

A Comparative Study on Moving Object Detection and Tracking Methods

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Abstract

Moving object detection and tracking has great application in the field of computer vision. Patient monitoring, human-computer interplay is the newly developed methods of the human motion detection and their classification. Now it is recently applied in vehicle motion detection by detecting vehicle as per shape, color and speed. Initially the method is applied to identify the specified object is available in the video frame or not. There are three essential stages of data processing in object detection that are: Correct recognition of object, Characteristics of object and object tracking. Tracking requires the point of location and defined shape of an object in every frame. In this review paper we have studied various object detection and tracking methods that are used to classify, detect and track the object in different situations e.g. shadow region, crowded areas, occluded object and hazy background image (Alexe, Deselaers, Ferrari, 2010).

Keywords: Moving object detection, Object Tracking, Object extraction, Object classification.

In a computer vision moving object detection and tracking is a still active and an open research area due to daily advancement in this field, we identify and track objects over an image classification that tries to determine by using of, identify and track object on the classification of the images and also by human operators to analyze and monitor the developing of the camera by changing the old techniques that make try to explain the nature of object (Ess, Leibe, 2009; Zhang, Sun, Fu, Wang, Wang, 2014). Basically object detection and tracking monitoring mechanism, vehicle navigation, autonomous robot navigation, video, etc. Object detection includes the correct position of the objects in the frame of a video classification. Object tracking is needed in more efficient applications that provide the correct position and shape of object (Nimo, Lopez, Sappa, Graf, 2010). Each object tracking techniques emerge to be the first video where each frame or objects while the object detection techniques are required. In moving object detection and tracking the initial step is to detect the specified moving object and track in successive frames. Interplay moving objects detection, frame, frame such as object tracking and analysis is to detect their nature (Leibe, Seemann, Schiele, 2005; Freeman, Roth, 1995).

The further stage is moving object detection and tracking, which can be characterized as the result of environment correspondence among detected object from one frame to another frame. This can be happened due to the incorrect division in the present frame or incorrect division in the past frame, or perhaps because of an object coming into another object in the frame sequence (Gavrila, Giebel, Munder, 2004).

Method Comparison

The methods described below for moving object detection and tracking have some advantage and disadvantage:

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Table 1 – Method Comparison

Methods	Advantage	Disadvantage	Object Identified
Background subtraction methods	Simple to implement. A background can combine with existing background without changing in features. Smart method that doesn't require reprogramming. Easy to implement with any method. Fast recovery process. Less space requirement.	Rate of precision is very less. Tough to manage in quick changes in frame. Initializing the Gaussians is important. It not a decent method when shadow or some other obstacles in background. In some cases gives false positives. It not suitable with multi-model background.	Any targeted object
Real Time Background Subtraction and Shadow Detection Technique Theory	Precision is more better than frame differencing It detects shadow as Well.	It's a little complex method.	Target foreground objects
Optical Flow	It can produce the complete Information of moving object containing good precision.	Require large amount of calculation.	Flow vectors of moving objects over time to detect moving regions in an image
Frame Differencing	Good for static background. High precision. Very simple method	Background without moving objects. Low to moderate computational time.	comparisons between two successive frames to detect moving targets
Motion based	It does not require detection of predefined motion patterns.	Struggles to distinguish a non-moving human object.	Number of moving objects in each frame
Point Tracking	Handle occlusion and misdetection. Track points in noisy images. Easy to manage with adding new object and exit existing object.	Assume no object entries and exists. State is distributed by Gaussian. Computationally exponential both in time and memory.	Object occlusion and misdetection.

	Solves the problem of Kalman Filter.	State of a single object is estimated.	
Kernel Tracking	Robust to occlusion, clutter, distraction.	Spatial information of the target is lost cannot give good performance when an object & its background have similar color.	Efficient to occlusion.
Silhouette tracking	Object Shape is Implicitly modeled. Less sensitive to appearance changes.	Training is required	Shape essentially modeled.

Table 1: Method Comparison of Object Detection and Tracking (Tan,Wang, Maybanks, 2004; Zhou, Yang, Yu, 2013; Chaohui, Xiaohui, Shuoyu, Zheng, Min., 2007).

Conclusions

It is not easy task to take one method for detecting all type of images, nor can all methods gives the result with high precision for specific types of image. Moving object detection in video image captured from single camera with static or moving background that means fixing camera at appropriate place that to achieve better results by applying background subtraction method to extract and classify the features. There are many methods present to detect and track the moving object by using a single method but is very challenging task, less precision and decrease the performance of system. To solve the identified problems with high quality and accuracy with better performance that needs to develop smart real time moving object detection and tracking system by combining of the multiple techniques to make use of it together according to the application.

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Marketing Of Banana In Pudhukkottai District-A Current Scenario

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Introduction

Banana being a highly perishable fruit is to be marketed within a short span of time. Therefore, a systematic package of practices in banana production will greatly improve productivity and enable the growers to reap maximum benefit. Similarly a well-organised marketing system for banana will give a suitable reward to people actually participating in the system. Marketing cost is the cost incurred in cleaning, packing, transporting and other incidental charges paid in marketing the produce. It is the actual expenses incurred in bringing goods and services from the producer to the consumer. The marketing cost is a vital factor in determining the profitability of the banana growers and middlemen. The first of banana exports to Europe will start in a couple of months through separate private initiatives in Tamil Nadu. This will eventually open the doors to markets in the West for the local varieties.

One, the Trieste Port Authority in Italy is funding a project by the Tamil Nadu Banana Growers Federation, which is working with the Tamil Nadu Agriculture University, to standardise harvesting and post-harvest facilities for banana exports.

Austrian interest

Through another project, a buyer based in Vienna, Austria, keen on Indian varieties for the local markets there, is supporting Tirupur-based fruits exporter Ka Ve Ezhilan of Greener Agro Products India. The exporter is partnering with the National Research Centre for Banana (NRCB) and a consultant in IIT-Madras for a cable conveyor for moving harvested bananas to the pack house. This equipment has been demonstrated to the buyer who has approved the idea, he said.

Ezhilan, who is, on his own initiative, investing over ₹10 crore in a pack house for fruits exports in Pollachi, says the first consignment of about 100 kg of Grand Naine variety of banana will be airlifted by the month-end. Then, exports will be stepped up and by September a 20-tonne consignment of the fruit will be shipped out. The objective is to move about 150 such containers a year.

Ezhilan says farmers can benefit from a 20-25 per cent increase in prices as compared with the ₹15-20 a kg they get now.

Tapping the West

Theni in Tamil Nadu is a major banana cultivation centre but exports are primarily restricted to Gulf countries and South-East Asia, targeting overseas Indians. But now, exporters are targeting developed markets in Europe. While initially, the Cavendish banana will be shipped, he plans to popularise local varieties including Red Banana, Poovan and Kathali. G Ajeethan, General Secretary, Tamil Nadu Banana Growers Federation — who is backed by

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the Trieste Port Authority — says, as of now, there is no common infrastructure facility meeting European norms for banana exporters in the State.

For freshness

The Port Authority is funding the Federation and the Agriculture University about ₹1.25 crore to establish a rope conveyor facility in a selected banana farm. The major challenge is to minimise human handling during harvest and post-harvest to maintain the freshness of the fruits at destination. By mid-June, Ajeethan expects to ship out the first of the consignments to Europe. The consignment will initially be airlifted through Kochi or Bangalore, he said. S Uma, Director & Convenor, NRCB, said a team at the centre has designed the protocol for sea shipments of Nendran variety of bananas to Dubai. This was a Public-Private Partnership project with a Kochi-based exporter, Fair Exports India and the Agriculture and Processed Food Products Export Development Authority, New Delhi.

While airlifting can be costly, protocols have to be designed for sea shipments as the fruits will be in transit for up to three weeks. Now, nearly 20 tonnes of Nendran are being shipped out weekly. This has helped to bring down prices for overseas consumers who now pay about ₹125 a kg compared to ₹150 for air cargo consignments. Farmers too benefit as they get ₹5-10 more per kg.

Objectives Of The Study

The main objectives of the study are to find out the various problems faced by the banana growers and to identify the factors influencing the satisfaction of banana growers. Under these main objectives have been framed for the present study.

- To study the production practices of the selected banana in the study area.
- To evaluate the marketing practices followed by the growers of the selected banana.
- To analyze the various problems faced by the banana growers.

Sampling Design

The present study proposes to cover the production and marketing of banana in Pudhukkottai District. As census method is not feasible, the researcher has proposed to follow sampling. It is decided to select the banana which are cultivated in more than 200 Acres in Pudhukkottai district. The present study selected 5 bananas namely poovan, Rusthali, Moris, Appel bananas and Cavendish bananas in cultivated in the district. These banana are mainly cultivated in all blocks of the district. Pudhukkottai District Consist of Alangudi, Vadakadu, Pudhukkottai, Thirumayam, and one block Karakbakkudi, A selection of 240 banana growers is made on a simple random basis at the rate of 40 from each Taluks and One block.

Sources Of Data

The study is empirical in nature based on survey method. The primary data relating to the production, problems and satisfaction are collected by the interviewing the growers with the help of the interview schedule. The secondary data relating to the study like area, production and yield in Tamilnadu and in Pudhukkottai district are obtained from various published and unpublished records, annual reports, bulletins, booklets, journals, magazines, etc, the study is individual grower oriented and the factors selected are personal in character.

Tabel No:1.1: AVERAGES OF VARIABLE COSTS FOR PRODUCTION OF BANANA IN PUDHUKKOTTAI DISTRICT

	Machinery	Paid Labour	Family Labour	Materials	Subtotal	Percentage
Land Preparation	144	56	48	288	536	6.2
Planting	108	308	38	268	722	8.4
Weed control	24	1142	64	274	1072	19.8
Irrigation	60	0	48	734	842	9.8
Fertilization	2	76	14	232	322	3.8
Pest control	142	0	74	430	648	7.5
Harvesting	0	1234	812	456	2542	29.6
Marketing	428	0	672	124	1224	14.2
Other	18	30	0	0	48	0.5
Total	926	2844	1768	3046	8584	100.0

Source: Agricultural Department in Pudhukkottai District

It is inferred from table 1.1 that around one third of the variable cost is incurred for harvesting. It stands first rank in the variable cost of production of tomato. The variable cost weed control occupies the second position. It is interesting and worthy to note that the labour force used for production and marketing and marketing of tomato t is around two sixth of the total variable cost of the tomato in Pudhukkottai district. It indirectly generates employment opportunity. The present study reveals that the growers of tomato in this study area provide employment opportunity to the agricultural laourers in Pudhukkottai district.

Marketing Practices

Marketing is a crux of production problems, success of production of any crop depends upon its successful marketing. The selected banana are specialized crop grown in the Pudhukkottai district of Tamilnadu.

Marketing efficiency to a large extent depends upon production and cultivation practice. In Indian economy agriculture sector predominates not due to overwhelming share of the nation's product output also due to providing employment to a spacious sector of population.*

Generally, the grower's entire is handed over to one or a small number of middlemen for marketing his produce. As it is seldom possible for the producer to market himself all his profuse, the service of the intermediaries is inevitable. Accelerated growth of agriculture mainly depends upon the provision of farm and non –farm services. Among the nonfarm services Marketing is the most important.

Institutional Aspect Of Market Structure

The institutional aspect of market structure refers to the marketing channel or links of different functionaries involved in the process of marketing in other words marketing channel refers to the flow of the produce from the point of production to the final consumption involving assembling wholesaling re-whole saling and retailing. It is pertinent to examine the channels through which the produce reaches the final consumer as it may have some bearing on the growers on the growers share in the consumer's rupee.

* P.K. Banerjee, Indian Agriculture Economy- Financing small farmers, Chetra publishers, New Delhi ,1997.p.3

It should be noted that the commission agent is a common intermediary, which connects two important stages of marketing, i.e., assembling and wholesaling and its subsequent stages. For example, more than one channel may exist up to wholesaling i.e., the product may be sold either directly by the grower himself or through the village merchant or the pre-harvest contractor, but the channel involved after wholesaling may be common i.e., through the retailer to the final consumer. Similarly, only one channel may exist up to wholesaling i.e., direct sale by the grower through and /or to the commission agent and after wholesaling, more than one channel may exist whereby the produce reaches the final consumer either through re – Wholesalers or through retailers or the hawkers.

Market Awareness

It refers to the knowledge of different market situations in general and prices in particular on the part of the growers as well as the market information, which guides the growers as to when, where, whom and how to market the produce to their best advantage. The market rareness and the capacity of the growers to sell their advantage can be judged in terms of certain factors like place of sale, agency of sale and time of sale.

The Place Of Sale

This implies whether at the field itself or at the primary markets or at the Pudhukkottai wholesale market. The analysis pertaining to this may provide some insight about the factors associated with the place of sale on the part of the growers.

Agency Of Sale

It refers to the functionaries involved in the process of marketing. As is seen from the previous section, the produce is marketed through various channels involving various functionaries and they differ from produce to produce.

Among the selected banana, except brinjal and lady's finger, most of the growers sell their produce through the commission agents at the Pudhukkottai wholesale market, mainly due to comparatively higher price as compared to prices at the primary level. In the case of moringa, it is sold mostly to the pre – harvest contractor. Selling the produce to village merchant by the growers also exist in the case of tomato and onion.

Time Of Sale

Time of sale refers to as to when the growers sell their produce i.e., whether they sell during immediate post – harvest period or store in order to fetch better prices. Only onion comes under the purview of storage because of their comparatively less perishable nature. The growers of onion store the produce in order to realize better prices, the period of storage ranges between weeks to six weeks. Although the practice of storage on the part of the growers of the banana is widely prevalent irrespective of the size of holding, the factors compel the growers not to store for reasonably longer period are urgent need of cash, lack of storage facilities / and finally the loss in storage (both due to loss in weight and spoilage). The loss in storage has been reported to be 5 per cent in the case of onion, depending upon the period of storage. The urgent need of cash and the lack of storage facilities to a large extent and spoilage to some extent compel the onion growers not to store the produce for a considerably long period.

The above analysis pertaining to the selected banana indicates that the existence of inter – market and inter – districts trade due to awareness on the part of the growers regarding different marketing sources, whereby price being the main, if not, the only criterion influencing the place of sale, more than compensates the so – called harm exerted by the existing pattern of trade, reflected in terms of concentration in the hands of the few.

Disposal Of Banana In Short Time

There are many reasons such as (i) Most of the banana, especially leafy ones are highly perishable in nature (ii) Storage facilities are inadequate. (iii) processing facilities are inadequate. (iv) Market prices are very fluctuating (v) crops are not insured (vi) lack of cooperative marketing network in Pudhukkottai.

Methods Of Banana Marketing

The commission agent on behalf of the seller settles the prices of banana with the buyer in the following ways.

Private Negotiation

In this method the purchaser makes his offer personally to the commission agent and the bargain is settled. This method is common all over the district.

Open Auction

In this method almost all buyers assemble at a particular time in the market or at shop of the commission agent. Each lot of banana is kept for auction separately by auctioneer. The highest bid accepted for approval of the seller

Closed Bid System

The produce of each grower is arranged in separate lots with an identify number for each. The grower can present his produce for sale in one lot or more according to the grades. The traders visit the market yard before the time stipulated for declaration of sales, and go round examining each put up for sale. They are provided with bid slips are then deposited in a locked box. The slips in the box are taken out at the appointed time and compared by the market officials. The maximum price offered for each lot is called out and the grower's consent is also obtained for that price. If agreed by the grower, the lot is declared as sold to the trader who has offered the highest price.

Uzhavar Sandhai

Uzhavar Sandhais are functioning in the district for direct selling of banana by growers to consumers without any hindrance of middlemen. The main object of Uzhavar Sandhai is to ensure growers to get a better price for their produce and to enable the consumers to get fresh banana at a lesser price than the retail market price. Various measures are taken by the department of agriculture to increase the arrivals in Uzhavar Sandhai by way of providing facilities like electronic weighing scale, plastic trays, trolleys, wastage bins to the growers. In addition to these, computers for effective communication, new hybrid seeds, seedlings, organic farming methodology, vermin composting demonstration and post harvest management training to growers will also be offered to those growers utilizing Uzhavar Sandhai

Table 1.2: REASONS FOR THE PREFERENCE OF SELLING THE PRODUCE THROUGH UZHAVAR SANDHAI

Total No. of Growers : 240

S.No	Reasons	No.of growers Supporting the reason	Percentage On Total No. Of growers	Rank
1.	Absence of Commission	201	83.75	II
2.	Absence of Middlemen	154	64.17	VI
3.	Correct Weighment	213	88.75	I
4.	Immediate Payment	189	78.75	III
5.	Remunerative Price	172	71.67	IV

6.	Government Agency	144	60.00	VII
7.	Market Facilities	160	66.67	V
8.	Time Savings	136	56.67	VIII

Source: Primary Data

The Uzhavar Sandhai provide accurate weight and measurement for weighing the agricultural produce. It is the main reason for the growers for selling their produce through Uzhavar Sandhai. This reason stands out and takes the first rank among reasons for preference. Further, it is reported that cheating in weighing by private agencies is the reason for this preference to Uzhavar Sandhai. Another important reason is the absence of commission. This view is supported by 83.75 per cent of the respondents. It is because of the fact that growers need not pay even a single paisa to the Uzhavar Sandhai.

Table No:1.3: REASONS FOR THE SELLING OF THE PRODUCE THROUGH AGENCIES OTHER THAN UZHAVAR SANDHAI

S.No	Reasons	No.of growers Supporting the reason	Percentage On Total No. Of growers	Rank
1.	Better Price	80	47.48	III
2.	Settlement of prior debts	92	50.00	I
3.	A very good amount of Marketable Surplus	64	34.78	V
4.	Better market services	84	45.65	II
5.	Traditional and Time bound practice	68	36.95	IV
6.	Others	62	33.70	VI

Source: Primary Data Note : Multiple Answers Considered

It is reported that the intermediaries advance money to the growers both for cultivation and consumption expenses without any securities. But they compel the growers to bring the produce to their shops. The second in intermediaries is the list of reasons for the grower's preference of the intermediaries is the better market facilities. The third in the rank is concerned with the better price with their experience and influence on behalf of the growers. Another reason for selling the produce through intermediaries is traditional and time bound practice with them as reported by 36.95 percent of the growers who dealt with other agencies also. lastly, convenience and non – availability of packing gunnies are stated by 33.70 percent of the growers in the column others as a reason for selling their produce through intermediaries.

Garrett's Ranking Technique

Garrett's Ranking Technique is used to rank the important problems faced by the small growers in coffee plantation. The collected pieces of information from the respondents of small growers are arranged and converted into mean score values which are in turn ranked using Garrett's Ranking Technique.

Per cent position = $100 (R_{ij} - 0.05) / N_i$

Where

R_{ij} : Rank gives for its factor by the 5th individual .

N_i : number of reasons ranked by the 5th individual.

CHI - SQUARE TEST

The chi – Square test represents a useful method of comparing experimentally obtained data with those expected theoretically. The following formula has been used:

$$\text{Chi – square test (x}^2\text{)} = \sum \frac{(f_o - f_e)^2}{f_e}$$

Where f_o = Observed frequency.

f_e = Expected frequency

Degree of freedom (d.f) = (r-1) (c-1)

If the calculated value is greater than the table value at a particular significant level, say 0.05 level, it is concluded that the factor is dependent on variable for which Chi – Square is computed. If the calculated value is less than the table value, it is concluded that the factor is independent on the variable.

Table No:1.4: VARIETY OF BANANA CULTIVATED AND PROBLEMS RELATING TO SAPLING & SEEDS.

S.No	Problems	Variety					Total
		Brinjal	Tomato	Onion	Beetroot	Moringa	
1.	Non – availability of saplings and seeds in time	248	202	132	62	148	792
2.	High cost of saplings and seeds	172	114	122	28	92	527
3.	Low productivity	184	160	96	64	136	640
4.	Poor quality of saplings and seeds	159	175	70	27	113	544
5.	Menace of insects and diseases	317	129	240	179	231	1020
	Total	1080	780	660	360	720	3660

Calculated Value of $X^2 = 67.06$

Source :Primary Data

Table value at 5% significant level for 16 d.f = 26.30.

The calculated value is more than the table value. It implies that the hypothesis there is a significant relationship between variety of banana cultivated and problems relating to saplings and seeds' holds good. Thus it is statistically revealed that there is a significant relationship between variety of banana cultivated and problems relating to saplings and seeds.

The calculated value is seen to be more than the table value. It implies that the hypothesis there is a significant relationship between awareness of the growers and problems relating to saplings and seeds' holds good. This reveals statistically that there is a significant relationship between awareness of the growers and problems relating to saplings and seeds.

Landholdings And Problems Relating to Agricultural

Problems relating to agricultural loan are tested with the size of landholding. For this ,the hypothesis framed is that there is a significant relationships between land hold hips and problems relating to agricultural loan'. The ranking scores of respondents belonging to different landholdings are furnished in Table 1.5

Table No:1.5: LANDHOLDINGS AND PROBLEMS RELATING TO AGRICULTURAL LOAN

S.No	Problem	Landholdings			Total
		Small	Medium	Large	
1.	Not properly extended in time	465	251	126	842
2.	Inadequate for banana	348	172	96	616
3.	Higher rate of interest	324	179	109	612
4.	Improper lending system	348	172	102	622
5.	Granted on the basis of favoritism / preference	465	336	107	908
Total		1950	1110	540	3600

Calculated value of $\chi^2 = 28.96$

Source : Primary Data

Table value at 5% significant level for 8 d.f = 15.51.

The calculated value is greater than the table value. it implies that the hypothesis there is a significant relationship between landholdings and problems relating to agricultural loan' holds good. This confirms statistically that there is a significant relationship between landholdings and problems relating to agricultural loan.

Table No1.6: Variety of Banana Cultivated and Problems Relating to Agricultural Loan

Problems	Variety					Total
	Brinjal	Tomato	Onion	Beetroot Moringa	Moringa	
Not properly extended on right time	250	180	156	80	176	842
Inadequate for banana cultivation	188	135	111	61	121	616
Higher rate of interest	179	138	124	60	111	612
Improper lending system	190	130	106	58	138	622
Granted on the basis of favoritism / preference	273	197	163	101	174	908
Total	1080	780	660	360	720	3600

Source : Primary Data

Calculated value of $\chi^2 = 7.55$

Table value at 5% significant level for 16 d.f = 26.30

The calculated is less than the table value. It implies that the hypothesis there is a significant relationship between variety of banana planted and problems relating to agricultural loan does not hold good. This confirms statistically that there is no significant relationship between variety of banana cultivated and problems relating to agricultural loan.

Distress sale of banana by growers is reported to be widely prevalent. Growers sell the output well in advance of the harvesting season at prices much lower than those prevailing in the market in order to tide over their financial difficulties with money lenders and commission agents. It is suggested that the financial assistance at moderate rate of interest to meet their financial requirements.

At the time of repayment of loan by the growers, the lending financial institutions should adopt a flexible approach in deciding the date of recovery of loan dues from the growers. By taking into account the time of harvesting and the nature of market. The lending institutions should adopt a flexible approach in collecting dues.

The government of India need to design policies generated at making local markets work for growers. This involves creating strong, accountable and transparent regulatory bodies in this sector to provide marketing information and monitor competition among the supply chain. Moreover, technical assistance, better access to credit and inputs, investments in infrastructure and storage facilities are paramount to enable growers make a decent living and compete with others.

The growers should come forward to pay wages higher than industrial operators and builders to avoid labour turnover. Emoluments and fringe benefits should also be given regularly to the workers in order to retain them in the cultivation.

Conclusion

India is the world's second largest producer of banana. Tamilnadu is the major contributor to the country in banana cultivation. The study revealed that the area of banana cultivation in Pudhukkottai District of Tamilnadu remains constant throughout of the study period but there is a fluctuation in marketing of banana. Considering the current scenario of the agri industry, it has to maintain its comparative attractiveness like others in India to grow and develop as a major industry. This would mean that the rewards to the growers should commensurate with the efforts required of them.

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Molecular characterization of a Hill Stream Cyprinid Fish *Garra lamta* using D-loop region of Mitochondrial DNA

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Abstract

Garra lamta is a hill stream fish belonging to family Cyprinidae and subfamily Garrinae. Being a non-protein coding gene, the mitochondrial D-loop plays a significant role in the field of molecular characterization. Till date, there has been no reported study about the complete or partial sequence of D-loop or control region of *Garra lamta*. For these reasons, the objective of this research was to assess the molecular characterization of this species using mitochondrial D-loop. The evolutionary history and phylogenetic tree of the sample species was inferred using the maximum likelihood method. MEGA 7 was utilized to induce all the phylogenetic studies.

Key words: *Garra lamta*, Garrinae, mitochondrial D-Loop, molecular characterization

Introduction

Molecular and genomic analysis of fishes give an understanding about their metabolic exercises and their genomic outline living in wild (Oleksiak, 2010). Hill stream fishes live in quick slope streams and structure their sanctuaries under rocks and stones (Ojha and Singh, 2006). Slope streams are special biological systems portrayed by shallow limited channels with rough beds and quick, violent and shooting hypertonic water stream. In Garhwal, fish is the least expensive and promptly accessible source of protein and fat.

In the recent past, the slope stream condition has experienced enormous decimation because of woodland fire, deforestation, overgrazing, multipurpose waterway valley ventures and so on. This has impacted the fish population on an extensive scale by breaking down their bolstering and reproducing grounds. Because of separating of stones and rocks, shakes and stones, which are the bringing forth grounds of various fishes, acquired a change the ichthyofauna of Garhwal locale. Because of changes in geography of the area, the slope stream fishes show a few adjustments for survival and can be described by their slim level bodies, little eyes and suckers.

Fishes of the family cyprinidae comprise 16 percent of the world's fishes approximately 321 recognized genera and 3268 species (Nelson, 2006). *G. lamta* is a hill stream fish belonging to family Cyprinidae and subfamily Garrinae. The molecular techniques in the field of biology has helped us to establish genetic relationships between the members of different taxa. DNA sequence analysis has been applied for 30 years to assist species identification (Ward et al., 2005). The mtDNA is the best studied molecular marker applied in molecular characterisation because of its justifying properties like high copy number, maternal inheritance, etc.

The MCR (MtDNA Control Region) plays a pivot role in the field of molecular taxonomy. The control region is the non- protien coding region of mitochondrial DNA, and it has been

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proven to be an ideal marker for assessing the genetic structure of recently diverged or closely related populations or species (Awise, 1994; Bremer et al., 1996; Iguchi et al., 1999; Tabata and Taniguchi, 2000; Ishikawa et al., 2001, Li et al., 2012). The Control region is noted for its non-protein coding and a faster rate of evolution, as it is a unique and highly variable area in the mitochondrial DNA (Zhang et al, 2013; Bronstein, 2018). However, there has been no reported study about the complete or partial sequence of the mitochondrial control region of the *G. lamta*. For these reasons, the objective of this research was to establish the molecular characterization of this species based on control region.

Materials And Methods

Samples of *G. lamta* were procured from fishermen near the Alaknanda river, a snowfed torrential stream at the Srinagar Garhwal (30.22°N 78.78°E), at an average elevation of 560 meter above sea level (1837 feet). The procured fishes were transported live to the laboratory, and were kept in a well-aerated hatchery at 20-24°C before analysis to get acclimatized to the existing conditions. After correct identification and taking morphometric data at species level (Tilak and Hussain 1977; Jingran 1975), the specimens were properly cleaned and different tissues were taken out by sacrificing the fish. Tissue (Muscle) samples were collected and preserved in 95% v/v ethanol in 2ml cryo-preservatory vials. These vials were kept in cyroboxes. The cyroboxes containing tissue samples were then kept at 4°C for further use.

The standard phenol/chloroform procedures (Sambrook et al., 1989) were used to isolate the total genomic DNA. A Partial sequence of the MCR was amplified by PCR (Eppendorf, Master cycler gradient) using sets of primers DLL: 5'- CCACTAGCTCCCAAAGCTA -3' and DLH: 5'- ACTTTCTAGGGTCCATC -3' (Bernatchez et al., 1992). Each PCR mixture (25 µL) included 2µl template DNA, 2.5 µL 10X Taq Assay Buffer, 2.5 µL dNTPs (2 mM each), 1.8-2 µL MgCl₂ (25 mM), 0.5 µL of each primer (10 µM), 0.15-0.2 µl (1 U) Taq DNA polymerase. The following cycling protocols were used to amplify the MCR gene: an initial denaturation at 94°C for 3 min, 35 cycles of denaturation at 94°C for 30 secs, annealing at 49°C for 45 secs and extension at 72°C for 1 min and a final extension at 72°C for 10 min. Sequencing of amplified PCR products were done from outside agency: Xcelris Labs Limited, Ahmedabad.

Phylogenetic and molecular evolutionary analyses were conducted using MEGA 7 (Kumar et al., 2016). The Maximum Likelihood method tree was created to provide a graphic representation of the patterning of divergence between species.

Results And Discussion

Thirty morpho-meristic characters were analysed (Table 1) for correct identification and taking morpho-metric data at species level based on Tilak and Hussain (1977) and Jingran (1975). Altogether 2 samples of *G. lamta* were used and sequenced for mitochondrial DNA partial sequence analysis. Sequences were submitted to NCBI GenBank (Accession numbers: MK347000-MK47001). In total 12 sequences were analysed for preparing phylogenetic tree.

Maximum composite likelihood estimate of the pattern of nucleotide substitution was estimated using MEGA 7 (Table 2). Rates of different transitional substitutions were shown in bold and those of transversional substitutions were shown in italics. The nucleotide frequencies were 24.09% (A), 30.46% (T/U), 17.75% (C), and 27.70% (G). The transition/transversion rate ratios were $k1 = 23.412$ (purines) and $k2 = 9.39$ (pyrimidines). The overall transition/transversion bias was $R = 7.37$, where $R = [A * G * k1 +$

$T^*C^*k2]/[(A+G)*(T+C)]$. For the populations, the average transition/transversion ratio was 7.37, which suggested that the transition was higher than transversion, which was consistent with conclusions of other authors (Liu HY et al., 2004; Yang et al., 2008; Peng et al., 2010; Li et al., 2012).

The nucleotide composition of the mtDNA D-loop of *G. lamta* was also calculated, in which the average A, T, C, and G contents were 34.3, 45.7, 3.7, and 13.5.0%, respectively, and the base distribution showed no apparent difference among populations. The results showed that the G and C bases were relatively low. The A + T content was higher than the G + C content among the sequences examined, which was consistent with previous findings that the control region is an A + T-rich region of the mitochondrial genome (Brown et al., 1986; Saccone et al., 1987, Cheng et al., 2010; Li et al., 2012).

The evolutionary history was inferred by using the Maximum Likelihood method based on the Tamura 3-parameter model. The tree confirms that the studied samples are of Genus *Garra* (Fig. 1). The mtDNA displacement-loop (D-loop) region, is located between tRNAPro and tRNAPhe in mtDNA (Sahoo, 2015). This region being a non-protein coding region ideal marker for phylogenetic studies (Morris, 2012). The present study was a preliminary step toward assessing the molecular characterisation of *G. lamta* using D-loop from India. However, to better resolve phylogenetic relationships of this species with other members of cyprinids based on D- loop or control region, more taxon sampling is needed for future studies.

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Table 1 Measurements (in cm.) and counts of *Garra lamta* (Hamilton-Buchanan)

S. No.	Morpho-Meristic Characters	Mean	Range
1.	Total length	18.94	16.5-21.3
2.	Standard length	15.76	13.5-17.8
3.	Head length	3.58	3.3-4.0
4.	Snout Length	1.66	1.4-1.7
5.	Eye diameter	0.62	0.5-0.7
6.	Length of caudal peduncle	3.02	2.8-3.4
7.	Height of caudal peduncle	1.88	1.7—2.1
8.	Maximum Body depth	3.44	3.4-3.8
9.	Intra Orbital Length	2.02	1.8-2.2
10.	Fork Length	17.22	15.2-18.9
11.	Head Depth	2.22	1.9-2.6
12.	Pre Pectoral length	3.12	2.8-3.5
13.	Pre Dorsal Length	7.24	6.5-7.8
14.	Pre Ventral Length	8.3	7.5-8.9
15.	Pre Anal Length	11.98	10.7-13.1
16.	Height of dorsal fin	2.96	2.1-3.6
17.	Height of anal fin	2.58	1.8-3.1
18.	Height of caudal fin	4.54	4.3-4.8
19.	Length of dorsal fin	2.64	2.32-2.9
20.	Length of anal fin	1.06	0.91-1.2
21.	Length of caudal fin	3.18	3.0-3.5
22.	Barbells Number	2 pairs	2 pairs
23.	Caudal fin	Deeply Emarginated	Deeply Emarginated
24.	No. of lateral line scales	34.2	32-36
25.	No. of L. tr. scales	4/4 ½	4/4 ½
26.	Dorsal fin ray	11 (2/9)	11 (2/9)
27.	Pelvic fin ray	15	15
28.	Ventral fin ray	9	9
29.	Anal fin ray	7 (2/5)	7 (2/5)
30.	Caudal fin ray	17	17

Table 2 Maximum Composite Likelihood Estimate of the Pattern of Nucleotide Substitution

	A	T	C	G
A	-	1.76	1.61	24.08
T	1.4	-	15.07	1.03
C	1.4	16.57	-	1.03
G	32.68	1.76	1.61	-

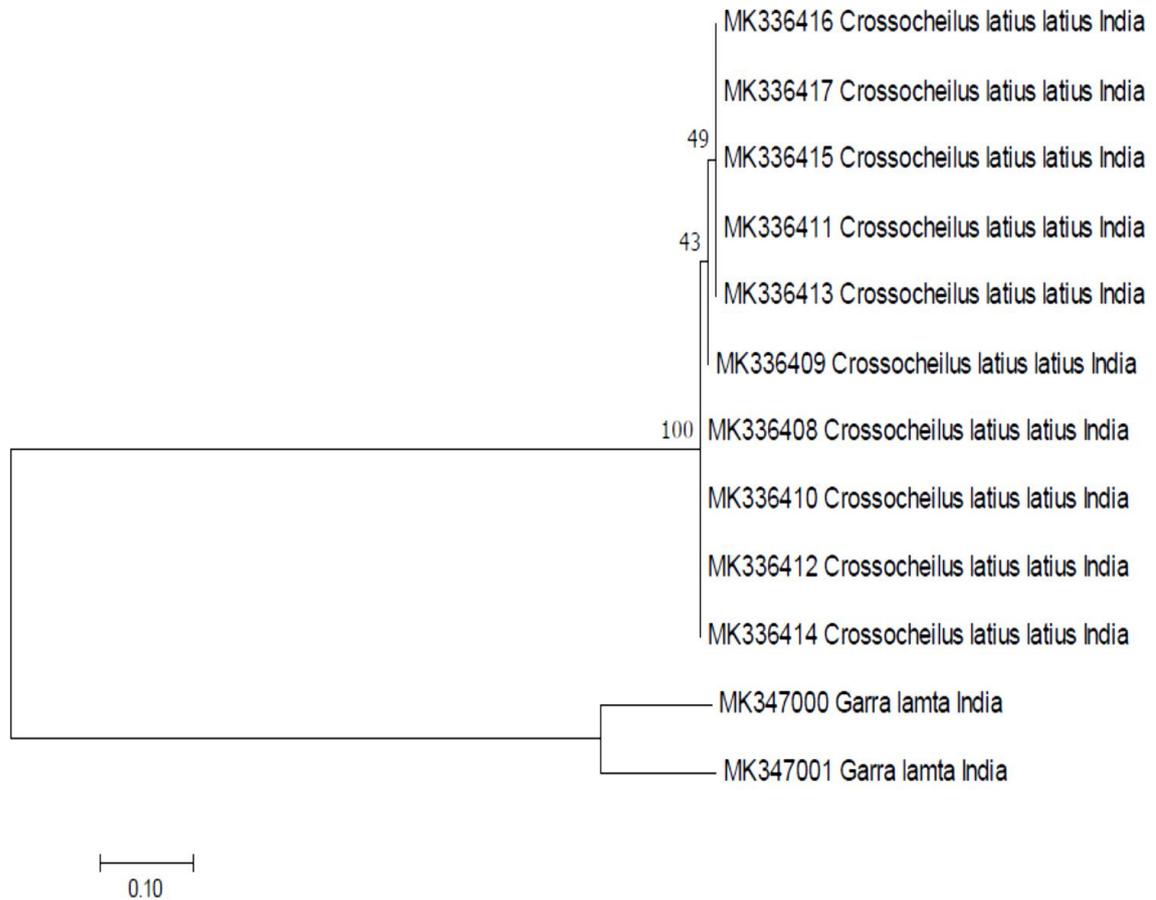


Figure 1 Molecular Phylogenetic analysis of *Crossocheilus latius latius* by Maximum Likelihood method.

Effectiveness of Computer Assisted Programs in Developing English Linguistic Skills among the Students of Aarohi Schools

Dr. Nivedita*

Ms. Shaleen Kamboj**

Abstract

The main aim of education was to preserve, transmit and advance knowledge. In the past, it was easy to achieve the aims of education with the help of dedicated teachers and self – motivated students. The teachers were using the traditional methods of teaching with the help of some books and visual aids like charts and pictures. But with the passage of time, the system of education changed due to increase in number of students, lack of text books and source material etc. the increased number of students resulted in large classes with individual differences. Normally a class consists of 40 to 50 students who are grouped together and taught by traditional methods irrespective of their individual differences. Moreover, due to information explosion the objectives of education have also become multi dimensional. It is difficult to achieve those multi dimensional objectives using traditional methods only. All these problems have made the education system rigid and static. The solution of these problems can only be tackled by the use of technology in the education system. Only the use of technology can bring the flexibility in the prevailing system of education.

Introduction

Computer assisted program is a program of instructional material presented by means of a computer or a computer system. This is in fact a mode of instruction whereby effective use of computer is made for the purpose of content transaction. Many educational computer programs are available online and from computer stores and textbook companies. They enhance teacher instruction in several ways. Computer programs are interactive and can illustrate a concept through attractive animation, sound and demonstration. They allow students to progress at their own pace and work individually or problem solve in a group. Besides the computer programs may be used for diagnosis or assessment too.

But these programs should be selected with thorough review by the teacher. The teacher should review the computer program or the online activity or game to understand the context of the lesson and determine which ones fit the needs of their students and how they may enhance instruction.

There are many advantages of using computers in education. They provide one to one interaction with the students. Besides, an instantaneous response to answers is elicited. This way the students receive immediate feedback and it let them not to continue to practice the wrong skills. Computers capture the students' attention because the programs are interactive and engage the students' spirit of competitiveness to increase their scores and hence their level of skill acquisition. The computer programs allow students to proceed at their own pace and do not move ahead until they have mastered the skill. In addition, the computer programs

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also follow the psychological principal of individual differences. The computer programs provide differentiated lessons to cater the needs of all students who are at risk, average or gifted.

Definitions Of CAP

Computer assisted programs provides instructional activities through the use of a computer as the primary vehicle for teaching content. Different educational technologists have defined computer assisted programs as follows:-

According to Good's Dictionary(1973) "computer assisted programs is an automated instructional technique in which automatic data processing method is used to control the presentation of stimuli to a learner, to accept the response and evaluate the learner's responses."

Bhatt and Sharma (1992) were of the view that computer assisted instructions provide an interaction between learners, a computer controlled display and a response entry device for the purpose of achieving educational outcomes.

Chamber and Sprecher (1983) defined CAP as the use of a computer to provide classroom instructions and course content in the form of drill and practice tutorials and simulation.

Review Of Related Literature

Every research project in the behavioral science has on its early stage that is a review literature. Review literature consists of two words review and literature. The term review means to organize the knowledge of the specific areas of research to involve to progress the depth of knowledge to show that his study be an addition to this field.

The word literature implies to the different meaning to the different situation. Here in research the knowledge of particular are of investigation of any discipline which include, theoretical, practical and its research studies.

In the word of Good Barr and Seats- The competent physician must keep a breast discoveries in the field of medicine obviously the careful students of education. The research worker and investigator should become familiar with location and use of source of educational information. Reviewing the literature has includes identifying all the relevant published material in the problem area and reading that part of it.

Studies in Abroad

Ya Huei Wang and Huang Chang Liao(2017) studied about "Learning performance enhancement using CALL by collaborative learning groups". It was attempt to test whether the use of CALL and innovative collaborative learning could be more effective than that of conventional teaching in improving students language proficiencies. True experimental design was used in this research. [(TOEIC) test of English for international communication for listening, reading, writing and speaking] were used for pre test and post test assessments. 2 groups were formulated : (a) traditional collaborative learning group (TCLG) comprised of 32 students, (b) Innovative collaborative learning group (ICLG) comprised of 32 students, for the experiment. MANCOVA and ANOVA were used to analyze the data. The results revealed that CALL had significantly better learning performance than those who did not. Students of ICLG were better than students of TCLG in their learning performance.

J. Tomesko (2017) conducted research on "the effectiveness of computer assisted instructions to teach physical science" on 60 students of St. Marine Gold school of Auckland, New Zealand. Researcher used self developed CAI material for teaching physical science to 2nd year graduates. He came out with the findings that students taught with

computer assisted instruction have higher achievement in physical science subject than those who are taught with conventional teaching.

Studies in India

Dr. Suman Dalal and Ms. Rinku Rani (2016) aimed at finding out the effectiveness of computer assisted programs in improving language creativity in English. For this study, CAP material & conventional material on various topics of English were developed by the researcher herself. Language creativity test was developed by Dr. S.P Malhotra to test the creativity of language at pre test and post test level. This study was conducted on 60 students of class 7th. 30 students in experimental group and 30 students in control group. This study revealed that CAP method is much more effective in enhancing the language creativity of the learners than that of conventional method.

Dr. sarika sharma (june, 2017) HOD, central university of Haryana conducted her research on " role of CAI in teaching children with special needs" on sample of 20 students. she overviewed that the use of CAI in teaching reproduces higher achievement than the use of conventional teaching alone. Students learn easily, faster and with speed & pace with the use of CAI.

Justification Of Study

CAI has been used as an effective and efficient medium of instruction in the advanced countries as well as in India for formal and non-formal education at all levels. In CAI, learners can learn at own pace and spend as much time as they need. The use of computer in the classroom has boomed since the 1980s but studies within the past 15-20 years had focused on the relationship between CAI and academic achievement in different subject areas. Number of studies has been carried out to find the effectiveness of CAI at different levels, many researchers have successfully conducted the studies which showed the significant effect of CAI on academic achievement of the learners in different subject. Although a large number of researches were done on the use of CAI in teaching learning process in developed countries. But in the developing countries like India, it is an embryonic stage particularly in the field of teaching foreign language i.e English language. So, there is the need to conduct researches to study the effect of CAI for teaching and learning of the English language. Further very researches have been done for developing self learning material for CAI in teaching of English at pre service training level.

Keeping in view the dearth of researches in CAI for teaching English language at teacher education level Indian situations, this experiment study was planned and executed

Statement Of The Problem

"EFFECTIVENESS OF COMPUTER ASSISTED INSTRUCTIONS IN DEVELOPING ENGLISH LINGUISTIC SKILLS AMONG THE STUDENTS OF AAROHI SCHOOL"
OPERATIONAL DEFINITIONS OF THE TERMS USED

COMPUTER ASSISTED INSTRUCTIONS

- a. Computer based programs is any course of instructions whose primary means of delivery is a computer.
- b. A sequence of instructions written to perform a specified task that a computer can interpret and execute.
- c. Computer programming is the iterative process of writing or editing source code.

Linguistic Skills

- a. The art of study of using language effectively and persuasively.
- b. A treatise or book discussing this art.

- c. Skill in using language affectively and persuasively.
- d. A study of speaking or writing, specially the language of a subject.
- e. The art of using speech to persuade, influence, or please; oratory.

AAROHI SCHOOL

(In educationally background blocks of the state):- these are progressive , secular, child centered co- educational school committed to providing quality education in backward blocks or rural areas. The school endeavor to cater to intellectual, physically, emotional, psychological and spiritual development of children to bring out the best in each child.

Aarohi Schools are affiliated with Board of School Education, Bhiwani, Haryana. The school has adopted the syllabus of BOSE Haryana, Bhiwani. Medium of instruction is English and Mother tongue as well. To keep pace with present age and to bring the latest in field of information technology with the reach of every student, the schools are equipped with ICT lab where students from all classes are provided opportunities to work on the computer. The objective is to ensure that each child get atleast 6 hours access to computer per week. The curriculum is designed to teach software / hardware/ application/ language and skills.

Objectives of the study

- To compare the achievement of the students in developing English Linguistic skills before taught through CAI and Conventional teaching at Criterion Referenced Pre test stage.
- To compare the achievement of the students in developing English linguistic skills after exposed to CAI and conventional teaching at Criterion Referenced post test level.

Hypotheses of the study

- There exists no significant difference between the use of CAI and English linguistic skills learning (at pre test stage).
- There exists no significant difference between the students who develop English linguistic skills with the help of CAP and those who don't use computer assisted instructions for developing English linguistic skills (at post test stage).

Delimitations of the study

Study is delimited to

- A sample of 250 students only
- Students of Aarohi Model Sen. S.ec Schools only
- Students of Sirsa District only
- Four linguistic skills in English language only
- Carried out with self constructed tool only

2 Research Design

Research design is a way towards the aim of research. It is master plan specifying the methods and procedures for collecting needed information involved in analyzing the data. There are number of experimental design used for research purposes. But the research design is used according to the objectives of the study. This study aimed at ascertaining the effectiveness of CAI by comparing it with the conventional teaching in developing English Linguistic Skills among the students of Aarohi Schools at secondary level. In order to compare the effect of two methods of teaching that is CAI and CT, pre test and post test control group design was used. The figure 3.1 shows the basic form of this design:-

Figure 1.1

phase	Treatment		Data collection		
	Duration	Control group	Experimental group	Control group	Experimental group
Pre training	7 days	T1- conventional program of student teaching	T1- conventional program of student teaching	Pre test- Skill of Listening, Skill of Reading, Skill of Writing, and skill of Speaking	Pre test- Skill of Listening, Skill of Reading, Skill of Writing, and skill of Speaking
Training	14 days	T1- conventional program of student teaching	T2- CAI program of training		
Post training	7 days			Post test- Skill of Listening, Skill of Reading, Skill of Writing, and skill of Speaking	Post test- Skill of Listening, Skill of Reading, Skill of Writing, and skill of Speaking

Pre test-post test control group design is a strong research design in which a group of research participants is randomly assigned to an experimental and control group. Both groups of participants were pre tested on the dependent variables and then post tested after the experimental treatment condition has been administered to the experimental group. Because of strict random assignments of research participants, it is assumed that the two groups are equivalent on all important dimensions and that there are no systematic differences between the 3 groups. They are matched on a list of characteristics like sex, knowledge in computers and parental education that might affect the outcome of the research.

In this study, 250 students of Aarohi Schools of secondary level of Sirsa District with well equipped computer lab were selected for experimentation. Out of these 250 students, two groups of 125 each were formed. One group was designated as experimental group and second as control group. Experimental group was exposed to CAI teaching and the control group was exposed to conventional teaching. These students were tested on 2 stages in order to find out the Effectiveness of computer assisted instructions and conventional teaching.

3.3 Sampling

Sampling is a process of using a small number of items or parts of larger population to make conclusions about the whole population. Sampling for the present research was done in two phases. In first phase, instructional material was developed and evaluated both for CAI and conventional teaching. The measuring tools i.e. criterion referenced pre test and post test

were also developed and evaluated in the terms of validity and reliability in this phase. In the second phase, experiment was done on a sample of 250 students i.e. 125 students for each group(experimental and control).

For this, purposive sampling was done which is the sampling technique in which sample is selected on the basis of the preliminary knowledge gathered from the population of the study. It is a type of non probability of the researcher. A purposive sampling is also called a judgemental, selective or subjective sampling.

3.8 Data Collection

Data is recorded measure of the certain phenomena. Data collection means recording of facts of the phenomena by the researcher. Data is collected by using certain tools. For this study, the data was collected with the help of the measuring tools developed by the researcher herself i.e. CRTs at pre test level and post test level. for collecting data 2 Aarohi Schools were opted.

3.9 Statistical Techniques Used

Data in its original form does not meet the requirement of the research. There is no need to convert the collected data into a meaningful form, which is known as data processing. Data processing is done by applying some techniques of statistics know as statistical techniques. On the basis of objectives and design of the study, the following statistical techniques were used in this study :

- The measures of central tendency and the measures of dispersion such as mean and SD were worked out to know the nature of the data;
- T-test was used to compare the effect of CAI and CT on the achievement of the students at pre test level and post test level.

Analysis, Interpretation And Discussion Of The Result

The achievement scores of the sample were obtained as a result of pre test and post test. The data was analyzed using the above mentioned statistical techniques. Significance of difference between the mean scores of both the groups on pre test and post test were compared and tested at 0.01 level of significance and as well as on 0.05 level of significance by calculating t-value.

SECTION-1 COMPARISON BETWEEN MEAN SCORES OF EXPERIMENTAL GROUP AND CONTROL GROUP AT PRE TEST STAGE

The significance of difference between the mean score of experimental and control group on pre test in each English Linguistic skills was found by applying t-test and the results are shown in table 4.1.1 to 4.1.3. the significance of difference between the total mean scores on all the linguistic skills of experimental and control group at pre test stage was also found by t-test and the result of which will be shown in table 4.1.4 and table 4.1.5 presents collective view of all the English Linguistic skills.

Table 4.1.1

Significance of difference between the mean scores of experimental group and control group on pre test level in Skill of Listening

Group	N	Mean	SEd	t-value	level of Significance
Experimental Group	15	5.42	0.42	0.54	N.S
Control Group	15	5.56			

It can be seen from table 4.1.1 that the mean scores of experimental and control group on pre test in skill of Listening are found to be 5.42 and 5.65 respectively. The values of SED is 0.42 and t-ratio between the two groups is 0.5. Thus, the difference found between the two mean was statistically not significant. It shows that both the groups can be treated equal for their entry level behavior at pre test.

Table 4.1.2 : Significance of difference between the mean score of experimental group and control group on pre test level in Skill of Reading

Group	N	Mean	SEd	t-value	level of Significance
Experimental Group	15	6.37	0.48	0.55	N.S.
Control Group	15	6.11			

It can be seen from table 4.1.2 that the mean scores of Experimental group and control group on pre test in Skill of Reading are found to be 6.37 and 6.11 respectively. The value of SED is 0.48 and t-ratio between the two groups is 0.55. Thus, the difference found between the two mean was statistically not significant at any level of significance. It indicates that both the groups can be treated equal for their entry level behavior at pre test stage.

Table 4.1.3: Significance of difference between the mean score of Experimental group and control group on pre test level in Skill of Writing

Group	N	Mean	SEd	t-value	level of Significance
Experimental Group	15	5.48	0.37	0.70	N.S.
Control Group	15	5.22			

The table 4.1.3 shows that the mean scores of experimental group and control groups on pre test level in skill of writing are found to be 5.48 and 5.22 respectively. the value SED and t-ratio between the groups are 0.37 and 0.70 respectively. The t-value is not significant at any level of significance. It indicates that both the groups can be treated equal for their entry level behavior at pre test.

Table 4.1.4: Significance of difference between the mean score of Experimental group and control group on pre test level in Skill of Speaking

Group	N	Mean	SEd	t-value	level of Significance
Experimental Group	15	6.08	0.38	1.13	N.S.
Control Group	15	6.51			

The table 4.1.4 shows that the mean scores of experimental group and control groups on pre test level in skill of speaking are found to be 6.08 and 6.51 respectively. the value SED and t-ratio between the groups are 0.37 and 0.70 respectively. the t-value is not significant at any level of significance. It indicates that both the groups can be treated equal for their entry level behavior at pre test.

Table 4.1.5: Significance of difference between the total mean scores in all English linguistic skills on pre test level of experimental and control group

Group	N	Mean	SEd	t-value	level of Significance
Experimental Group	15	5.57	4.35	0.009	N.S.
Control Group	15	5.71			

It can be seen from table 4.1.5 that the total mean scores in all the English linguistic skills of experimental group and control group on pre tests are found to be 5.57 and 5.71 respectively. The standard error of difference between the two groups is 4.35. The t-ratio is 0.009. Thus, the difference between the 2 means was statistically not significant. It indicates that both the groups can be treated as equal in terms of the students previous achievement in CRTs given in all specified skills of English language at pre test stage. So the entry level behavior of the students of both groups was found similar.

The entry level of students can be further studied by the data given in table 4.1.6. In this table pre test scores and post test scores of experimental group and control group in English Linguistic skills are shown with the calculated SEd and t-ratio.

Table 4.1.6: Significance of difference between the mean score of experimental and control group at pre test level

S.no	Name of unit	experimental group	control group	SEd	t-ratio	level of significance
1	skill of listening	5.42	5.65	0.42	0.54	N.S.
2	skill of speaking	6.37	6.11	0.47	0.55	N.S.
3	skill of reading	5.48	5.22	0.37	0.77	N.S.
4	skill of writing	6.08	6.51	0.38	1.13	N.S.

On the basis of results obtained from tables 4.1.1 to 4.1.6, it can be concluded that the students of both the groups were found similar for their entry level behavior before starting the experiment in terms of pre test scores. The students of the experimental group and control group did not differ significantly in their achievement on learning different English linguistic skills. This indicates that the students of both the groups i.e. experimental and control group were found to have almost similar achievement level at pre test stage.

It can also be seen from the table 4.1.6 that mean scores of the students was similar in experimental as well as control group at pre test level. Thus, our first hypothesis, “**there exist no significant difference between the students achievement using CAI and those who don't use CAI at pre test level**” is accepted.

4.2 SECTION-2 COMPARISON BETWEEN MEAN SCORES OF EXPERIMENTAL GROUP AND CONTROL GROUP AT POST TEST LEVEL

SECTION 2 presents the result of the execution of the experiment. The significance of difference between the mean scores of both experimental and control group on post test was found to by applying t-test and the results are shown in table 4.2.1 to 4.2.6. Table 4.2.5 shows the total mean score of all the English linguistic skill of both the groups experimental and conventional at post test level.

Table 4.2.1: Significance of difference between the mean scores of experimental group and control group on post test level in Skill of Listening

Group	N	Mean	SEd	t-value	level of Significance
Experimental Group	15	28.91		0.68	6.25
Control Group	15	24.65			0.01

It can be seen from table 4.2.1 that the mean scores of experimental and control group on post test in skill of Listening are found to be 28.91 and 24.65 respectively. The values of SEd is 0.68 and t-ratio between the two groups is 6.25. It is significant at 0.01 level of significance. It indicates that the students of both groups differ significantly at post test level. The comparison of mean scores further reveals that the mean scores of experimental group are higher than the mean score of control group. Hence, it can be interpreted that CAI was more effective than Conventional teaching in developing English Linguistic skills.

Table 4.2.2: Significance of difference between the mean score of experimental group and control group on post test level in Skill of Speaking

Group	N	Mean	SEd	t-value	level of Significance
Experimental Group	15	30.06		0.61	8.30
Control Group	15	25.05			0.01

It is evident from table 4.2.2 that the mean scores of experimental and control group on post test in skill of Speaking are found to be 30.06 and 25.05 respectively. The values of SEd is 0.68 and t-ratio between the two groups is 6.25. It is significant at 0.01 level of significance. It indicates that the students of both groups differ significantly at post test level. The comparison of mean scores further reveals that the mean scores of experimental group are higher than the mean score of control group. Hence, it can be interpreted that CAI was more effective than Conventional teaching in developing English Linguistic skills.

Table 4.2.3: Significance of difference between the mean score of Experimental group and control group on post test level in Skill of Writing

Group	N	Mean	SEd	t-value	level of Significance
Experimental Group	15	28.17		0.66	6.79
Control Group	15	23.71			0.01

It is evident from table 4.2.3 that the mean scores of experimental and control group on post test in skill of Writing are found to be 28.17 and 23.71 respectively. The values of SEd is 0.66 and t-ratio between the two groups is 6.79. It is significant at 0.01 level of significance. It indicates that the students of both groups differ significantly at post test level. The comparison of mean scores further reveals that the mean scores of experimental group are higher than the mean score of control group. Hence, it can be interpreted that CAI was more effective than Conventional teaching in developing English Linguistic skills.

Table 4.2.4: Significance of difference between the mean score of Experimental group and control group on post test level in Skill of Reading

Group	N	Mean	SEd	t-value	level of significance
Experimental Group	15	30.37	0.59	9.78	0.01
Control Group	15	24.57			

It is evident from table 4.2.4 that the mean scores of experimental and control group on post test in skill of Reading are found to be 30.37 and 24.57 respectively. The values of SEd is 0.59 and t-ratio between the two groups is 9.78. It is significant at 0.01 level of significance. It indicates that the students of both groups differ significantly at post test level.

The comparison of mean scores further reveals that the mean scores of experimental group are higher than the mean score of control group. Hence, it can be interpreted that CAI was more effective than Conventional teaching in developing English Linguistic skills.

Table 4.2.5: Significance of difference between the total mean scores in all English linguistic skills on post test level of experimental and control group

Group	N	Mean	SEd	t-value	level of Significance
Experimental Group	15	29.12	0.64	6.74	0.01
Control Group	15	24.81			

It can be seen from table 4.2.5 that the total mean scores in all the English linguistic skills of experimental group and control group on post tests are found to be 29.12 and 24.81 respectively. The standard error of difference between the two groups is 0.64. The t-ratio is 6.74. Thus, the difference between the 2 means was statistically significant at 0.01 level. It indicates that both the groups students differ significantly. The comparison of total mean scores further reveals that the mean scores of experimental group are higher than the control group.

Further, the post test scores of students can be studied by the data given in the table 4.2.6. In this, post test scores in all the English linguistic skills are shown with calculated SDS and t-ratio.

Table 4.2.6: Significance of difference between the mean score of experimental group and control group at post test level of different English linguistic skills

S,NO	Name of skill	Experimental group	control group	SEd	t-value	level of significance
1	skill of listening	28.91	24.65	0.68	6.25	0.01
2	skill of speaking	30.06	25.05	0.61	8.30	0.01
3	skill of Reading	30.37	24.57	0.59	9.78	0.01
4	skill of writing	28.17	23.71	0.66	6.79	0.01

On the basis of results obtained from tables 4.2.1 to 4.2.6, it can be concluded that the students taught through CAI achieved more scores than the students taught through CT. It can be seen from table 7.2.6 that students taught through CAI achieved higher marks than the students taught through conventional teaching at post test level. The t-value are also significant at 0.01 level of significance for all the skills. It statistically proves significant difference between the mean post scores in each skill. Thus, the second hypothesis “ **there exist no significance difference between the students achievement who develop English**

linguistic skills with the help of CAI and those who don't use CAI for developing English linguistic skills at post test level" is rejected.

This hypothesis was rejected because there exist a significance difference and students of experimental group are highly influenced with the use of CAI and their learning power has also improved. Students taught with CAI has effectively developed all the 4 skills of English language.

Discussion On Results

At the beginning of the study, both the groups i.e. experimental group and control group were allotted students randomly. Then both the groups were pre tested on CRTs. The result obtained by applying t-test showed no significant difference between the two groups (table 4.1.1 to 4.1.6). thus, both the groups were treated equal before going for experimentation. Thus first hypothesis that **"there exist no significant difference between the students achievement using CAI and those who don't use CAI at pre test level"** is accepted. In the study conducted by Nirdosh (2012) on the effect of self learning modules on environmental awareness in elementary school students belonging to different socio economic status and school systems and Sheetal (2013) on effect of CAI on academic achievement of 9th class students in biology control group and experimental group were equalized by giving the pre test before each unit.

The interpretation of the results in the table 4.2.1 to 4.2.6 showed that the performance of the CAI group of post test in each English linguistic skill is better than that of control group on post test. Thus CAI was found effective than conventional teaching for the achievement of students in developing English linguistic skills. The difference between the total score was also found statistically significant at .01 level (shown in table 4.2.6). hence, the obtained result were not in favor of second hypothesis. Thus our second hypothesis **"there exist no significance difference between the students achievement who develop English linguistic skills with the help of CAI and those who don't use CAI for developing English linguistic skills at post test level"** is rejected. It might be due to CAI provide better experience than Conventional teaching to students and also motivated them to learn better independently. The students of control group might have found conventional teaching as boring in comparison to CAI, thereby showing significant difference.

The overall results of the study indicate that CAI helped in improving the achievement of the students of Secondary level of Aarohi schools, Sirsa District in developing English linguistic skill among them. As it was observed during the experiment that CAI also developed the self confidence in students through self instruction, which provided self assurance and self recognition to the students during teaching learning through CAI.

Educational Implications

The present study can be an addition to the reservoir of knowledge in the field of teacher education too. The study can be boon for the students where they are generally taught through lecture cum demonstration method. It indicate that students can be taught better through new individualized methods of teaching like CAI. The findings of the study show that CAI has its effect not only in increasing student academic achievement but also in enhancing their views on latest teaching learning techniques.

The findings of the study presented in this chapter, have their direct implications for teachers, teacher-educators, students, curriculum planner and administrators too. The findings indicate that instructional material was developed and evaluated by calculating reliability and validity of the developed instructional material for both the groups and both the methods of teaching

i.e CAI for experimental group and CT for control group. It indicates that training should be given to pre service and in service teachers for developing CAI material. Development of CAI material should be made essential component of teaching subjects and the students should be given training to develop CAI material at least for one unit of each teaching subject. This will certainly prepare the students to develop CAI for Teaching in classroom situations. The teacher educators should motivate the pre service as well in service teachers to develop positive attitude towards the usage of CAI in teaching learning process. Especially at pre service level of training, the teachers should be motivated towards the use of computers in teaching learning process. The ability to develop and apply CAI in classroom can improve their interest in the use of computer technology in teaching learning process. The curriculum planner should also include some chapters in the text books especially prescribed for Teacher education courses that can be converted into CAI material easily. The in service teachers should be given special instructions by administrator to teach those particular chapters through CAI. Besides this, the administrator should motivate pre service as well as in service teachers to develop positive attitude towards the use of CAI in teaching learning process.

5.3 Suggestions For Further Researchers

Generally one of the outcomes of conducting any research study is to generate avenues for further study for the researchers. This study also paves the way in same direction. The following suggestions are offered for further work in the same field:

- The results of the present study throws a valuable light on the effectiveness of CAI on the achievement of the students , but the present study was based on a sample drawn from a limited geographical area and was confined to English subject of 9th and 10th std .Similar research can be put in with the sample drawn from wider geographical area and in other subjects too e.g. Science, Mathematics, Social Science, Hindi etc.
- Similar CAI material can be developed and evaluated in different subject like Hindi, Science, Social Studies, Mathematics etc.
- A comparative study of similar type can be carried out to find the comparative effects of CAI on the achievement of students in relation to their sex and level of intelligence.
- Besides above all, the result of a single study is insufficient to decide about the effect of CAP on the achievement of students in developing English linguistic skills among. Thus a series of studies on different schools and colleges are required to find the actual effect of CAP on the achievement in developing English linguistic skills.

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Content Based Image Retrieval Techniques

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Abstract

Distinguishing proof of images from an image database is an imperative investigate region in image processing. For the image retrieval number of procedures is created. In prior investigate the content based image retrieval is utilized, but due to the number of issues content based image retrieval method is proposed. This Paper speaks to the different image retrieval techniques. The content based image retrieval is the foremost compelling method for image retrieval. In this the content alludes to the different substance of the image such as color, Shape and Textures. Presently a day the block truncation coding procedure is favored for image retrieval. Out of this dot diffusion block truncation coding strategy is utilized in this paper. To pick up image by using dot diffusion block truncation two aspect descriptor are extricated which are color histogram include and bit design feature. The execution of image retrieval assignment is measured in terms of average precision rate and average recall rate.

Key Words: Image Retrieval, Content Based Image Retrieval, Block Truncation Coding, Dot Diffusion Block Truncation Coding, Average Precision Rate, Average Recall Rate.

1. Introduction

Content based image retrieval (CBIR), also known as content-based visual information retrieval (CBVIR) and query by image content (QBIC) is the application of computer vision techniques to the image retrieval problem, that's , the issue of looking for computerized pictures in huge databases.

Content-based image recovery is restricted to conventional concept-based approaches. "Content based" implies that the look resembles the content of the image instead of the metadata such as watchwords, labels, or depictions related with the image. The term "content" in this setting might allude to shape, texture , color or any any other information that can be deduced from the picture itself.. CBIR is alluring since looks that depend absolutely on metadata are subordinate on annotation completeness and quality. Having people physically explain images by entering metadata or a keyword in a expansive database can be time expending and keywords possible not be capture which craved to portray the image. The assessment of the adequacy of keyword-image look is not been well-defined and subjective in nature.

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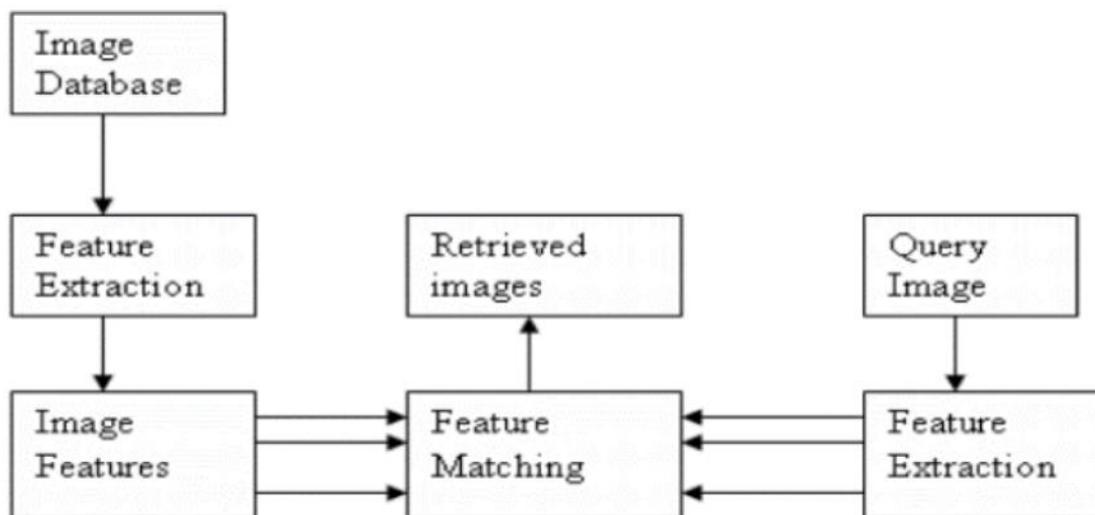


Fig. 1 Architecture of CBIR system

1.2 CBIR CLASSIFICATION

Content-based retrieval methods can be further classified into classes depending on the highlights they utilize such as shape, color and texture. Each highlights lesson is assist isolated into subclasses by the sort of the algorithm utilized for developing the highlight vector. Shape highlights are encourage partitioned as boundary based and region based highlight extraction methods. A few analysts classify spatial highlights of image into a isolated class.

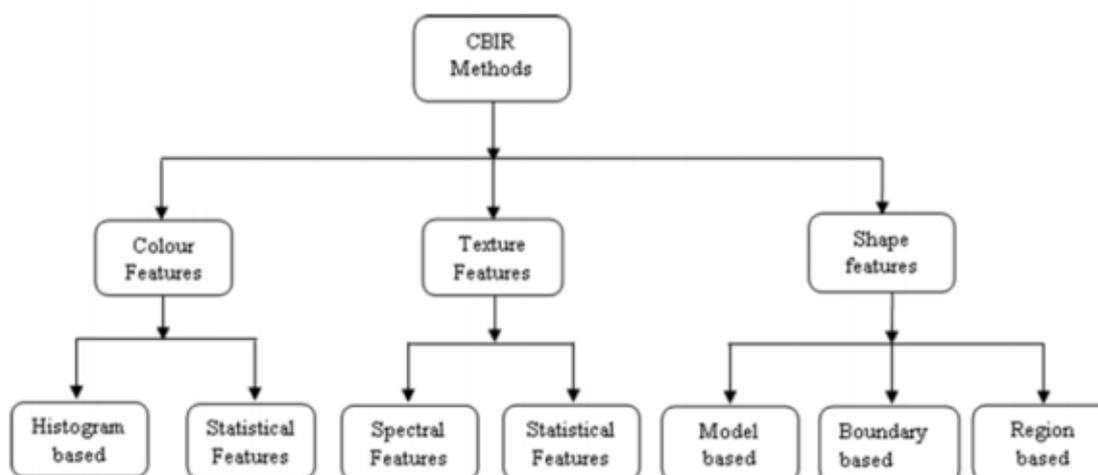


Fig. 2 Architecture of CBIR system

1.2.1 COLOR FEATURE

Color is the foremost noteworthy one in looking color collections of self-assertive subject matter. Color plays a vital role in human visual recognition component. All type of methods for speaking to color highlight of an picture can be classified into two set of groups:

1. Statistical methods of color representation
2. Color histograms

The preeminent as frequently as conceivable utilized color spaces are as takes after:

- CMY (cyan, magenta and yellow)
- RGB (red, green, and blue used in color monitors and cameras)
- Lab (CIE L^*a^*b , lightness, a and b are two color dimensions, from green to red and from blue to yellow) HSI
- CMYK (cyan, magenta, yellow, and black used in color printers)
- HSV (hue, saturation, and value).

1.2.2 TEXTURE

Texture gives us data on general course of action of textures and objects on the image. Texture isn't characterized for a partitioned pixel; it depends on the dissemination of escalate over the image. Texture has periodicity and versatility properties; it can be portrayed by fundamental bearings, differentiate, and sharpness. Texture examination plays an critical part in comparison of images supplementing the color include.

1.2.3 SHAPE FEATURE

Shape highlight gives the foremost critical data around an image. Shape highlights are as a rule depicted utilizing bit or locale of an image. The precision of shape highlights depends upon the division utilized to separate an image with more important objects. The shape descriptors are categorized into two module:

1. Locale based descriptor
2. Boundary based descriptor

A few boundary based agent shape portrayal strategies are polygonal approximations, chain codes, limited component and Fourier descriptor.

Step 1: Initialization:

Randomly select k centroids ($m_1, m_2 \dots m_k$)

For each point x

Find $1 \leq l \leq k$ such that $\text{distance}(x, m_l)$ is minimum

Add x to cluster C_l and update centroid m_l .

End For

Step 2: Negative Contribution Points

For each cluster C_l

For each point $x \in C_l$

If $\text{contribution}(x, C_l) < 0$

Move x to a cluster C_p such that contribution

(x, C_p) is maximum Update

centroid $_p$

End If

End For

End For

Step 3: Positive Contribution Points:

For each cluster C_l

For each point $x \in C_l$

If $\text{contribution}(x, C_l) \geq 0$

Move x to a cluster C_p such that is maximum Update centroid m_p

End if

End for

End for

1.3 Experiments And Results

Our test information comprised of 777 images having a place to 18 categories gotten from the College of Washington's Protest and Concept Acknowledgment for CBIR inquire about extend image information set . Each category contained altering number of images. All the images contained a printed depiction saying the notable frontal area objects. The images were clustered utilizing our calculation by means of the starting centroids chosen at irregular. The cluster whose centroid was closest in separate to the given test image was decided and the images having a place to the cluster were recovered. The comes about were at that point compared with images recovered utilizing the k-means clustering calculation with the same set of beginning centroids. A few of the recovered images for sample test images are given taking after execution measures were utilized to assess the execution of the algorithm.

Precision = Total number of retrieved relevant images

Total number of retrieved images

Recall = Total number of retrieved relevant images

Total number of relevant images

Conclusion

In this paper diverse image recovery procedures are considered. For this a 12 number of papers was considered and different image recovery strategies and their sorts and strategies are specified such as the content based and substance based and the Semantic based image recovery. But afterward on diverse clustering strategies and image highlights are utilized for Image recovery. It is watched that amongst all clustering strategies, K-Means is broadly utilized clustering strategy within the prepare of substance based image recovery. K-Means

performs proficiently and reduce slipped by time. Together with a DDBTC method can moreover

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Customer Engagement and Its Influences on Customer Satisfaction

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Abstract

Customer engagement and satisfaction is a major concept in marketing world, most of the marketers are concentrating how to develop their customer satisfaction level, because the secret of marketing or products success is the best satisfied customers. Customer engagement and experience increases the satisfaction. The main purpose of the paper is to reveal theoretically the relationship between customer engagement, and satisfaction and to test them empirically. Based on literature analysis, relations between customer engagement, and satisfaction have been revealed. The quantitative research (survey) has been chosen in order to meet the purpose of the research and to test those relationship empirically. The data is collected from structured questionnaire. Sample size is 110 and also descriptive research study is used as a research design and followed simple convenience sampling method. The respondents are the customers of the phoenix mall at Velachery in Chennai. In this study Pearson's correlation and regression are used for analysis. Result of this study is Majority of customers found that engagement is positively influencing their satisfaction.

Keywords: *Customer engagement, Satisfactions.*

Customer Engagement

Engagement was first conceptualized by Kahn (1990), who studied its psychological preconditions. Recently, organizations have been launching programs to engage customers and measuring levels of customer engagement as a response to the growing resistance of consumers to traditional marketing programs (Bagozzi & Dholakia, 2006). Since 2005, the term "engagement" has been increasingly used in the broader academic marketing literature (Brodie et al., 2011). However, in spite of the use of this term in recent practitioner and academic literature, systematic conceptualizations of engagement in marketing are scarce (Vivek et al., 2012) and a general consensus has not yet been reached (Hollebeek, 2011a; Javornik & Mandelli, 2013).

According to Brodie et al. (2011, 2013), customer engagement represents a highly context-dependent psychological state, characterized by a specific intensity level that plays a center role in the process of relational exchange.

Moreover, other relational concepts can act as antecedents and/or consequences in customer engagement processes. As such, customer engagement is defined as "a multidimensional concept comprising cognitive, emotional, and/or behavioral dimensions" (Brodie et al., 2011). Also Patterson et al. (2006) defined customer engagement as the level of a customer's physical, cognitive, and emotional presence in their relationship with a service organization. Engagement is acknowledged as a potentially highly context-specific variable that may impact consumer choice in relation to brands, products, or organizations (Patterson et al.,

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2006). Bowden (2009) described customer engagement as “a psychological process” driving customer loyalty, and primarily concerned with examining the formation and development of customer relationships. Engagement is further characterized by differing levels, which are individual and/or context specific (Bowden, 2009; Sprott et al., 2009).

Customer Satisfaction

Customer satisfaction is a business philosophy showing the responsibility and ability to meet customers' needs, managing and forecasting their expectations, and highlights the importance of creating value for them (Lager, 2008). Customer satisfaction may be defined as an individual's perception either discontent or pleasure by comparing the perceived performance of a product with respect to one's expectations (Mendoza, Marius, Pérez, & Grimán, 2007). Because shopping malls are not able to compete effectively without meeting their customers' expectations, so, customer satisfaction is the secret and the determinant of success in the hospitality industry. Therefore, if malls managers want to improve and develop their businesses, they should clearly understand the factors that provide higher value for customers (Yilmaz, Alpkán, & Ergun, 2005). Because customer satisfaction metrics provide information for mall managers which is necessary to understand and identify the real needs and requirements of customers, so they can have high value for improving this understanding (Kim, 2008).

Review Of Literature

It is acknowledged that customer engagement plays important role in long-term business relationships, “where other relational concepts act as specific engagement antecedents and/or consequences” (Brodie et al., 2011). Customer engagement for marketing decisions was stressed by Van Doorn, Lemon, Mittal, Nass, Pick, Pirner, and Verhoef (2010), who suggested customer engagement behavior could be a “useful framework for classifying and segmenting customers, based on their propensity to engage and the types of engagement behaviors they display”. However the peculiarities of customer engagement behavior differ in various business fields due to context-dependent nature of this phenomenon and due to various approaches to it.

Vivek et al. (2012) after throughout analysis of various research on this topic distinguishes two perspectives of its interpretation: 1) from practitioners point of view customer engagement is being understood as activities facilitating repurchase behavior and strengthening customer commitment to a brand; 2) from academic point of view customer engagement could be treated as a measure of intensity of participation with organization and other customer in a mutual knowledge exchange process.

Mollen and Wilson (2010) argues that there are three main themes related to customer engagement, i.e. mental state along with active and sustained cognitive processing; assurance of instrumental and experiential value; emotional bonding, pleasure and satisfaction. Similar suggestions regarding customer engagement conceptualization have been made by Cheung, Lee, and Jin (2011). According to them there are three possible ways to treat customer engagement, i.e. as a process, as a behavioral manifestation and as psychological state (Cheung et al., 2011). The interpretation of engagement may vary depending on actors, i.e., subjects (e.g. customers, students, employees) and objects (e.g. brand, service, stores.) of engagement (Brodie et al., 2011). However the performed analysis of recent scientific literature showed that customer engagement should be treated as a multidimensional construct and despite variety of its dimensions identified by various researchers in different fields all of them can be grouped into three main dimensions

(cognitive, emotional, and behavioral) in accordance with suggestions made by Macey and Schneider (2008), and Brodie et al. (2011; 2013). Kim et al. (2013) in their study of mobile user engagement identified cognitive, affective and conative stages of user engagement; those correspond respectively to above mentioned cognitive, emotional and behavioral dimensions. Expression of those dimensions determines different level of customer engagement in the particular context of the research leading to different outcomes.

Brodie et al. (2013) the consequences of customer engagement could be customer perceived value, satisfaction, trust, commitment and loyalty. All of them are the main measures of sustainable customer relationships as well. In this paper, referring to the purpose of the research, we focus only on two of them perceived customer value and satisfaction.

Kim et al. (2013) engagement in mobile technology and its omnipresent service leads to perceived value and satisfaction, which leads to future customer loyalty (Kim et al., 2013). This statement was supported by Rajah et al. (2008), who argued, that co-creation via active customer participation, interaction and personalization can influence customer satisfaction, which, along with such factors as trust, strengthens relationships between the company and customer. Kim et al. (2013) identified and supported by the empirical research the existence of the reverse relations: the better customer is satisfied with product/service, the more likely he is intended to engage into value creation. This kind of relations between customer engagement and satisfaction was also supported by the research of Dong et al. (2008). Relying on the diversity of various research results the reciprocal relations between customer engagement and satisfaction will be examined in the empirical part of this paper.

Conceptual Framework



Objectives Of The Study

- To analyze customer engagement and its relationship with satisfaction.
- To assess the influence of customer engagement on satisfaction.
- To offer suggestions to improve customer engagement which leads to the satisfaction.

Hypotheses Of The Study

H₀₁: There is no significant relationship between customer engagement and satisfaction.

H₀₂: There is no significant influences of customer engagement on satisfaction.

Research Methodology

Research Methodology

The research design for this study is descriptive in nature and quantitative research methodologies are used. A structured questionnaire was used for quantitative research. A structured questionnaire was designed and was pre-tested before using as a final instrument for collecting the data, and analyzes these to make a critical evaluation of the performance.

Primary data

The primary data were collected from the customers of phoenix mall at Velachery in Chennai, questionnaire prepared exclusively for this purpose, this questionnaire contains direct questions in the Likert scale.

Secondary data

Websites, magazines, articles were used widely as support to primary data as a secondary data source.

Sampling Design and Size

Researchers targeted all the customers of phoenix mall in chennai, a detailed study comprising of all customers is an arduous task for an individual researcher. Therefore, to keep the study within the reliable and manageable limits, **CONVENIENCE SAMPLING** was adopted. 150 questionnaires were distributed in the sample phoenix mall, in that 117 respondents was return back, and among that 110 questionnaires were found suitable for the study.

Pre Testing Procedures (Pilot Study)

Before the survey questionnaire was administered to the respondents, a pre-test of the questionnaire was conducted to test the validity of the questionnaire used for data collection 50 Questionnaires were distributed personally to the respondents, Some minor wording modifications to the questionnaire and certain changes were made which enabled the researches to plan the survey effectively and to accomplish the objectives of the study and made as a result of this process.

Reliability

The internal consistency reliability method was used in this study to determine the reliability of the scale questions by determining the co-efficient alpha. Cronbach's co-efficient alpha is a measure of the internal consistency of measurement.

Overall reliability of the study is .812

Analysis And Interpretation

H₀: There is no significant relationship between customer engagement and satisfaction.

Table: 1

		Satisfaction
Customer engagement	Pearson Correlation	0.885
	Significance(2-tailed)	0.001*
	N	110

Source: Primary data; *significant at one percent level.

In order to test the relationship, Pearson correlation was applied. From the result it is observed that there is positive correlation between independent variable and satisfaction. The customer engagement has the r value of (r=0.885) from the p value in the correlation matrix, it is observed that the level of independent variables relationship was significant at 0.01 level. Hence the hypothesis is rejected. So it is concluded that there is significant strong relationship between customer engagement and satisfaction.

H₀: There is no significant influences of customer engagement on satisfaction.

Table: 2

Model Summary

R	R Square	Adjusted Square	R Std. Error of the Estimate	F	Sig.
.885	.782	.782	2.318	1545.670	.000*

- a. Dependent Variable: satisfaction
- b. Predictors: (Constant), customer engagement

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.
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	B	Std. Error	Beta		
(Constant)	2.245	.362		6.195	.001
Satisfaction	4.388	.112	.885	39.315	.001*

Source: Primary data computed; *significant at one percent level.

Above the table indicates that the influences of customer engagement on satisfaction in the phoenix mall. Here, customer engagement is considered as independent variables and satisfaction is considered as dependent variables.

Further, Linear regression is employed, to test the above stated hypothesis. In the regression model, the p-value is found to be significant at one percent level. Hence, the stated hypothesis is rejected. The measure of strength of association in the regression analysis is given by the co-efficient of regression determination which is denoted by the adjusted R-square value. The adjusted R-square value is found to be 0.782 which implied that 78.2 percent of the variation on the level of dependent variable is explained by the independent variables.

From the regression equation, it is inferred that customer engagement is positively influencing the satisfaction of customers in phoenix mall.

Findings Of The Study

From the Pearson Correlation analysis, the customer engagement r value is $r=0.885$ from the p value level was significant at 0.01 level. So it is concluded that there is significant strong relationship between customer engagement and satisfaction.

From the regression analysis, the adjusted R-square value is found to be 0.782 which implied that 78.2 percent of the variation on the level of dependent variable is explained by the independent variables. From the regression equation, it is inferred that the customer engagement is positively influencing the satisfaction.

Suggestions

Based on the study, the following suggestions are proposed.

First, in order to increase customer satisfaction by trust in brand, creating social bonding through developing brand community, and activating the innovation of new products can be developed. Second, customer satisfaction could be increased by improved service quality. Third, for enhancing the customer satisfaction through customer engagement, customer satisfaction should be carried on, for examples by following up complaints for the customers, giving more outlet to make sure that services are directly available, and giving facilities that satisfy the customer needs. To respond these changes effectively, companies that offer products and especially in stores, need to better understand the technology dynamics in order to offer better services and products and promote their businesses.

Conclusion

In the marketing world, customer engagement is an attitude of emotional readiness, which has effects on the satisfaction. It is evident from the literature review that when management of malls motivates its customers then the resultant of satisfactions will be equally high. Through the proposed study that customer engagement directly and indirectly influencing that customer satisfaction is identified. Researcher suggested that the management of malls can take required steps to improve the customer satisfactions by following the recommendations that were suggested and introduce the schemes by considering customer engagement associated with the customer satisfaction.

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Drivers of Google Pay Adoption among youth: An empirical study

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Abstract

Google Pay is a mobile payment app which has been developed by Google to power in-app tap- to-pay purchase on mobile devices, enabling users to make payments with Android phones, tablets, etc. It offers various services like payment of utility bills, transfer money, etc. This has paved a way for the government to build a cashless economy. It is a simple way to send or receive money with zero fees. This paper tries to study the significant factors and customer satisfaction among the users of the Google Pay app. The study concludes that Google pay will become an extremely significant distribution channel in the future. Further to this, the paper indicates that all the independent variables have shown a significant relationship on customer satisfaction. It also revealed that the most satisfied customers always recommend others to use Google pay App for conducting various transactions.

Keywords: Google Pay, Adoption, Customer Satisfaction

1.1 Introduction

Technology development has resulted in payment transactions through direct communication. It supports the growth of advanced payment systems. Online payments have gone up pushing the economy into a technological state. Mobile payment system enables the user to make the payments through a mobile device. Mobile payment is being adopted worldwide. The demonetization in November 2016 accelerated the use of mobile payment apps. Speed and

convenience of mobile payment services attracted more and more people. Factors like advanced technology, increased use of smartphones, efforts by the government to build a cashless economy, etc. supported the growth of mobile payment. There are many companies that offer mobile payment apps. The most popular ones are Apple Pay, Google pay and Samsung pay.

Google by introducing Google Pay has made online payments much easier. Google pay is a digital wallet platform and online payment system developed by Google to power in the app and tap-to-pay purchases on mobile devices, enabling users to make payments with Android phones, tablets or watches. It is a simple way to send or receive money with zero fees. Google pay makes it easy to keep track of purchases and get personalized suggestions to save time and money. Google pay service is provided to users resident in India by Google India Digital Services Private Limited. It offers services like pay and receives money straight from a bank account, payment of utility bills, transfer money, loan facilities, etc. It is as easy as handing over cash, but with added security.

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Google pay was originally launched as Android Pay; the service was released at Google I/O 2015. It used technology from the carrier-backed Softcard-Google had acquired its intellectual property in February 2015. At launch, the service was compatible with 70% of Android devices and was accepted at over 7, 00,000 merchants. Google wallet still powered web-based play store purchases. It also provides some app-based peer-to-peer payment options. On January 8, 2018, Google wallet merged into Android Pay and rebranded as Google Pay. On September 18, 2017, Google launched Tez as a payment service in India. When Tez launched, it was largely aimed at bank-based payments. But Google soon added bill and utility payments to the service. Google wants to turn Tez into a fully featured app that can be used for everything payment related in India. As a part of that, on August 20, 2018, Google rebranded Tez to Google pay.

Google pay is available in over 20 countries with 25 million monthly active users. It saw about 860 million transactions worth more than 2, 00,000 crores. Google has teamed up with HDFC Bank, ICICI Bank, Federal Bank, Kotak Mahindra Bank. Google pay will allow its users to get pre-approved loans. Customers can use Google pay to transact at over 2000 online apps and sites. Google plans to enable payments at retail locations like Big Bazaar and FBB. It faces heavy competition from similar payment apps. But Google pay services have already made considerable progress.

1.2 Literature Review

Dennis Dennehy & David Sammon (2015) studied about trends in mobile payments. They indicated that mobile payments are increasingly being adopted by organizations as a new way of doing business in the 21st century. The use of m-payments as a new payment channel has resulted in an increase in the volume of literature dedicated to the topic. There has been a significant increase in m-payment research appearing in the journal. The study and practice of m- payment systems can be considered as a research domain that will continue to get increased attention from researchers.

M.Manikandan & S.Chandramohan (2016) studied about the awareness level of mobile wallets services and stated that it is important for providers to understand the awareness level of customers. This study also proves that every respondent is having a smart phone with them so it is easy for the service providers to capture this age group. But it was identified from the study; lack of awareness became the dominant reason for the poor practice of mobile wallet services.

Octavian Dospinescu (2012) studied on E-wallet a new technical approach and objective of this study is to propose a new technical approach regarding the „e-wallet“ concept. That is to improve the present level of knowledge by joining the near field communication technology and the classic concepts about money. This study considers that the future of the electronic payment systems will be based on the following defining elements: the mobile environments and devices, the electronic wallet and standards meant to increase the flexibility of the transactions.

S Manikandan & J.Mary Jayakodi (2017) conducted an empirical study on consumer's adoption of mobile wallets the study mainly focuses on factors that influence the consumers to use and they also analyze problems faced by consumers. They find that the mobile wallets usage awareness has spread among the people in India due to the government policy of demonetization & this has forcefully induced the usage of mobile wallets. The security & safety of funds plays challenging factors for users.

Sanjeev Pandashetty & Krishna Kishore SV (2013) studied on consumer adoption of mobile payments the study focuses on consumer's willingness to the adoption of mobile payments and identifying the factors that have yielded consistent results influencing in the adoption of mobile payments. This study finds that teenagers are aggressive in adopting mobile payment applications. They recommended that other age groups can also be slowly pursued their mobile payment application.

Shamsher Singh & Ravish Rana (2017) studied Consumer Perception of digital payment mode and found that demonetization has presented a unique platform for the adoption of digital payment, as an alternative to cash for Indian consumers. The increasing use of the internet, mobile penetration and the government initiative such as Digital India are acting as a catalyst which leads to exponential growth in the use of digital payment. The future economy will be driven by a cashless transaction which will be possible only through digitalization of payment mechanism at a different location such as the smart phone, internet banking, card transactions, etc.

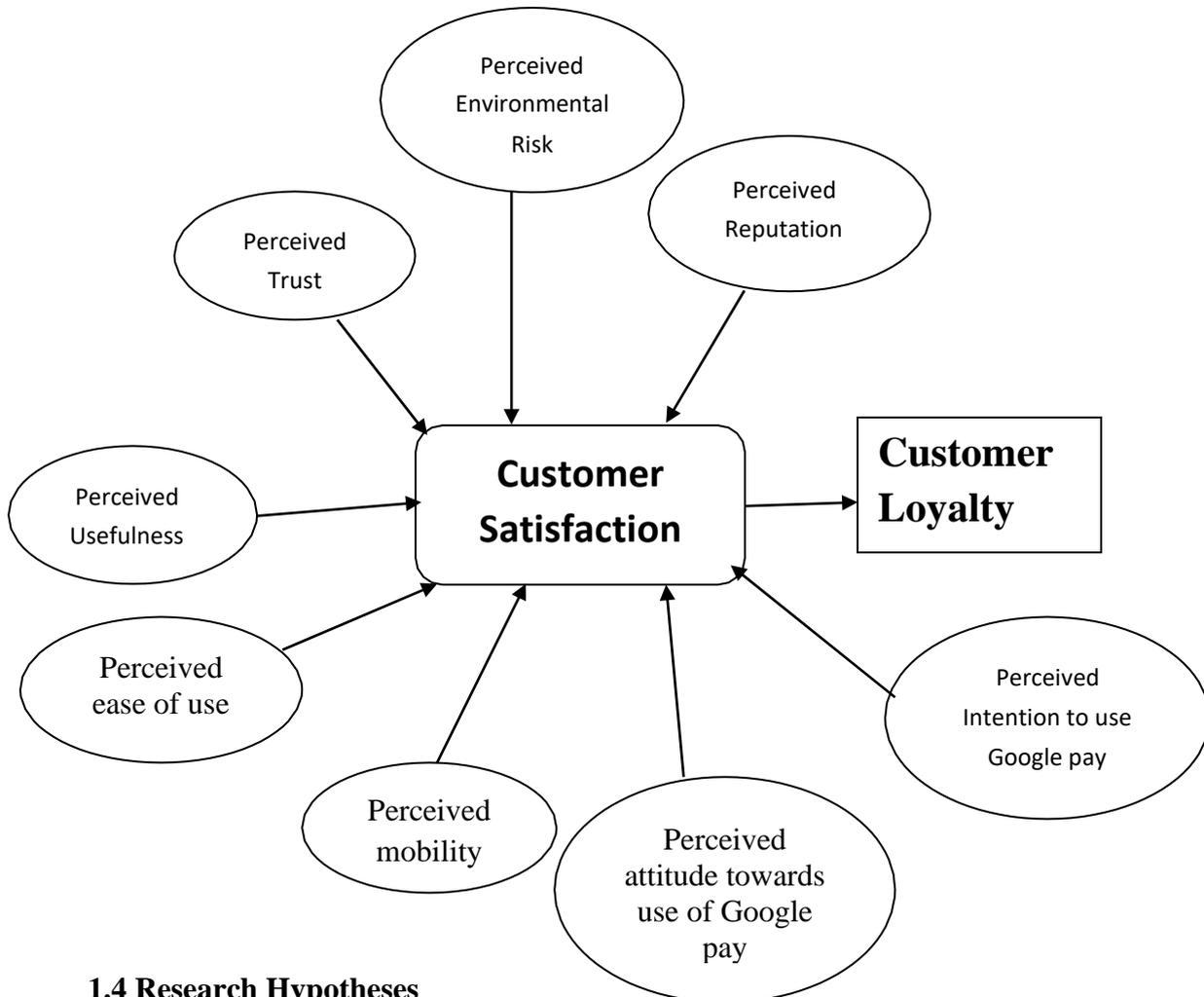
Tomi Dahlberg & Niina Mallat (2002) studied on mobile payment service development and indicated that the new payment solutions have mostly been technology driven at the cost of convenience and value to the consumer. This study investigates the characteristics of mobile payment solutions that increase or decrease consumer's willingness to adopt these solutions. From the managerial point of view, the research highlights the importance of ease of use, low transaction costs, security and wide applicability of the mobile payment solutions.

Tomi Dahlberg et al., (2006) studied on mobile payment market .Research stated that changes and innovations in the technological environment have driven the development of mobile payment so far. Many contingencies and competitive factors impact the mobile payment market and that mobile payment services compete with advanced physical and electronic payment services. Mobile payment market is currently under transition with a history of numerous tried and failed solutions and the future of promising but yet uncertain possibilities. To succeed, mobile payment services have to be competitive with other payment services in all payment situations.

1.3 Conceptual Frame Work

Figure 1 demonstrates the conceptual framework of the study. It exhibits the relationship of eight key predictors of service quality on customer satisfaction regarding Google pay services among youth. The study also intended to examine the relationship between customer satisfaction and customer loyalty among the users of Google Pay.

Figure 1; Conceptual framework



1.4 Research Hypotheses

H1a: Perceived reputation will have a significant relationship on customer satisfaction.

H1b: Perceived environmental risk will have a significant relationship on customer satisfaction.

H1c: Perceived trust will have a significant relationship on customer satisfaction.

H1d: Perceived usefulness will have a significant relationship on customer satisfaction

H1e: Perceived ease of use will have a significant relationship on customer satisfaction

H1f: Perceived mobility will have a significant relationship on customer satisfaction

H1g: Perceived attitude towards use of Google pay app will have a significant relationship on customer satisfaction

H1h: Perceived intention to use Google pay will have a significant relationship on customer satisfaction

H1i: Customer satisfaction will have a significant relationship on customer satisfaction

1.5 Methodology

This section deals with survey instrument, the sample selection, data collection and reliability of the data. A self-administered questionnaire was prepared for this study was

divided into two sections. The first part focuses on the demographic profile of the respondent, including his/her age category, educational qualifications, occupation and monthly income. The second part was framed to identify various factors affecting Google Pay adoption. The sample respondents were given a set of questions and asked to mark their response regarding each question, using a Likert scale (1-5), with responses ranging from "strongly disagree" to "strongly agree". The collected data were analyzed based on correlation using the Statistical Package for Social Sciences (SPSS) version 21 computer program. In order to assess the factors influencing adoption, the primary responses gathered in the form of a consumer survey that was prepared and given to 104 responses among youth and of different educational levels across the country. The chosen respondents are those who are using the Google pay app at least for last six months. A digital online form was made using "Google Documents" in the same questionnaire style; then, the link was shared through e-mail and Whatsapp for getting users responses. Once a participant finished the questionnaire, the raw data was recorded on a spreadsheet that could be retrieved and downloaded only by the researcher. The study also used secondary data from various published sources such as, journals, newspapers, magazines and websites. Since this is an empirical research based on both exploratory and conclusive research designs.

1.6 Reliability analysis

To find out whether the questionnaire was reliable, the researcher measured its internal reliability, which is the most common method of measuring reliability. Cronbach's alpha test was used [Nunnally and Bernstein, 1994]. A minimum alpha of 0.6 is said to suffice for the early stage of research.

1.7 Profile of the study respondents

Of the respondents, 54.8% were male and 45.2% were female. Other details of the sample are as follows: 79.8% of the respondents were in the age group of 20-30 years; 7.7 % of the respondents were in the age group of above 40 years; 6.7 % of the respondents were in the age group of below 20 years, and rest of them included in the age group of 30-40 years. The study revealed that majority of the respondents belongs to the urban population (41.3%), followed by semi-urban (30.8%) and rural (27.9%). 59.6% of the respondents were graduates, followed by postgraduates (26.0%); and 55.8% had a monthly salary between Rs. 150,001 and Rs. 25,000. In terms of occupation, 58.7% of the respondents have to work in private organizations. With respect to their usage level, many of the respondents (61.5%) were regular users.

1.8 Pearson Correlation Analysis

The Pearson correlation analysis was used to measure the variables. The below table 2 shows the correlation results among all the constructs employed in this study. The results indicates that there are significant positive correlations between perceived reputation and customer satisfaction ($r = .543, p < 0.01$), perceived environmental risk and customer satisfaction ($r = .263, p < 0.01$), perceived trust and customer satisfaction ($r = .713, p < 0.01$), perceived usefulness and customer satisfaction ($r = .704, p < 0.01$), perceived ease of use and customer satisfaction ($r = .656, p < 0.01$), perceived mobility and customer satisfaction ($r = .539, p < 0.01$), perceived attitude towards use of Google Pay and customer satisfaction ($r = .806, p < 0.01$), perceived intention to use Google pay and customer satisfaction ($r = .811, p < 0.01$), customer loyalty and satisfaction ($r = .754, < 0.01$).

Table 1: Results from Pearson Correlation Analysis

Constructs used	Pearson Correlation Value
Perceived Reputation	.543**
Perceived Environmental Risk	.263**
Perceived Trust	.713**
Perceived Usefulness	.704**
Perceived Ease Of Use	.656**
Perceived Mobility	.539**
Perceived Attitude Towards Use Of Google Pay	.806**
Perceived Intention To Use Google Pay	.811**
Customer Loyalty	.754**

** . Correlation is significant at the 0.01 level (2-tailed). Source: Compiled by the researcher

1.9 Conclusion and managerial implications

Mobile payment systems are changing the traditional ways of making payments, receiving money, doing shopping, etc. Competitions are prevailing among mobile payment apps to improve their performance and attract more users. Hence it is important to evaluate the adoption level of the app and the drivers of adoption. The current study examined some significant factors which influence customer adoption of Google Pay. The results shows that the attitude and intention to use have high positive relationship towards customer's adoption of the Google Pay app. Google Pay attempts to provide risk-free transactions in an easy manner which has resulted in high customer satisfaction. Usefulness of Google Pay in making effective transactions has created a positive attitude towards its usage. Through better performance and services, it would create more satisfied and loyal customers. Taking into account the positive impact of these factors on customer satisfaction, the service provider can make improvements in these factors to create a better image among the users. As per the findings of the study, it was able to conclude that there is a positive response to the use of Google Pay. However, measures must be taken to provide proper awareness and knowledge to attract more people to use Google pay. It is necessary to educate consumers about the simplified usage of this paid app. It can be concluded that Google pay is accepted as one of the effective payment apps to make safe and secured transactions.

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Problems Faced By Women Police Personnel With Special Reference To Kerala Police: A Study

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Abstract

This paper aims to study the array of problems faced by women in police workforce as well as their job satisfaction. This field of work has been always termed as a man's job. But the current statistics show that a fair share of women occupy different positions in the police workforce. Working women have to face several problems, ranging from societal pressures to the balancing act between work and life. This becomes all the more obvious in a job where men were always the rulers and that follows quite a patriarchal regime. Women in police force go through a lot of issues like lack of proper sanitation facilities, transportation facilities, more number of night shifts etc. This paper is a well thought out analysis of such problems which has also come up with viable solutions to it. The pedagogic tools used are percentage analysis and also by preparing questionnaire. For the purpose of data collection personal interviews have also been taken thus making it primary source of data. The study is conducted in Kerala district.

Keywords: Women Police, Job Satisfaction, Sanitation Facilities, Transportation Facilities, Night Shifts, Family Work Life Balancing.

Introduction

The Kerala State Police is the state police for the Indian state of Kerala, and is chargeable for broad enforcement of law in a statewide aspect. In Thiruvananthapuram, the capital district of Kerala, lies its headquarters. There are five Police Commissionerates and 14 Police districts which are headed by District Police Chiefs, rank of deputy Inspector General of Police / Superintendent of Police ranks as the case is. The additional Director General of Police area unit responsible of a specific functions like Administration Headquarters, Modernization, PCR, CBCID, Intelligence, Traffic and Training. There are different branches for the Kerala Police like the Crime Branch, Armed Police, Kerala Police Cyber Dome and so on. They conduct several campaigns towards a better state like campaign against online illegal activities. They even have innovative initiatives like CCTNS (Criminal Crime trailing Network System), 'Janamythri' community policing programme, clean campus safe campus programme, Student police cadet, Cyberdome, Sabarimala virtual queue, Subhayathra, Nirbhaya and Pink Patrol and women self-defense training program. Job satisfaction is one among the foremost researched variables within the space of geographical point scientific discipline and has been related to various psychological problems starting from leadership to job style. Job satisfaction may be a gratifying spirit ensuing from the appraisal of one's job, achieving or facilitating the accomplishment of

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one's job values; and also the extent to which individuals like or dislike their jobs. Job satisfaction theories have a strong overlap with theories explaining human motivation. The most common and prominent theories in this area include: Maslow's needs hierarchy theory; Herzberg's motivator - hygiene theory; the Job Characteristic Model; and the dispositional approach.

Women in the field of police were always seen with skepticism and has never been well received. However, changes in social conditions, the increasing involvement of women in crime either as accused or victim, growing juvenile delinquency and domestic violence necessitated employment of women in greater number in the Kerala Police. Women officers use less physical force and are better in defusing violent confrontations with the public. They also possess better communication skills than their male counterparts and are way more able to elicit the public's cooperation and trust. Thus women officials are becoming important in the Kerala Police.

Review Of Literature

Literature review simply means discussing already published information relating to a particular subject, a particular area of study etc. It helps in gaining more idea about previous works done in that area. It helps in getting more knowledge base, develop a research methodology, design a framework for the research etc. Following publications were referred to widen the knowledge for our research purpose:

- **Pagutharivu, R (2014)**, conducted a study on "Problems faced by the families of police personnel a futuristic study". His findings includes the problems faced by police officers in the form of loss of time spent with their family. Many families were dissatisfied with the police job as they found it stressful. In this study all police personnel felt that they faced mental difficulties as they have to work in stressful situations. Almost 97% suffered familial problems like people not understanding norms, law and order, not respecting them, treating police as comedians etc. 83% faced financial problems due to frequent travelling, spending money for food in out station duties. Health difficulties were also common among majority.
- **Saha, Atanu (2013)**, conducted a study on "Ergonomic studies on police personnel working in rotating shift in West Bengal, India. Main findings were that many police personnel describe policing job as stressful. Their job related attitudes like salary, holiday, arms and ammunitions are not upto the mark. Study also found that it created many psychological, physiological and family life problems due to attitudes of job. Details regarding their shift rotation system, working status and job performance were also identified. Study also revealed that policing job is highly associated with oxidative stress, diabetes and cardiovascular risk etc.
- **Chiranjeevi, K (2008)**, conducted a study on "A study of human resource management with reference to reformation and restructuring of police personnel in West Godavari district". Main findings were that due to fast changing values in society, rapid urbanization, growth of slums, terrorism etc. police is under severe stress. Not only crimes are rising but they are becoming more and complex. Neither structure of police nor legal system are adequate to cope up with challenges. It is also inferred that there is an urgent requirement for reforms in police department.
- **Das, Adyasha (2005)** in their study of "Changing human values and leadership styles-A case study on Indian police" analyzed police leadership, ethic structures and metamorphosis of values among officers of the Indian Police Service. They examined

the application of leadership theories to Indian Police Service and responses indicated success in identifying consistent relationship between leadership theories and the police leader's performance. They also identified that officers today are more aware about dignity, freedom and rights. Analysis revealed that autonomy, individualistic work patterns, competition and conformity as positive indicators facilitating performance. Authority, team spirit, manipulation and autocracy are not regarded as necessary for facilitating performance.

- **Pattanaik, Sowesh (2005)** conducted a study on the topic "Police, its work processes and the community: an empirical study of a district in Orissa and attempted to study relationship between legal, organizational, political, social and cultural variables that characterize police's work. The conceptual and theoretical framework were drawn from the Anglo-American literature. They observed that in the colonial situation, police officer was effectively the only government representative and even today it remains to be the most visible manifestation of the state. Study got overwhelming response for approaching police for settlement of dispute. Reluctance to seek help from police was due to cumbersome and expensive legal procedures.
- **Saxena, Chaya (2017)** studied the topic "Misuse of investigative powers of police and human rights of victims of crimes" and found that police comes first in contact with the victims of crime and as an agency of state has a vivid role to play in ensuring fair and just treatment to victims human rights. Police role has been defined and delineated by the means of various international instruments. They prescribe police role as inclusive of a duty to uphold human rights of all, protection from crimes etc.
- **Varma, Praneetha (2003)** conducted study on the topic "Functioning of all women police stations in Tamil Nadu- A Sociological Approach" and they attempted to describe the functioning of all women police stations. Their main findings were that caste had lesser influence on functioning of all women police stations than class. Other findings were that disposal of petitions were faster than before the introduction of women police stations, their functioning women police stations are more oriented towards social service, they fulfill the objectives established by the Tamil Nadu government. Suggestions like sectoral improvements were given for their effective functioning.
- **Harisingh, Jija Madhavan (2015)** studied the topic "Gender status in Karnataka police a study of entry level cadres in women police". Their findings were that women officers are proven to be as competent as their male counterparts, found to be more flexible, emotionally independent, assertive, self-confident etc. On the other hand, male executives were authoritarian and prejudiced when compared to women studied. Also, it was found that women officers are less likely to use excessive force. It was inferred from the study that women are less probable than their male colleagues to be involved in fight or other assaults. They suggest that presence of women can bring many beneficial changes.
- **Ahamed Khan, Akram Khan Istihak (2013)** in their study of "Custodial violence –A study of the state of Bihar" found that custodial violence and abuse of police power is not only peculiar for Bihar but it is widespread throughout the country. It was understood that lack of enforcement of law, slow pace of judicial enquiries and criminalization of police strata have made the custodial violence prevalent. They found that torture has become an inevitable part of police investigation. Many steps like service of lawyer

under circumstances of near interrogation, right against self-incrimination were ensured to the accused for protecting their interests.

- **Suman (2016)**, in his study “Human Rights Violations by Punjab Police” highlights the necessity of human rights and its global perspective. It studies on the sensitivity towards human dignity, human life and human freedoms can serve as an index of the progress of a civilization. It is based on a combination of historical, descriptive and empirical research methods. It also extends into the broader theoretical expanse of the problem while correlating the internal and external linkages of the complexities of the Human Rights violation.

Need And Importance Of The Study

When feminism is no longer an alien theory and gender equality is accepted as the need of the hour, identifying issues that women face in the society holds much importance. Contemplating on this very issue, it is quite evident that women in different work places face a number of problems. When it comes to a field like police force that has always been termed as a 'man's job', things get even more complicated. This notion that is the relic of a patriarchal society can cause various troubles for a woman police officer. This study aims to research on the multitude of problems that women face as police personnel and come up with viable solutions for the same.

It is important to identify and create a discourse on such issues as gender equality is a major pillar of social development. Gender equality cannot be simply attained with women coming forward to various work fields. It is of utmost importance to maintain equality within the work force by eradicating or minimizing their problems.

Statement Of The Research Problem

It is 2019 and women are no longer bound within the four walls of their homes. Today, we see the presence of women in every field of work, be it astronomy or fashion. Women are no longer constructed within the social frame wherein they are only seen as beauty gurus, teachers or nurses. Women all over the world are breaking stereotypes and working towards a better future. There is a large share of women in police work force as well. Indeed, things are looking up in terms of gender equality but there are many problems that women have to face in this field, simply because they are born into the so called "weaker gender". Thus our study aims to identify the existence of such gender based issues that women face as police personnel and to research the extent of this issue.

Scope Of The Study

The study is conducted on the topic “Problems faced by women police personnel with special reference to Kerala police”. For the study purpose various police stations were visited and opinions of women police officers were collected. It mainly aims at identifying problems faced by women police officers and providing suggestions for the same.

Objectives Of The Study

- To understand the history of Kerala Police
- To evaluate the problems faced by women police personnel in Kerala Police force
- To examine the job satisfaction of women personnel in Kerala Police force
- To suggest the welfare measures and steps for the development of women police personnel in Kerala Police

Research Methodology

- Research Design: A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to research purpose with economy in procedure.
 - Sampling Design: Sampling Design refers to the technique or procedure that researcher would adopt in selecting items from the sample.
 - Sampling Size: 100 respondents are selected after considering time and cost.
- Sampling method:** Simple Random Sampling method is used to collect data from the respondents.
- Data Collection: Data collected includes both Primary data and Secondary data. Primary data is the data collected for the first time by the way of questionnaire. Secondary data is the data collected from published sources like previous reports of the company, articles and websites. These sources act as means of reliable secondary data effective for analysis.
 - Data Analysis Tools:
 - Percentage Analysis
 - SPSS
 - Presentation: The collected data is primarily, presented in the form of tables to provide a better understanding of data.

Limitations Of The Study

The limitations of this study are as follows:

1. The study was conducted within a short span of time.
2. The sample size is limited only to 100 respondents
3. Perceptions and responses of people may be biased.

Analysis And Interpretation

Table 1 FACTORS INFLUENCING IN SELECTING POLICE JOB

Sl no	Particulars	Frequency	Percentage
1	Personal interest	42	42
2	Job security	12	12
3	Advice from family	12	12
4	Advice from friends	27	27
5	Random decision	14	14
	TOTAL	100	100

Source: Primary Data

Interpretation

42% agreed that they chose police job out of personal interest. 12% said that it is due to job security. 12% selected job due to advice from family. 27% selected job due to advice from friends. 14% chose as a random decision.

Table 2 JOBS PREFERRED BY WOMAN OFFICER

Sl No.	Jobs preferred	Frequency	percentage
1	Administrative jobs	20	20
2	Similar jobs like men	18	18
3	Female department jobs	12	12
4	Less risky but competent jobs	14	14
5	Risky jobs	24	24
6	Don't know	12	12

	TOTAL	100	100
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Source: Primary Data

Interpretation

Out of the hundred women polices 20% of them prefer to do administrative jobs, 18% prefers to do similar jobs like men, 12% prefers female department jobs, 14% prefers less risky but competent jobs, 24% prefers risky jobs and only 12% of them said they weren't sure about it.

Table 3 WHETHER THIS JOB HAS HELPED IN GAINING RESPECT AMONG THE PUBLIC

SL.N o.	Options	Frequency	Percentage
1	Strongly Agree	28	28
2	Agree	36	36
3	Neutral	14	14
4	Disagree	10	10
5	Strongly disagree	12	12
	TOTAL	100	100

Source: Primary Data

Interpretation

28% of the respondents strongly agreed that this job has helped them to gain respect among the public, 36% of them agreed to it, 14% of them were neutral about it, 10% of the respondents strongly disagreed to it and 12% of the respondent strongly disagreed to it.

Table 4 NUMBER OF NIGHT SHIFTS WORKED IN A MONTH

Sl. No.	No. of night shifts	Frequency	Percentage
1	0-5	24	24
2	5-10	32	32
3	10-15	16	16
4	15-20	13	13
5	More than 20	15	15
	TOTAL	100	100

Source: Primary Data

Interpretation

According to the questionnaire's results 24% said have to work 0-5 night shifts on an average, 32% said 5-10 night shifts, 16% said 10-15 night shifts, 13% said 15-20 and 15% said that they will have to work more than 20 night shifts in a month.

Table 5 SANITATION FACILITIES AVAILABLE FOR WOMEN IN THE POLICE DEPARTMENT

Sl. No.	Options	Frequency	Percentage
1	Well comfortable	26	26
2	Comfortable	13	13
3	Moderately Comfortable	34	34
4	Uncomfortable	15	15
5	Very uncomfortable	12	12
	TOTAL	100	100

Source: Primary Data

Interpretation

26% of the respondents said that the sanitation facilities available for women in the police department is very comfortable, 13% said it's comfortable, 34% agreed that its moderately comfortable, 15% said its uncomfortable and 12% said its very uncomfortable.

Table 6 WHETHER PROPER TRANSPORTATION FACILITIES ARE AVAILABLE FOR WOMEN

Sl. No.	Options	Frequency	Percentage
1	Strongly disagree	14	14
2	Disagree	12	12
3	Neutral	33	33
4	Agree	22	22
5	Strongly agree	19	19
	TOTAL	100	100

Source: Primary Data

Interpretation

In the survey 14% of them strongly disagreed about proper transportation facilities in the department, 12% disagreed to it, 33% were neutral about it, 22% agreed that the transportation facilities are good and 19% strongly agreed to it.

Table 7 BALANCING PROFESSIONAL LIFE WITH PERSONAL LIFE

Sl. No.	Particulars	Frequency	Percentage
1	Through educating family	20	20
2	Proper planning	46	46
3	Finds it difficult	22	22
4	Not able to manage	12	12
	TOTAL	100	100

Source: Primary Data

Interpretation

Out of 100 respondents, 20% balance their work through educating the family, 46% of them balance their life by proper planning, 22% of the respondents find it difficult to manage their life with personal life while 12% were not able to manage it.

Table 8 ANALYSIS OF THE EFFECT OF FREQUENT TRANSFERS OVER PERSONAL LIFE

Sl.No	Particulars	Frequency	Percentage
1	Strongly disagree	12	12
2	Disagree	14	14
3	Neutral	28	28
4	Agree	32	32
5	Strongly agree	14	14
	TOTAL	100	100

Source: Primary Data

Interpretation

Out of 100 respondents, 12% disagrees that frequent transfers have affected their personal life while 14% have disagrees it. 28% of the respondents have a neutral position about this. 32% agrees that it affects their personal life while 14% strongly agrees.

Table 9 ANALYSIS ON SEXUAL HARASSMENTS IN THE WORK PLACE AND HOW THEY ARE REPORTED

Sl.No	Particulars	Frequency	Percentage
1	I haven't faced any harassment	80	80
2	I have but never reported as it may affect my profession	8	8
3	I reported immediately to the forum	8	8
4	I reported it to my family	2	2
5	I ignored	2	2
		100	100

Source: Primary Data

Interpretation

Out of the 100 respondents 80% haven't faced any harassment, 8% reports that they have faced but never reported as they fear that it may affect their profession. 8% agrees that they reported immediately to the forum. 2% have reported it to their family, 2% ignored it.

Table 10 ANALYSIS WHETHER A WOMAN REJECTED FROM ANY PROJECTS SIMPLY BECAUSE OF BEING A WOMAN

Sl.No	Particulars	Frequency	Percentage
1	Never	24	24
2	Rarely	42	42
3	Often	24	24
4	Very often	6	6
5	Cannot say	4	4
	TOTAL	100	100

Source: Primary Data

Interpretation

Out of 100 respondents 24% never faced any such rejection while 42% rarely feels it. 24% of the respondents have often rejected on the basis of their gender and 6% very often feels it. The rest 4% cannot respond it accurately.

Table 11 ANALYSIS ON FACTORS OPERATE IN THE POLICE SERVICE

SL.No	Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	TOTAL
1	Lack of promotional incentives	14	38	22	12	14	100
2	Misbehavior from male officers	16	22	32	16	14	100
3	Salary disparities	12	22	38	18	10	100
4	Corruption	29	23	25	10	13	100
5	Hostile environment	16	30	32	10	12	100
6	Women's work not appreciated as men	28	28	20	14	10	100

Source: Primary Data

Interpretation

Out of 100 respondents, in the case of lack of promotional incentives 14% strongly agrees. While 38% agrees 22% have a neutral opinion whereas 12% disagree and 14% strongly disagrees.

Misbehavior from male officers as a factor, 16% of the respondents strongly agrees with it and 22% agrees it. Majority i.e. 32% have a neutral opinion on that. Whereas 16% disagrees and 14% strongly disagrees it.

Among the 100 respondents 12% strongly agrees salary disparities, 22% agrees while 38% have a neutral opinion. 18% among the respondents disagrees and 10% strongly disagrees it. 29% of the respondents strongly agrees corruption, 23% agrees and 25% is neutral upon it. While 10% of the respondents disagrees it, 13% strongly disagrees it.

Hostile environment as a factor, 16% strongly agrees it while 30% agrees it. 32% has a neutral opinion on it, 10% disagrees and 12% strongly disagrees it.

Among the 100 respondents 28% strongly agrees that women's work is not appreciated as men, 28% agrees, while 20% have a neutral opinion. 14% of the respondents disagrees while 10% strongly disagrees.

Table 12 REASONS FOR IMPROPER UTILIZATION OF TALENTS OF WOMEN

Sl No	Particulars	Frequency	Percentage
1	Gender Discrimination	58	58
2	Biased Superiors	18	18
3	Unsupportive Family	10	10
4	Lack of promotional incentives	14	14
TOTAL		100	100

Source: Primary Data

Interpretation

58% of the population says that gender discrimination is the reason for improper utilization of talents of women police. 18% says that it is due to biased superiors. Only 10% says that it is due to unsupportive family. 14% agrees to the fact of lack of promotional incentives.

Table 13 ANALYSIS OF STATEMENT WHETHER WOMAN ARE GIVEN SAME RESPONSIBILITIES AS MEN IN PERFORMING THEIR DUTIES

SI No	Particulars	Frequency	Percentage
1	Strongly Agree	18	18
2	Agree	16	16
3	Neutral	32	32
4	Disagree	22	22
5	Strongly Disagree	12	12
	TOTAL	100	100

Source: Primary Data

Interpretation

From the above table, it can be understood that 18% of the population strongly agrees to the statement. 16% agrees that woman are given same responsibilities as men. 32% remains neutral. 22% says that women are not given same responsibilities as men. 12% strongly disagrees that women are given same responsibilities as men.

Table 14 HAVING THE FREEDOM OF WORK IN PROFESSION

SI No	Particulars	Frequency	Percentage
1	Strongly Disagree	14	14
2	Disagree	12	12
3	Neutral	40	40
4	Agree	22	22
5	Strongly Agree	12	12
	TOTAL	100	100

Source: Primary Data

Interpretation

Out of 100 respondents, 14% strongly disagreed to the fact that they are having freedom in their profession. 12% disagreed that they are having freedom in their profession. 40% remained neutral. 22% agreed that they have freedom in their profession and 12% strongly agreed that they have freedom to take their own decisions.

Table 15 POTENTIALITIES OF WOMEN ARE INADEQUATE, SIDE LINED AND STAGNANT

SI No	Particulars	Frequency	Percentage
1	Strongly Agree	10	10
2	Agree	30	30
3	Neutral	36	36
4	Disagree	14	14
5	Strongly Disagree	10	10
	TOTAL	100	100

Source: Primary Data

Interpretation

10% strongly agreed to the statement that potentialities of women are inadequate, side lined and stagnant. 30% also agreed to the same. Majority i.e., 36% remained neutral to the statement whereas only 14% disagreed to the statement. 10% strongly disagreed that women's potentialities are sidelined, inadequate and stagnant.

Table 16 FACTORS REQUIRED FOR A WOMEN POLICE FOR BETTER PERFORMANCE

SI No	Particulars	Frequency	Percentage
1	Better working conditions	38	38
2	Better transportation facilities	32	32
3	Understanding officials	16	16
4	Supportive family	14	14
	TOTAL	100	100

Source: Primary data

Interpretation

Out of 100 respondents, 38% of population responded that better working conditions must be provided for better performance of women police. 32% responded that better transportation facilities are essential. 16 % responded that understanding officials are required for better performance. 14% said that supportive family is essential.

Findings, Suggestions And Conclusion

Findings

- 42% of respondents said that it is their personal interest which made them choose the job.27% said that they chose police job due to advice from friends.14% of respondents chose this job as a random decision.12% of respondents chose police job as it is a secured job.Advice from family made 27% of respondents choose this police job.
- 24% from 100 respondents say that they work in night shifts for 0-5 days in a month.32% says that they work in between 5-10 shifts in a month.16% says that they work for almost 10-15 night shifts in a month.13% say that they work for 15-20 night shifts.From 100 women police respondents nearly 15 % work for more than 20 shifts in a month.
- 26% of the women are well comfortable with the sanitation facilities available for them in the police department.13% are comfortable with the sanitation facilities available for them in the department.34% of women officers are just moderately comfortable with the sanitation facilities.15% of the respondents are uncomfortable with sanitation facilities available for them.12% are highly uncomfortable with the sanitation facilities available for them.
- While analyzing the transportation facilities available for women, 14% strongly disagreed that proper transportation facilities are available for them.12% of the respondents disagree that proper transportation facilities are available for them.Nearly 33% of the respondents are neutral about the statement that proper transportation facilities are available for women police.22% out of total 100 respondents agrees that transportation facilities are properly available for women police.19% from 100 respondents strongly agree that they have proper transportation facilities available for them in the department.
- Proper planning helps 46% of the respondents balance their professional life with personal life. Through educating family, 20% of the respondents are able to balance their professional life with personal life.22% are finding difficulty in managing their work life with personal life.12% are not able to manage their personal life with work life.
- 12% strongly disagree that frequent transfers have affected their personal life.14% disagree that their personal life have been affected by frequent transfers.28% are neutral about transfers affecting their personal life. Almost 32% agrees to the statement that their

personal life has been affected due to transfers.14% have been strongly affected due to frequent transfers.

- 80% of the women police officers haven't faced any harassment in work place.8% have faced harassment but have never reported it to the forum as they fears that it might affect their profession.8% of the women police officers who have faced harassment have reported it to the forum.2% of the officers have reported it to their family but not to the forum.2% have ignored such experiences.
- 24% of women officers were never rejected from any projects because of being a women.42% of the officers say that they were rarely rejected from any project since they are women officers.24% of the women officers were often rejected from any project because of their gender. Because of being a women 6% of the respondents were rejected from projects

Suggestions

- Lack of sanitation facilities is an important problem faced by women officers. Hence, providing better sanitation facilities solves one among major problems faced by women officers.
- Transportation facilities can also be improved so that women officers can find ease in travelling safely to required places.
- Number of night shifts provided to women officers can be reduced so that it helps them to manage their family life with their work life.
- Number of transfers provided to women officers can also be reduced as it makes them difficult to manage their family.
- Support and encouragement must be given to those women officers who face serious sexual harassment in workplace. Forums for reporting such cases must provide best support to the women officers and proper action must be taken against those wrongdoers.

Conclusion

Women are an indispensable part of society. Still they are being ill-treated in one or the other way. Women doing a police job can help her in gaining respect among the public as well as promote the concept of gender equality. Even then they face various difficulties as they are portrayed as weaker gender. Better working conditions, family support, understanding colleagues helps them in performing better. Also, majority are satisfied with the job too. It was identified that frequent transfers, increasing number of night shifts, biased superiors , lack of promotional incentives being the main problems faced by them. Besides these shortcomings, women are competent enough and if provided with better facilities they can break the stereotype of policing being a man's job. It can result in more women coming up to take competent and risky jobs. This can further help them in getting a respectful and cooperative attitude from public. However, by keeping aside all the negativities and problems, police job can provide a better future for the women workforce.

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Factors Influencing Customer's Perception Towards Patanjali Personal Care Products: A Study

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Abstract

The consumer goods industry deals in products which are manufactured for the purpose of home consumption and are made available through retail stores in the market. A broader classification made to such final goods is durable and non durable goods. Non-durable goods also known to be fast moving consumer goods have shorter shelf life and are thus sold quickly in the market. The FMCG industry is now the 4th largest industry contributing towards the Indian economy. Wide spread awareness, accessibility and affordability, and improving lifestyles have been the reason for growth in this sector. Patanjali Ayurveda Limited is one such consumer goods concern in India which was initially started as a pharmacy in the year 2006. Today, Patanjali is considered as one of the most trusted FMCG brand in the country. This paper focus to study the factors influencing customers perception towards Patanjali personal care products.

Keywords: Consumer goods, Non durable goods, FMCG, Customer perception

INTRODUCTION

The consumer goods sector is a category of stocks and companies in connection to items purchased by individuals rather than by industries and manufacturers. This sector includes companies involved with food production, packaged goods, clothing, beverages, electronics and automobile.

The Patanjali Ayurveda Limited is an Indian FMCG company. Manufacturing units and headquarters are located in the industrial area of Haridwar while its registered office is located at Delhi. The company manufactures mineral as well as herbal products. Patanjali Ayurveda produces products in the categories of personal care and Food. The Company manufactures 444 products including 45 types of cosmetic products and 30 types of food products. According to Patanjali, all the products manufactured by them are made from Ayurveda and natural components and this reason made it popular within a short span of time.

Customer satisfaction is a marketing term that measures how products or services supplied by a company meet or surpass a customer's expectation. Customer satisfaction is utmost important because it provides marketers and business owners with a metric that they can use to manage and improve their businesses. In a rising competitive marketplace where businesses compete for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy on which they concentrate to get a good recognition for their business.

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Review Of Literature

- **Mrs.S.Sangeetha P. Sri Padma Abirami (2016)** studied on “Customer Satisfaction towards ITC Products “.A survey has been conducted to know the people’s linking pattern of the ITC’s products. It is observed that overall retailers like to buy most of the ITC products because of the margins given by them. It is the people preferred ITC food products and ready to eatable items and stationery items. Some people often like to have good quality at lower price that’s why they prefer other brands. Due to quality and brand image, the ITC are able to attract the customers.
- **M. Akhila, and Ali Ashar (2015)** studied on the topic “A study on customer satisfaction towards Maruti Suzuki in Coimbatore”. Major findings are Majority of the respondents were using SUV type cars. There is no significant relationship between type of Maruti cars and gender. The Maruti Suzuki cars are the best and fast moving brands. Now a day the demand for the cars by customer shows increasing trend, at the same time they expected easy handling, safety and security, higher performance etc which makes the advanced technologies and adopt new model.
- **A.K.Subramani (2015)** studied on “customer satisfaction towards KFC and MCDONALDS, Chennai.” Major findings are: that as far as market presence and brand value is concerned McDonalds has definitely provide a point for themselves. But KFC who re-entered in 2003 has shown a rapid progress and no wonder if in the coming year KFC overtakes McDonalds in the Indian market share. Both the food giants have given each other immense competition in terms of customer satisfaction, service quality and promotional strategies.
- **M. Karthik (2015)** studied on “customer satisfaction towards lays chips, in avadi, Chennai”. Major findings are: that the customers are moderate towards the satisfaction on lays chips. Also it is recommended to increase the quantity, types of flavour and availability, in order to attract more customers for the product.”
- **Rupali Khanna (2015)** prepared a project report on the topic “Customer Perception towards Brand: A Study on Patanjali”. She found that nearly 2/3rd of the users age between 20-40 years. Looking at the gender distribution, 70% of the users taken under study are females who can perceive to be more interested in buying herbal cosmetics. In Occupation frequency, nearly half of the users are students who are pursuing studies followed by 35% of service class users. The purchasers of Patanjali products are significantly from low income group having and income below 1 lakh. This is because the significant portions of users are students who have little or no Income.
- **Dr.S.Namasivayam (2014)** studied on “Customer Satisfaction towards Samsung Smart Phones with Reference to Coimbatore City”. He found that Samsung smart phones are highly moving smart phones, when compared to other smart phone. The study about the various aspects of customer satisfaction on Samsung smart phones in Coimbatore city satisfied the following objectives i.e. handling convenience in Samsung smart phones and the quality of service provider in Samsung smart phones.
- **Sapna Sood (2014)** studied on “Consumer behavior and perception of women towards Lakme”. Major findings of the study are: Lakme is the clear market leader across all age groups and income levels. Maximum number of respondents are using make up products of their brand like mascara, eyeliner, foundation etc. 48% of respondents are satisfied with the services provided by Lakme whereas 52% of respondents are satisfied with the products of Lakme

- **Joseph Andrews (2013)** studied on “Customer satisfaction towards soft drinks with special reference at Karaikudi town”. Major findings are: Nearly 55.83% of male respondents are taking soft drinks when compared to female. Slice is the fast moving item in Karaikudi because it contains more fruit juice than others.
- **Mr.S.Gopalakrishnan (2013)** Studied on “Consumer Satisfaction Towards Dairy Milk Chocolate With Special Reference To Uthamapalayam City”. Major findings of his study are: 53% of the respondents are satisfied in price of dairy milk, 42% of the respondents are satisfied in quality of dairy milk, 44% of the respondents are highly satisfied in taste of dairy milk.
- **Priyanka Yadav (2013)** studied on “Analytical Study of Customer Satisfaction of Reliance Fresh”. Major findings of the study are: Reliance Fresh is the most preferred retail outlet at Rohtak. Higher educated individuals show more interests in the organized buying of the things. Most of the customers like to buy the products directly from the outlet instead of home delivery. Customers mostly focus on the quality of goods and service.
- **Mrs. A.Kavitha and Dr. K.Ramesh (2012)** studied on “Customer Satisfaction Towards Johnson & Johnson Baby Care Products in Namakkal District”. From their research it is found that there is a close association between residential area, age, educational qualification, family monthly income, number of children, nature of child, type of Johnson & Johnson baby care products using of the respondents and their level of satisfaction towards using Johnson & Johnson baby care products.
- **Sundari and Murugan (2011)** revealed that the factors influencing purchase decision of personal care products are “primary benefit” and “secondary benefit”. The primary benefit includes price, quality, and quantity. However, the “secondary benefit” includes gradients of the product, the purpose of the product, innovative features, manufacturers reputation, and certification of the product.
- **Nishad Parmar (2011)** studied on customer satisfaction on Amul Milk. Major findings of the study are majority of the customers are satisfied with the Amul milk because of its good quality, reputation, easy availabilities. Some customers are not satisfied with the Amul Milk because of high price, lack of dealer services, spoilage and low shelf life etc. therefore, if slight modification in the marketing programme such as dealers and outlets, promotion programmers, product lines etc., definitely company can be as a monopoly and strong market leader.
- **Dr.T.N.R.Kavitha (2009)** studied on “Customer satisfaction towards toothpaste with special reference to Colgate”. It's found that majority of the respondents comes under the age group below 20 years. 36% of respondents purchase the product because of its brand image. Its learnt that Colgate brand is a fast moving brand which has a number of products that satisfy the needs of children and adults.
- **According to Hansemark and Albinsson (2004)**, “satisfaction is an overall customer attitude towards a service provider, or an emotional reaction to the difference between what customers anticipate and what they receive, regarding the fulfillment of some need, goal or desire”.
- **Agnes K.Y. Law, Y.V. Hui, Xiande Zhao, (2004)** have studied on “Modeling repurchase frequency and customer satisfaction for fast food outlets”. In this study, the relationships between customer satisfactions; repurchase frequency, waiting time and other service quality factors in fast food outlets are modelled. Results shows that waiting

time, staff attitude, food quality and food variety all significantly affect customer satisfaction.

- **Hoyer and MacInnis (2001)** said that satisfaction can be associated with feelings of acceptance, happiness, relief, excitement, and delight. There are many factors that affect customer satisfaction. According to Hokanson (1995), these factors include friendly employees, courteous employees, knowledgeable employees, helpful employees, accuracy of billing, billing timeliness, competitive pricing, service quality, good value, billing clarity and quick service.
- **Kotler (2000)** defined satisfaction as: “a person’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations”.
- **According to Oliver, Richard L. (1997)**, Satisfaction is as a judgment following a consumption experience - it is the consumer’s judgment that a product provided (or is providing) a pleasurable level of consumption-related fulfillment.

Need And Importance Of The Study

Patanjali Ayurveda Limited, after its humongous success and public liking, has become one of the most preferred manufacturers of mineral and herbal based products. As per reports, it is one of the largest growing FMCG companies across the country with an estimated value of Rs. 5,000 crore for the fiscal 2015-2016. Developed with the primary aim of establishing and promoting the science of Ayurveda, the company effectively works in coordination and accordance with the latest technologies coupled with ancient wisdom. Patanjali products have wide range of assortments of shampoos, toothbrushes, spices, noodles, jam, tea, corn flakes and beauty products – the list goes on. The consumer awareness about impact of harmful chemicals, in what they eat and use, has been growing rapidly and is at an all-time high. So there couldn't have been a better time to launch a brand that offers “no harmful chemicals”.

Statement Of The Problem

Consumer is said to be the “king” for any business. Customer satisfaction is important because it provides marketers and business owners with a metric that they can use to manage and improve their businesses. Customer satisfaction is the best indicator of how likely a customer will make a purchase in the future.

Being different from its competitors, Patanjali Ayurveda Ltd produce a wide range of products from natural components. The company has been gaining a good number of customers because of affordable price range and brand image. This motivated us to make a study on consumer satisfaction and awareness towards Patanjali personal care products.

Objectives Of The Study

The main objectives of the study are as follows:

- To evaluate the satisfaction level of customers towards Patanjali personal care products.
- To analyse the customer perception towards Patanjali personal care products.
- To analyse the awareness level of customers of Patanjali personal care products.
- To determine the factors influencing customer to go for Patanjali brand.

Research Methodology

Research Design: A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to research purpose with economy in procedure.

1. Sampling Design: Sampling Design refers to the technique or procedure that researcher would adopt in selecting items from the sample.

Sampling Size: 100 respondents are selected within Ernakulum district after considering time and cost.

Sampling method: Simple Random Sampling method is used to collect the data from the respondents.

2. Data Collection: Data collection involves Primary data collection and Secondary data collection. Primary data is the data collected for the first time using questionnaire method. Secondary data is the data available from published sources like previous reports of the company and from the previous projects. Company journals and websites act as secondary data useful for analysis.

3. Tools used for interpretation and analysis of Data

- Tables
- SPSS

Analysis And Interpretation

TABLE 1: SHOWING THE GENDER WISE CLASSIFICATION OF RESPONDENTS.

Gender: Gender is the range of characteristics pertaining to, and differentiating between, masculinity and femininity. Depending on the context, these characteristics may include biological sex some cultures have specific gender roles that can be considered distinct from male and female.

Gender	No. of respondents	Percentage
Male	41	41%
Female	59	59%
Total	100	100%

Source: Primary Data

Interpretation

From the above table it is observed that 41% of the respondents are male and 59% of the respondents are female.

TABLE 2: SHOWING THE AGE GROUP OF RESPONDENTS.

Age: It is the process of becoming older. It is effect of time on a person. The term refers especially to human beings, many animals, and fungi. In humans, ageing represents the accumulation of changes in a human being over time, encompassing physical, psychological, and social changes.

Age	No. of respondents	Percentage
10-20	20	20%
21-30	37	37%
31-40	22	22%
41 & above	21	21%
Total	100	100%

Source: Primary Data

Interpretation

From the above table it is observed that 20% of respondents fall in the age group of 10-20, 37% of respondents fall in the age group of 21-30, 22% of respondents fall in the age group of 31-40 and 21% of respondents are above 40 years of age.

TABLE 3: SHOWING THE OCCUPATION OF RESPONDENTS.

Occupation: A person's job is their role in society. A job is an activity, often regular and performed in exchange for payment. An activity that requires a person's mental or physical effort is work, which may be in the form of an hourly wage, by piecework or an annual salary.

Occupation	No. of respondents	Percentage
Govt. employee	29	29%
Business	19	19%
Professional	13	13%
Nil	39	39%
Total	100	100%

Source: Primary Data

Interpretation

From the above table it is observed that 29% of the respondents are government employees, 19% of the respondents are business people, 13% of the respondents are professionals and 39% of the respondents are unemployed.

TABLE 4: SHOWING THE INCOME LEVEL OF RESPONDENTS.

Income Level: The amount of monetary or other returns, either earned or unearned, accruing over a given period of time. Income derived from paid employment and comprising mainly wages and salaries.

Income level	No. of respondents	Percentage
Below 50000	12	12%
50000-100000	30	30%
100000 & above	20	20%
Not Applicable	38	39%
Total	100	100%

Source: Primary Data

Interpretation

From the above table it is observed that the income level of 12% of the respondents is below 50000, 30% of the respondents is between 50000 & 100000, 20% of the respondents is above 1 lakh and 38% of the respondents do not earn income.

TABLE 5: SHOWING THE SOURCE OF INFORMATION OF RESPONDENTS.

Source of Information: An information source is a source of information for somebody, i.e. anything that might inform a person about something or provide knowledge about it. Information sources may be observations, people, speeches, documents, pictures, organizations, websites, etc. They may be primary sources or secondary sources.

Source of information	No. of respondents	Percentage
TV Advertisements	33	33%
Newspapers & Magazines	35	35%
Friends Recommendation	22	22%
Others	10	10%
Total	100	100%

Source: Primary Data

Interpretation

From the above table it is observed that the source of information of 33% of respondents is TV advertisements, 35% of respondents got information from newspapers & magazines, 22% of respondents got information from friends and 10% of respondents got information from other sources.

TABLE 6: SHOWING THE PERSONAL CARE PRODUCT THAT IS USED BY RESPONDENTS.

Personal Care Products: Personal care products and services includes products for the hair, oral hygiene products, shaving needs, cosmetics and bath products, electric personal care appliances, other personal care products, and personal care services for males and females.

Personal product	No. of respondents	Percentage
Dental Care	25	25%
Skin Care	26	26%
Toiletries	15	15%
Hair Care	29	29%
All	5	5%
Total	100	100%

Source: Primary Data

Interpretation

From the above table it is observed that 25% of the respondents use dental care products, 26% of the respondents use skin care products, 15% of the respondents use toiletries, 29% of the respondents use hair care products and 5% of respondents use all the products.

TABLE 7: SHOWING FROM WHERE THE USERS BUY THE PRODUCTS.

Method of purchase	No. of respondents	Percentage
Patanjali Outlet	47	47%
Super Markets	27	27%
Online Purchase	19	19%
Others	7	7%
Total	100	100%

Source: Primary Data

Interpretation

From the above table it is observed that 47% of the respondents buy the products from Patanjali outlets, 19% of the respondents buy the products from super markets, 27% of the respondents buy the products through online and 7% of the respondents buy the products from other sources.

TABLE 8: SHOWING HOW OFTEN CUSTOMERS TYPICALLY USE THIS PRODUCT.

Consumption period	No. of respondents	Percentage
Less Than 3 Months	50	50%
3 Months – 6 Months	26	26%
6 Months – 1 Year	13	13%
More Than 1 Year	11	11%
Total	100	100%

Source: Primary Data

Interpretation

From the above table it is observed that 50% of the respondents have been using the product for a period of less than 3 months, 26% of the respondents have been using the product for a period of 3-6 months, 13% of the respondents have been using the product for a period of 6 months- 1 year and 11% of the respondents have been using the product for more than a year.

TABLE 9: SHOWING THE RESPONDENTS' SATISFACTION LEVEL ON THE PERFORMANCE OF THE PRODUCT.

Customer satisfaction: Customer satisfaction is a term frequently used in marketing. It is a measure of how products and services supplied by a company meet or surpass customer expectation. Customer satisfaction is defined as "the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals."

Performance Of The Product	No. of Respondents				
	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied
Quality	19	40	23	13	5
Package	15	32	35	8	10
Availability of product	20	35	25	13	7
Price	35	39	16	6	4
Brand Image	25	22	36	13	4

Source: Primary Data

Interpretation

From the above table it is observed that, regarding the quality of product, 19% of respondents are highly satisfied, 40% of respondents are satisfied, 23% of respondents are neutral, 13% of respondents are dissatisfied and 5% of respondents are highly dissatisfied. Regarding the package of the product; 15% of respondents are highly satisfied, 32% of respondents are satisfied, 35% of respondents are neutral, 8% of respondents are dissatisfied and 10% of respondents are highly dissatisfied. Regarding the availability of the product; 20% of respondents are highly satisfied, 35% of respondents are satisfied, 25% of respondents are neutral, 13% of respondents are dissatisfied and 7% of respondents are highly dissatisfied. Regarding the price of the product; 35% of respondents are highly satisfied, 39% of respondents are satisfied, 16% of respondents are neutral, 6% of respondents are dissatisfied and 4% of respondents are highly dissatisfied. Regarding the brand image of the product; 25% of respondents are highly satisfied, 22% of respondents are satisfied, 36% of respondents are neutral, 13% of respondents are dissatisfied and 4% of respondents are highly dissatisfied.

TABLE 10: SHOWING HOW THE GRIEVANCES OF RESPONDENTS ARE RESOLVED.

Problems resolved	No. of respondents	Percentage
Yes, by the company or its representatives	6	47%
Yes, by me or someone outside the company	5	38%
No, the problem was not resolved	2	15%
Total	13	100%

Source: Primary Data

Interpretation

It is observed that the problems of 47% of respondents are resolved by the company or its representatives, problems of 38% of respondents are resolved by themselves or someone outside the company and problems of 15% of respondents are not resolved.

TABLE 11: SHOWING HOW THE RESPONDENTS COMPARE PATANJALI PRODUCTS WITH OTHER BRANDS.

Comparison with other brands	No. of respondents	Percentage
Much better	14	14%
Better	38	38%
About the same	33	33%
Worse	11	11%
Much worse	4	4%
Total	100	100%

Source: Primary Data

Interpretation

It is observed that 14% of the respondents opines that Patanjali products are much better than other brands, 38% of the respondents opines that Patanjali products are better than other brands, 33% of the respondents opines that Patanjali products are about the same as compared to other brands, 11% of the respondents opines that Patanjali products are worse than other brands, 4% of the respondents opines that Patanjali products are much worse than other brands.

TABLE 12: SHOWING HOW LIKELY THE RESPONDENTS ARE, TO BUY AGAIN THE PRODUCT.

Opinion	No. of respondents	Percentage
Definitely Will	29	29%
Probably Will	30	30%
Might Or Might Not	23	23%
Probably Will Not	10	10%
Definitely Will Not	8	8%
Total	100	100%

Source: Primary Data

Interpretation

It is observed that 29% of respondents will definitely buy the product again, 30% of respondents will probably buy the product, 23% of respondents might or might not buy the product, 10% of respondents probably will not buy the product, and 8% of respondents definitely will not buy the product.

TABLE 13: SHOWING WHETHER THE RESPONDENTS CHOOSE SUBSTITUTES, IF THE COMPANY INCREASES THE PRICE OF THE PRODUCT.

Substitute product: In consumer theory, substitute goods or substitutes are products that a consumer perceives as similar or comparable, so that having more of one product makes them desire less of the other product.

Opinion	No. of respondents	Percentage
Yes	81	81%
No	19	19%
Total	100	100%

Source: Primary Data

Interpretation

It is observed that 81% of the respondents will opt substitute products, if the company increases the price of products and 19% of the respondents will continue to buy Patanjali products.

TABLE 14: SHOWING WHETHER THE RESPONDENTS ARE AWARE OF THE INGREDIENTS USED IN THE PRODUCT.

Awareness of ingredients	No. of respondents	Percentage
Yes	52	52%
No	48	48%
Total	100	100%

Source: Primary Data

Interpretation

It is observed that 52% of the respondents are aware of the ingredients used in the products and 48% of the respondents are not aware of the ingredients used.

Findings And Suggestions

Findings

1. Majority of the respondents (59%) are female.
2. Majority of the respondents (37%) fall in the age group 21-30.
3. Most of the respondents are unemployed (39%).
4. Majority of the respondents do not earn income (38%).
5. Most of the respondents (35%) got their source of information from newspapers and magazines.
6. Majority of the respondents (29%) use hair care products of Patanjali brand.
7. Most of the respondents (47%) buy the products from Patanjali outlets.
8. Half (50%) of the respondents are using Patanjali products for a period of less than 3 months.
9. 40% of the respondents are satisfied with the quality of the product.
10. 35% of the respondents are satisfied with the availability of the product.
11. 39% of the respondents are satisfied with the price of the product.

12. The grievances of most of the respondents (47%) are resolved by the company or its representatives.
13. Majority of the respondents (38%) opinion that Patanjali product is better than other brands in the market and 4% of the respondents opines that the product is much worse than other brands.
14. Most of the respondents (30%) say that they will probably buy the product again.
15. 81% of the respondents prefer to go for substitute product if the company increases price.
16. Majority of the respondents (52%) are aware of the ingredients used in the product.

Suggestions

Certain strategies that can be adopted to increase the market position are:

1. Make the products available in all common stores.
2. Packaging of the products could be improved.
3. More attractive promotional activities could be adopted by the company.
4. The product design could be improved.

Conclusion

The study on customer satisfaction of Patanjali personal care products reveals that most of the consumers are satisfied with the products and company's overall performance. Most of the customers are aware of the ingredients used in the products. Majority of the customers have been using the product for a period of less than 3 months. The study concludes that quality of the product is the factor that influenced the buyers to purchase the product.

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The Relationship between Talent Management and Organizational Commitment: A study of Tourism Industry of Rajasthan

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Abstract

The goal of every business is to achieve its stated goals and objectives with a limited resource base with the human resource as a key factor. The human resource if not rightly discovered, retained and developed to cope with changes in the business environment is likely to fail in its operations. Chiefly among the human resource practices of developing employees is talent management. When employee's talents are identified and enhanced it does not only increase their productivity but brings about higher satisfaction on their jobs, increased motivation, high staff retention rate and organizational commitment.

Today tourism industry faces turnover problems as wide opportunities are available in the market for the employees. These organizations need to work hard to keep their employees loyal who think in the interest of the organization. Due to low productivity employees are not focused to serve towards the goals of the organizations. Organizations need to identify the initiatives taken to keep their employees. Therefore, the purpose of this study is to investigate the relationship between talents management and organizational commitment in tourism industry of Rajasthan.

Keywords: Talent management, Organisational Commitment, Tourism Industry.

1. Introduction

In today's competitive atmosphere, employees find difficult to serve one organization for longer years. Long serving employees are a rarity and this leads to increase in turnover rate in organizations. Employees are changing jobs more than often than before. The thriving economy today has influenced the commitment level of employees (Boles, Madupalli et al., 2007). Opportunities available in the market allow employees to leave their jobs for better positions offered to them by other organizations. Employees are more worry for their own interest and no longer think the interest of the current organization they are working with (Brewer, 1996). Employees are constantly on a lookout for their career growth and will ready to move to another organization which provides a better opportunity to them. Employees will opt for any organization which is willing to pay higher salaries and career development opportunities to them. Organizations will lose their employees to competitors if they are not following talent management practices (Zheng, 2009). Studies have shown the relationship between talent management and organizational commitment in tourism industry of Rajasthan. It is essential for the organizations to realize their responsibilities towards their employees. Organizations need to make efforts in order to encourage employees' commitment towards the organization through effective talent management.

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2. Review of Literature

Talent Management

According to Philps (UK) (1999), "Talent is defined as ability or quality possessed by a person in a particular field or activity. To make sure that organizations have right staff, doing the right role, at the right time, doing the correct things, a series of complex HR practices are combined and give it a name "Talent Management"

Talent management is defined as a unified set of HR functions such as enrollment, selection, advancement and performance evaluation aimed at increasing the scope of organization (**Fegley 2006**).

Talent management competencies is a set of behavioral patterns that the line managers need to attract, select, engage, develop and retain talented employees in order to attain specific desirable objectives of the organization (**Oehley and Theron, 2010**).

Organizational Commitment

The Business Dictionary (2013), characterizes organizational commitment as a sentiment of obligation that a representative has towards the mission of his organization.

According to Balay (2000), organizational commitment is a emotional connection of the employee with their organization bonded by typical esteem and objectives.

As indicated by **Batemen and Strasser (1984)** organizational commitment must be examined for its organization with the adequacy of the workers' practices and execution; with the representatives' attitudinal and full of feeling issues, for example, work fulfillment; the representatives' activity and job attributes; just as the individual qualities of the workers, for example, age, and occupation residency".

Relationship between talent management and organizational commitment

In today's competitive environment, organizations need employees with high commitment level, they want employee's participation, teamwork etc to give a tough competition to their rivals. Talent management is considered as a key element in such a situation, it helps in managing and retaining talented employees and motivate them to contribute in the goals of n organizations.

Mahal (2012) explored and presumed that the HR practices are determinants of organizational commitment and employee retention. In their examination he gathered information from 100 representatives working in an association; his investigation uncovered that if great workplace is given to workers, they put forth a strong effort and demonstrate a high commitment towards their organization. After effect of their investigation is that the HR practices assumes most essential role in enhancing and keeping up organizational commitment.

Yap et al. (2010) in his examination reasoned that representatives who discover assorted variety of training were extensively more committed and fulfilled towards their organization in contrast with the individuals who think that it is ineffectual and not genuine.

(**Mosadeghrad, Ferlie, & Rosenberg 2008**). Talent management practices are considerably significant for organizations to reduce the problem of turnover of skilled employees which becomes a major risk to growth of organizations in this competitive environment. In addition, organizations have to pay extra cost due to increased practices of selection and hiring. Organizations are likely to avoid the harmful effects of turnover by using latest talent management techniques and by increasing motivation of employees. Employees who are committed to their organizations are having superior level of motivation, job security, performance and creativeness and reduced stress and turnover.

Klein, H. (2001). In his study he concludes that there is an important relationship between training and affective organizational commitment of an employee. Organizations who are providing effective training practices to its employees may have better commitment of its employees towards them.

3. Research Gap

In summarizing, the extensive and detailed literature review with the help of the available Indian and foreign sources provided an insight regarding various shades of the present research problem, according to which a lot of researches done on impact of talent management practices on organizational commitment globally yet not much work has been done in measuring the impact of talent management practices on organizational commitment in context of Rajasthan.

4. Research Objective

To identify the relationship between talent management and organizational commitment in tourism industry of Rajasthan.

5. Research Hypothesis

1. Alternate Hypothesis: All the practices of talent management and organizational commitment are positively inter-related with each other and have meaningful relations.

2. Null Hypothesis:- All the practices of talent management and organizational commitment are not at all positively inter-related with each other and don't have meaningful relations.

Sub Hypothesis 1: The talent management is positively inter-related and has a meaningful relationship with the job stability and security.

Sub Hypothesis 2: The talent management is positively inter-related and has a meaningful relationship with the organizational leaving.

Sub Hypothesis 3: The talent management is positively inter-related and has a meaningful relationship with the job retention.

Sub Hypothesis 4: The talent management is positively inter-related and has a meaningful relationship with the job development.

Sub Hypothesis 5: The talent management is positively inter-related and has a meaningful relationship with the organizational commitment.

Sub Hypothesis 6: The talent management is positively inter-related and has a meaningful relationship with the job attraction.

Sub Hypothesis 7: The talent management is positively inter-related and has a meaningful relationship with the job engagement.

6. Research methodology

The present research is basically exploratory in nature. It is based on the mixed mode research method. The Primary data was collected through the questionnaire collected from employees working in tourism industry. We are validating the hypothesized relationships on a sample 790 employees from tourism industry.

The methodology for researching and analyzing the data collected from sectors of Tourism Industry was a challenging task for the researcher; hence researcher used following research methodology for the research work.

Tool Used

Factor Analysis is used

Sample for the study

Employees working in tourism industry

7. Research Findings And Data Analysis

7.1 Demographic data of respondents

The salient demographic features such as: age, gender, marital status, education and income of the employees summarized in Table 7.1.

Table 7.1. Demographic Data of Employees

Demographic variables	Frequency	Percentage
<i>Age</i>		
18-28	319	40%
29-38	321	41%
39-48	113	14%
49-58	37	5%
59 and above	0	0%
<i>Gender</i>		
Male	622	79%
Female	168	21%
<i>Marital status</i>		
Married	570	72%
Unmarried	220	28%
<i>Educational qualification</i>		
Matric and below	292	31%
Under- Graduate	196	26%
Graduate	90	11%
Post-Graduate	98	12%
Professional qualification, if any _____	114	15%
<i>Income</i>		
Below 15000	292	37%
15001 to 25000	214	27%
25001 to 40000	88	11%
40001 to 60000	94	12%
60001 to 150000	102	13%
Above 150000	0	0

Note: n = 790

The majority of those tourism industry respondents, where the sample comprised approximately 41 percent respondents who are between 29-38 years, 40 percent are between 18-28 percent, 14 percent are between 39-48 years, 5 percent between 49-58 years and for above 59 no respondent is there. There are 21 percent of females and 79 percent of males, where male employees are responded more than female employees. The majority in the marital status question was 570 (72%) respondents were married and 220(28%) respondents were unmarried. The qualification sample is approximately about 292(37%) , Under-Graduate were 196(25%), Graduate were 90(11%) , Post-Graduate were 98(12%) and Professional qualification, if any were 114(15%). It can be easily inferred from the above analysis that majority of the people working in tourism industry are Matric and below matric. Only 12% people are postgraduate. The income level is approximately Below RS. 15000 PM were 292(37%) , Rs.15001to Rs.25000 PM were 214(27%) , Rs.25001 to Rs.40, 000 PM were 88(11%) , Rs.40, 000 to Rs.60000PM were 94(12%) , Rs.25001 to Rs.40, 000 PM is 102(13%) and Above Rs.150000PM 0. From the data collected it can be inferred that

majority of the respondents (37%) working in tourism industry were working under Rs. 15,000PM, only 12% Of respondents were getting more than 40,000 PM.

This study in terms of the purpose is an exploratory research and in terms of method is a correlational type. The tool of data gathering is data mining and required data have been collected by the questionnaire. The statistical population of research includes various employees working in hotel, Booking Sector, Cab and Taxi Services. The questionnaires validity and reliability have been approved and Cronbach's alpha for questionnaire asked to employee was .775.

For Employee

Table 7.2: Case Processing Summary

		N	%
Cases	Valid	786	99.5
	Excluded ^a	4	.5
	Total	790	100.0

Source : primary data

a. Listwise deletion based on all variables in the procedure.

Table 7.3: Reliability Statistics

Cronbach's Alpha	N of Items
.775	44

Source : primary data

First, normality of the statistical population distribution by using of the Kolmogorov-Smirnov valid test is checked. Then the average demographic information test and dimensions Talent management and organizational commitment by using of T-test and ANOVA (Analysis of variance) are conducted. And then the effectiveness of each of the independent variables by using of factor analysis is determined.

Normality distribution test of the statistical population

First, normality of the statistical population distribution by using the Kolmogorov-Smirnov valid test is checked and considering that the SIG value of the Kolmogorov-Smirnov test is greater than 0.05, at 95% confidence level, the test will have the normality of the distribution

Table 7.4

Research Variables	Educational qualification	Marital status	Gender	Age	Monthly Income	Organizational Commitment	Talent Management	Talent Retention
Kolmogorov-Smirnov Z	.345	.407	.544	.690	.552	.532	.503	.602
Asymp. Sig. (2-tailed)	.782	.958	.421	.741	.854	.841	.957	.984

The results of the table show that basic component of talent management and organizational commitments are normally distributed.

Hypothesis

All the practices of talent management and organizational commitment are positively inter-related with each other and have meaningful relations.

Analysis table

Factor analysis results

Table:7. 5 Correlation Matrix^a

	VAR00001	VAR00002	VAR00003	VAR00004	VAR00005	VAR00006	VAR00007	VAR00008	
Correlation	VAR00001	1.000	.021	.003	-.040	.019	.026	.020	.002
	VAR00002	.021	1.000	.825	-.029	.024	.042	-.002	-.085
	VAR00003	.003	-.025	1.000	-.007	.039	.039	.014	-.099
	VAR00004	-.040	-.029	-.007	1.000	-.004	-.018	-.026	.050
	VAR00005	.019	.024	.039	-.004	1.000	.014	-.097	-.038
	VAR00006	.026	.042	.039	-.018	.014	1.000	.052	-.065
	VAR00007	.020	-.002	.014	-.026	-.097	.052	1.000	.016
	VAR00008	.002	-.085	-.099	.050	-.038	-.065	.016	1.000
Sig. (1-tailed)	VAR00001		.283	.465	.130	.300	.235	.287	.474
	VAR00002	.283		.000	.210	.254	.119	.473	.009
	VAR00003	.465	.000		.427	.135	.141	.345	.003
	VAR00004	.130	.210	.427		.458	.307	.233	.079
	VAR00005	.300	.254	.135	.458		.346	.003	.144
	VAR00006	.235	.119	.141	.307	.346		.074	.035
	VAR00007	.287	.473	.345	.233	.003	.074		.328
	VAR00008	.474	.009	.003	.079	.144	.035	.328	

a. Determinant = .307

Table 7.6 Factor analysis correlation table

	Job stability and security	Organization leaving	Job retention	Job development	Organizational commitment	Job attraction	Talent management	Job engagement
Job stability and security	X	.021	.003	-.040	.019	.026	.020	.002
Organization leaving	.021	X	-.025	-.029	.024	.042	-.002	-.085
Job retention	.003	.025	x	-.007	.039	.039	.014	-.099

Job development	-.040	-.029	-.007	X	-.004	-.018	-.026	.050
Organizational commitment	.019	.024	.039	-.004	X	.014	-.097	-.038
Job attraction	.026	.042	.039	-.018	.014	X	.052	-.065
Talent management	.020	-.002	.014	-.026	-.097	.052	X	.016
Job engagement	.002	-.085	-.099	.050	-.038	-.065	.016	X

Checking the correlation between research variables

According to the correlation results in above given table, the correlation coefficient of job engagement and job development has the greatest correlation value and is equal to 0.050 and then the correlation coefficient of job attraction and organization leaving is equal to 0.042 in forward direction. After that, job retention and job engagement have coefficient of -0.099 and then job engagement and organization leaving with the coefficient of -0.319 are related to the talent management in reverse direction. As we see the outcome in above table we came to conclusion that not all the practices of talent management and organizational commitment are positively inter-related with each other and have meaningful relations. Hence the hypothesis is rejected here and null hypothesis is accepted.

Outcome of hypothesis testing

Sub Hypothesis 1: The talent management is positively inter-related and has a meaningful relationship with the job stability and security.

The coefficient obtained here is .020 and it shows positive inter-related correlation.

Hence this sub hypothesis is accepted.

Sub Hypothesis 2: The talent management is positively inter-related and has a meaningful relationship with the organizational leaving.

The coefficient obtained here is -.002 and it shows negative inter-related correlation. Hence this sub hypothesis is rejected.

Sub Hypothesis 3: The talent management is positively inter-related and has a meaningful relationship with the job retention.

The coefficient obtained here is .014 and it shows positive inter-related correlation.

Hence this sub hypothesis is accepted.

Sub Hypothesis 4: The talent management is positively inter-related and has a meaningful relationship with the job development.

The coefficient obtained here is -.026 and it shows negative inter-related correlation. Hence this sub hypothesis is rejected.

Sub Hypothesis 5: The talent management is positively inter-related and has a meaningful relationship with the organizational commitment.

The coefficient obtained here is -.097 and it shows negative inter-related correlation. Hence this sub hypothesis is rejected.

Sub Hypothesis 6: The talent management is positively inter-related and has a meaningful relationship with the job attraction.

The coefficient obtained here is .052 and it shows positive inter-related correlation.

Hence this sub hypothesis is accepted.

Sub Hypothesis 7: The talent management is positively inter-related and has a meaningful relationship with the job engagement.

The coefficient obtained here is .016 and it shows positive inter-related correlation.

Hence this sub hypothesis is accepted.

Table 7.7 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Adequacy.	Measure of Sampling	.505
Bartlett's Sphericity	Test of Approx. Chi-Square of Df	919.264 28
	Sig.	.000

The outcome KMO and bartlett's test suggest that all the outcomes of talent management and organizational commitment are interrelated to each other whether negatively or positively.

Table 7.8 Component Correlation Matrix

Component	1	2	3	4
1	1.000	-.039	-.077	.014
2	-.039	1.000	.000	.022
3	-.077	.000	1.000	-.112
4	.014	.022	-.112	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

Component correlation matrix suggests that out of eight factors the principle factors were only four around which principle analysis was given.

8. Conclusion

To realize the research objectives of the survey, the comprehensive evaluation of the essential empirical and theoretical literature was carried out. The 44 item scale has been developed to measure the level of organizational commitment in employees working in tourism industry of Rajasthan. In the above mentioned tables we clearly see that all the outcomes of talent management and organizational commitment are interrelated to each other whether negatively or positively. So it can be concluded here that all the practices of talent management and organizational commitment are not at all positively inter-related with each other and don't have meaningful relations. Hence here the null hypothesis is accepted which is all the practices of talent management and organizational commitment are not at all positively inter-related with each other and don't have meaningful relations.

9. Recommendations

Based on the findings of the study, the following recommendations are worth considering;

Education of HR managers towards talent management practices

Human resource managers in the tourism industry should have common understanding of the concept of Talent Management to improve recruitment practices, development of employee's, performance management and retaining talent.

Education of employees on the organization's policy

Strong policy framework for talent management within tourism industry is needed to provide education and training to employee's to boost their level of commitment towards their organization. The research findings revealed that 30% of the employee respondents were not aware of the talent management policy in the organisation. Therefore the organization should seek to educate the entire staff about its policy on talent management. The education should first seek to create awareness of the talent management policy and secondly orient them about how the policy operates. This will help them to understand the policy.

Developing effective talent management practices

The regression analysis indicated an inverse relationship between all the talent management practices identified in the organisation except succession planning and career guidance and recruitment and selection process. Employees are more likely to leave the organisation when there is effective performance management, motivation, and training and development. The organization should give more attention to the talent management practices which would rather increase employee retention or develop more effective talent management practices which will seek to build a strong employee commitment and retention in the organization.

Improve working conditions

The study revealed that majority which is of the employees were likely to leave the organization due to poor working conditions. The organization should therefore improve its working conditions to enhance its working relationship thereby increasing the rate of employee retention. Conditions of work such as wages and salaries, working time, health and safety needs, and the working environment should be improved.

Effective retention strategies

The study revealed that employees are retained mainly through talent management practice. However talent management practice should be one of the effective ways to retain employees. The organization should therefore seek to build more effective retention strategies which will improve the employee's standard of life; creating a work-life balance. This will sustain the employee's commitment to the organization even as they are developed to take up greater responsibilities.

10. Limitations Of The Study

The study suffers from the following limitations. The research survey conducted only in state of Rajasthan. Hence, the results arrived may not be applied to other states. Further the survey method which was adopted for collecting the data in this study has its own limitations. Out of the population, only 790 People working in Tourism industries were selected for eliciting first-hand information. In view of the time and monetary constraints, it was not possible to contact more than the selected number of respondents. Hence, the generalization of the findings of the study is subject to these limitations.

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The Role Of Perceived Brand Equity In Masstige Brands: A Comparative Study Of Apple And Samsung Smartphone Brands

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Abstract

The emergence of masstige brand has been settled the customary separation among luxury and non-luxury brands. The "masstige brand" term is effortless passes on their fundamental thought that is putting forth esteem to the majority. People likewise called a new luxury or mass luxury. Masstige is a short term for mass prestige. The term is used to refer to prestige products available to the masses. Masstige products are considered middle in luxury or premium products and they are priced between the middle class and the super-premium consumers. The "masstige marketing" is considered as a market penetration strategy for medium and large enterprises. In this paper authors present their study of the effectiveness of the marketing strategies of two major smartphone brands Apple and Samsung in the smartphone industry, and the mass prestige value of these brands. To examine the value of these brands, authors used the "MSI use score scale" Instrument to measure and to compare the success or failure of the these brands in terms of mass prestige value. Finally, authors used the primary and secondary data collected as an indicator of the brand value to determine the opportunity of succeeds of each brand in the Smartphone industry.

Key words: *Masstige, Brand equity, Smartphone Industry*

Introduction

"Mass or Masstige" items once a while convey a fashioner name and might be broadly distributed through stores, supermarkets, and different mass outlets. Michael Silverstein in BCG USA first time utilized the "Masstige" term". Like the suspicious truth, a normal product can be prestigious when it is labeled with a luxury brand. A combination of "mass" and "prestige," the term is an acronym for "mass prestige." The term was coined by Silverstein, Fiske and Butman (2008) in their book "Trading up": Why consumers want new luxury goods--and how companies create them" and Harvard Business Review article titled "Luxury for the Masses" (2003). The facts confirm that renowned brand assumes a job of improving customer's esteem. The imported brands, which are additionally called old luxury brands really do as such however it is oppressive for standard customers to purchase these products. Masstige was characteristic to fulfill this craving for luxury brands. Masstige is an instituted word which came from "mass" (which implies people in general) and "esteem". Masstige is referred to as prestige or premium brands acquired by the middle class or white collar class customers, which is the lion's share or the majority of any nation/country. These customers used to buy items of middle and low-cost price, however, recently have been purchasing those of middle and high-cost price to pick up fulfillment from quality or

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acquiring feeling. Masstige is an idea-driven from the pattern that the middle class or white collar class customers with moderately high salary fundamentally look for results of high caliber at a low price (Silverstein and Fiske, 2003). Masstige brands permit customer who needed to buy luxury brands yet could not as a result of their high cost, they approach it at a sensible cost yet additionally of with high quality, prestige, and self-accomplishment (Truong et.al, 2009). The masstige brands utilized by those customers who have such inclinations, which are portrayed as having a lower cost than old luxury brands. Masstige products are Mass-high quality generation and pride and character elite for the customers. Luxury has constantly intrigued individuals paying little heed to their social strata. Presently luxury is known by numerous new terms like premium, ultra-premium, opuluxe, trading up, masstige, hyper-luxury, and genuine or genuine luxury (Kapferer and Bastien, 2009; Paul J., 2015).

Literature Review

Justin Paul (2015), determined that Masstige marketing is considered as a market penetration strategy for medium and large enterprises, particularly in foreign markets. The author redefines "masstige marketing" strategy in this paper and maps the concept as a new model for the brand building. Second, the author examines the effectiveness of "masstige marketing" strategy with reference to marketing mix theory on product, price, place, and promotion.

Prashant Saxena (2015), now a days, companies are trying to move towards bigger segments as the people are quality oriented but still there is price sensitivity in Indians i.e. they are ready to pay if the offer is worthy. This is the reason why companies like Apple, Blackberry, HTC float comparatively cheaper products as they offered earlier. In today's scenario, India's middle-market consumers are trading up. They are aspirant about the quality of goods and services and middle-market consumers are ready to trade-up.

Christiaan Rudolf Quintus Roets et. al (2014), The study reveals that social image has a significant influence positively on brand trust same as in brand loyalty. Social image and brand trust are significant components of brand loyalty for African students. Both components are relevant to develop brand equity for mobile phone brands in this targeted market segment.

Nitika Aggarwal (2015), defined the relationship between brand equity and four mobile phone brands (Nokia, Sony Ericsson, Samsung, and LG). The results showed that each brand should focus on their brand equity for competing with another brand. The study reveals that the Nokia mobile phone brand has the highest brand equity among all four mobile phone brands.

Mula Nazar Khan et. al (2016), concluded that brand equity and brand association have a relevant positive and dominant impact on customer satisfaction on mobile phones. Development of brand equity is essential to make customer satisfaction on mobile phones. The implication of the study from finding is, marketing managers ought to concentrate primarily on brand equity

Alpana Vaidya et. al (2016), reported that most college going students are using the smartphone; the use of mobile phone is not gender based. There is no gender difference in using internet, calls, and texts among college students. Boys and girls equally use the smartphone. Android operating system and Samsung is the most popular smartphone brand among the college students of Pune city.

Research Gap

In summarizing, the extensive and detailed literature review with the help of the available foreign sources and Indian sources provided an insight regarding various shades of the present research problem, according to which a lot of researches done on measuring brand equity globally yet not much work has been done in masstige brands to reveal the truth behind the Indian contexts.

Smartphone Industry

A Smartphone is basically a mobile phone with an advanced operating system and combination of a personal computer operating system with new features which are useful for mobile or handheld use. They typically combine the features of a cell phone with those of other popular mobile devices, such as personal digital assistant (PDA), media player and GPS navigation unit. All Smartphones can access the Internet, have a touch screen user interface, can run third-party apps, music players and are high camera phones.

Samsung reasserted its global leadership with a renewed focus on lower-cost Smartphones. Sales of smartphone units were 44,008.8 that seems drastically increased with 135,516.1 in 2018. Sales of smartphones were 451.80 billion in 2013, which drastically increased by 1,178.20 billion in 2018, Sales of smartphones units were 135,516.1 in 2018 that is forecast to be increased with 233,363.7 in 2023, Sales of smartphones are 1,178.2 billion in 2018 which is forecast to be increased with 1,517.40 billion in 2023. In 2014, the market share of Samsung was 17.0%, which seemed to be increased by 18.2% in 2018. Samsung is having the highest market share of smartphone brands in India whereas market share of Apple was 0.6% in 2014, which increased by 2.4% in 2018, according to data from Euromonitor international report on mobile phones in India, August 2018.

Marketing Strategies Of Apple And Samsung Smartphone Brands

Apple Marketing Strategies

College dropouts Steve Jobs and Steve Wozniak founded Apple Computers, Inc. on April 1, 1976, they brought to the new company with a vision of changing the way people viewed computers. Jobs and Wozniak wanted to make computers small enough for people to have them in their homes or offices. While computers focus are still an important part of Apple, its music related products (i.e. iPod and iTunes) have become the company's most profitable sector. Also, and relevant for this project Apple released the iPhone, a cellular phone (Smartphone) as well as the Apple TV.

iPhone was created in order to move within the cell phone industry innovation of having a device that allows to have a cell phone capability, email as well as internet connection. Apple wanted to create a user friendly device, that's why in 2007 Apple releases the iPhone. In their desire of having an ease of use devise, they create a revolutionary user interface, eliminating the excess of buttons, and including a multi-touch capability. Moreover, they include a powerful software to the device; this allows them to create applications and networking. Furthermore, they include the capability to sync from iTunes, allowing the user to have their music, movies, and photos in their mobile phone.

Apple continued to find success with its larger screened iPhones. Much of this came out of Apple Masstige Marketing Through 4Ps:

Product

Portable Computers – including Mac products such as Mac Book Pro, iMac, MacBook Air, Mac Mini, Xserve. Accessories – including MagicMouse, Keyboard, Led Cinema Display.

iPod – including iPod Shuffle, iPod Nano, ipod Classic. iPhone – including iPhone4GS, iPhone4G, iPad.

Price

In terms of price Apple is a premium brand that does not attempt to compete on price. Apple has a premium target, and with the iPhone product and promotions to support the targeting audience iPhone has a skimming price. It is of higher prices as compared to most phones in the market. Moreover, Apple customers are not budging and they are very much loyal to the Apple brand. Also, part of the iPhone pricing policy is that it does not offer any discounts, the standard price is maintained across the market.

Place

In terms of place iPhone is present across many countries and nations and is known to provide an excellent service backup in all these countries. Since the target market of Apple iPhone is premium customers, they are found in A grade cities only. All modern retail outlets are distributed the iPhone through a carrying and forwarding agent. On the other hand, individual retailers are given the product through distributors. Finally, the iStores which are the exclusive showrooms are given the product directly from the company at best discounts.

Promotion

Promotions of iPhone are known to be fantastic and might range from a full front page ad on the launch of the product, promotions in the radio, the television and what not. Whenever a new phone is being launched, be sure to see iPhone everywhere, on each and every platform. Because they are targeting a premium segment, the presence of Apple iPhone is higher in the above the line segment than in the bellow the line segments. The interesting thing here is the taglines in newspaper ads because many of the iPhone ads are known to come up with the most interesting taglines for the new phone.

Samsung Marketing Startegies

Byung-Chull LeeFrom in Taegu, Korea founded Samsung on March 1, 1938. They entered in the systems development business, establishing Samsung Data Systems in 1985 (now Samsung SDS) as a leader in information technology services, including systems integration, systems management, consulting, and networking services. In the mid-1990s, Samsung revolutionized its business through a dedication to making world-class products, providing total customer satisfaction, and being a good corporate citizen, in the vision of "quality first." When the Samsung i7500, also known as the Samsung Galaxy, was released in June 2009, it marked Samsung's entry into the Android smartphone market.

Samsung is the most popular Android phone maker. As Android has grown, Samsung has come to completely dominate it. In 2012, Android claimed around 70 percent of the worldwide smartphone market and Samsung was responsible for 42 percent of all Android smartphone shipments during this year.

Product

The benefit of Samsung in terms of its product is that there is a trust on all Samsung products because of the way Samsung products have performed in the last few years. And with its Smartphones, Samsung has achieved a status symbol for its customers. At the same time, Samsung is known for its service and people know that Samsung gives a very fast service for any of its product. Some of Samsung products are: Tablets. Mobile phones – Smartphones & normal phones. Televisions – LEDs, LCDs, Plasma TV, SMART TV, HDTV. Washing machine. IT – Laptops, printers and accessories.

Price

Because of its presence in different product categories, Samsung uses various pricing strategies. We can divide the pricing strategies and match it with the products that it is used for. Skimming price – Samsung's Smartphones are one of the best in the market and are the market leader in terms of the features. Samsung uses Skimming price for these products wherein it tries to get a high value in the start before competitors catch up. Once the model is old or any competitor has launched a similar product, Samsung immediately drops the price. Competitive pricing – Samsung uses competitive pricing. Thus in various categories, Samsung keeps competitive pricing so as to beat the competitor. Samsung as a brand hardly uses penetrative pricing because it doesn't enter late in the market. In fact, it is present in most consumer durable segments in the market.

Place

Samsung is present through various channels in the market. It works on the channel marketing concept The sales and service dealers handle key accounts for Samsung and are involved in corporate sales. These dealers may also open exclusive Samsung showrooms. Samsung being such a branded product, the retailers are bound to keep Samsung as an alternative for their customers. The distribution network is the most interesting in the case of Samsung. In several cities, Samsung has a single distributor through whom they distribute throughout a territory. Thus all material of Samsung will be sold to a single distributor who in turn will sell it forward to retailers.

Promotion

Samsung uses multiple forms of promotions. Samsung as a company believes in pulling the customer to themselves through advertising but at the same time uses strong tactics to push the product to the customer through sales promotions. Thus on one hand, Samsung uses various marketing vehicles across the year covering festive season as well as non festive time. On the other hand, it gives many offers and discounts to its trade partners to motivate them to sell Samsung above competition. With such a strategy, Samsung's brand is on the rise so that both, the pull as well as push strategy is working simultaneously in Samsung.

Research Objective

- To measure and compare the perceived brand equity of smartphone brands.
- To assess masstige marketing strategy effectiveness and determine which smartphone brand is successful.
- To measure the mass prestige value of smartphone brands and compare the value to derive insights on the popularity of the brands.

Hypothesis

As per the literature review, research gap and need of the study various hypothesis were formulated:

<i>H1₀₁</i>	There is no significant difference between the means of demographic factors (gender, age, family income) and brand equity scores of mobile phone brands.
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<i>H1_{a1}</i>	There is significant difference between the means of demographic factors (gender, age, family income) and brand equity scores of mobile phone brands.
<i>H2₀₁</i>	There is no significant difference between the means of mobile phone brand liked most by the respondent and brand equity scores of mobile phone brands.
<i>H2_{a1}</i>	There is significant difference between the means of mobile phone brand liked most by the respondent and brand equity scores of mobile phone brands.
<i>H3₀₁</i>	There is no significant association between the mobile phone brand most liked by the respondent and mobile phone brand currently used by the respondent.
<i>H3_{a1}</i>	There is significant association between the mobile phone brand most liked by the respondent and mobile phone brand currently used by the respondent.

Research Methodology

Research Methodology to be adopted for this proposed research is described in the following sub sections: research objectives, the research design, questionnaire design, research instruments, sampling plan which contains sampling techniques used and data collection instruments developed. Also, the different analytical tools which are proposed to be used for analysis of the collected data to derive at the conclusions are also being explained.

As part of the methodology we use the MSluse Score Scale instrument in order to measure the mass prestige value of the Apple and Samsung brands and determined the Indian preferences of these brands in the Smartphone industry. First we complete a literature review of both brands. In order, to understand and tied the brands companies literature review, we do both brands marketing mix. We use primary and secondary data. The secondary data was collected from the companies' websites, public reviews and public sources.

Research Instruments

The research instrument used to collect primary data was structured questionnaire to be prepared personally administered to respondents for proper responses. Questionnaire was used as it is structured and appropriate to capture primary data to test the hypotheses formed. A summated rating scale format was used to test data. Authors created a brand equity score scale called MSluse. MSluse has three range, Which means high range of this instrument means the high prestige value and strong brand equity of the brands and low range of this instrument means the low prestige value and brand equity of the brands. The range defined in MSluse is as following:

- MSluse range over 6 signifies that brands created top of mind brand equity.
- MSluse range between 4 and 6 signifies that brands have built strong brand equity but not top of mind, its possible to do in the long run of brands.
- MSluse range between 1 and 4 signifies that brand equity of brands is not not good enough and brands have failed to build brand equity at acceptable level.

Data Collection

The data was collected from primary and secondary sources. Primary data was collected mainly by personal administration of the structured questionnaire to the selected sample: current & prospective smartphone users. The primary data was collected from questionnaires completed by smartphone users in Jodhpur city, India. The data collected was of 455

respondents for a total of 500 questionnaires. The secondary information or data was collected from the published sources such as Journals, Books, Industry Reports, Websites, Newspapers and Magazines etc. Online sources such as Google Scholar, SSRN etc was also be referred to collect secondary data.

Data Analysis And Findings

The analysis was done on data collected from 455 respondents i.e. smartphone users of different smartphone brands including Apple, Samsung, OnePlus, Xiaomi, Google, LG, Lenovo, Motorola, Vivo, HTC, Oppo etc. with no missing value for the variables on various brand equity dimensions including Brand Knowledge and Prestige, Brand Excitement and Status, Perceived Quality, Brand Association, Brand Loyalty, and Brand Awareness. Majority of respondents were under 37 years of age having annual income between Rs. 2,51,000 – 7,50,000. The distribution among male and female respondents is roughly equal. Majority of respondents had liking with 58.9% having liking for Apple smartphones while 41.1% having liking for Samsung smartphones. (See Table 1)

Table 1: Most liked smartphone brand

Most liked smartphone brand					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Apple	268	58.9	58.9	58.9
	Samsung	187	41.1	41.1	100.0
	Total	455	100.0	100.0	

Cronbach's alpha for each dimension extracted was 0.927 for the brand equity scale. (See table 2)

Table 2: Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.927	6

There was statistically no significant difference between gender group as determined by Oneway ANOVA, $p > .05$. There was statistically significant difference between age group as determined by Oneway ANOVA, $p < .05$. There was statistically no significant difference between family income (per annum) group as determined by Oneway ANOVA, $p > .05$. Hence, the findings of Alternate Hypothesis 1 was accepted and revealed that Demographics (age, family income) influenced the variables of brand equity and consumers prefer and consider smartphones brand by their age and family income but gender did influence the variables of brand equity. It showed that consumers do not prefer smartphone brand by their Gender. (See Table 3)

Data revealed that there was a statistically highly significant difference between the most liked smartphone brand groups as determined by Oneway ANOVA, $p = .000$. Hence, Alternate Hypothesis 2 was accepted and it revealed that the choice of most liked smartphone by consumers highly influenced the variables of brand equity and it revealed that a smartphone is liked and used by its strong brand equity and brand preference by consumers. (See Table 3)

Table 3: Oneway ANOVA

ANOVA TABLE WITH DEMOGRAPHICS						
		Sum of Squares	df	Mean Square	F	Sig.
Mluse with Gender	Between Groups	0.064	1	0.064	0.102	.750
	Within Groups	286.212	453	0.632		
	Total	286.277	454			
Mluse with Age	Between Groups	39.257	4	9.814	17.879	.000
	Within Groups	247.019	450	0.549		
	Total	286.277	454			
Mluse with Family Income(Per Annum)	Between Groups	39.257	4	9.814	17.879	.000
	Within Groups	247.019	450	0.549		
	Total	286.277	454			
Mluse with most liked smartphone brand	Between Groups	67.316	1	67.316	139.268	.000
	Within Groups	218.961	453	0.483		
	Total	286.277	454			

Findings of the study revealed that there was statistically significant association of most likely smartphone brand with smartphone brand using currently at $P = <.05$ (See Table 4) Hence, Alternate Hypothesis 3 was accepted. The results showed that majority of respondents liked that same smartphone brand which they are actually currently using. (See Table 5)

Table 5: Chi-Square Test

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	269.151 ^a	11	.000
Likelihood Ratio	329.310	11	.000
Linear-by-Linear Association	.032	1	.058
N of Valid Cases	455		

Table 5: Crosstabulation

Most liked smartphone brand		Currently using smartphone brand			Total
		Apple	Samsung	Others (Oneplus, Xiaomi, Lenovo, Asus, Letv, Vivo, Honor, Gionee, Oppo etc.)	
Most liked smartphone brand	Apple	175	37	56	268
	Samsung	1	165	21	187
Total		176	202	17	455

Conclusion

Based on the MSluse Score scale used to analyze the Smartphone industry. Authors concluded that it is a valuable instrument for companies that want to understand and measure their marketing and brand strategies. On the basis of MSluse in our analysis we found that Apple smartphone brand has succeeded in the strong brand building in the Indian market with high range of MSluse over 6 and Apple has achieved top of mind brand equity. Apple smartphone brand is the most prestigious brand in terms of MSluse and the marketing strategies of Apple smartphone brand has been centered on high quality based on its masstige value. Consumers are willing to pay the premium price for this brand. On the other hand, Samsung smartphone brand obtained with middle range of MSluse at 4 to 6, which means this smartphone brand has succeeded in brand building but not achieved their brand equity at top of mind. Samsung smartphone brand is the second most prestigious smartphone brand in terms of MSluse and customers may pay the premium price for this brand. Finally, the MSluse is a useful instrument that if the companies, as Apple and Samsung, can use to increase the mass prestige value of the brands in order to have a higher average life and succeed in the market.

Limitations And Future Directions

Naturally, this research is not without limitations. The data collection was conducted among the smartphone owners from Rajasthan state only in India. So the results could be different on multi state wise and country wise data. Therefore, the generalization scope for Indian market based on our research findings to limited to some extent. The research study is limited to respondent's related to only smartphone industry. The respondents from other industries are not being studied in this research. Due to vast geographical spread of India, the current & prospective smartphone owners in other parts of country are not being studied. The response from the respondents can be biased. The specifications of methodology and the scope of MSluse as measure of brand equity are important for future researches. The study can also be conducted on cross sectional and cross country on selected brands from industries such as Automobiles, Bikes, Laptops, Wrist Watches,

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- <https://www.euromonitor.com/mobile-phones-in-india/report>

An Empirical Study On Six Sigma Approach To Improve The Quality Of Process Outputs

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Abstract

Six Sigma is a mantra that huge numbers of the best associations on the planet swear by and the pattern is getting more smoking continuously. To such an extent that enterprises like GE demand that each venture be a Six Sigma venture. The Six Sigma system has without a doubt had an unmistakable effect to the main concerns of numerous companies and they have the numbers to demonstrate it since Six Sigma requires steady and predictable estimation. Six Sigma stresses quality from the earliest starting point. Regularly customary Software Development Life Cycle (SDLC) approaches present the quality procedures towards the finish of the task cycle, just before usage. Some ordinarily utilized terms are unit trying, framework testing, reconciliation testing, and so on. In This Paper we are focusing on little and medium dimension firms in Bangalore and concentrate the impacts of six sigma in improving Quality and efficiency of the firm

Keywords: Six Sigma, SDLC, Project Cycle.

Introduction

The factual portrayal of Six Sigma depicts quantitatively how a procedure is performing. To accomplish Six Sigma, a procedure must not deliver more than 3.4 imperfections per million chances. A Six Sigma imperfection is characterized as anything outside of client particulars. A Six Sigma opportunity is then the all out amount of chances for a deformity. Procedure sigma can undoubtedly be determined utilizing a Six Sigma mini-computer.

The essential target of the Six Sigma philosophy is the execution of an estimation put together methodology that concentrations with respect to process improvement and variety decrease through the utilization of Six Sigma improvement ventures. This is cultivated using two Six Sigma sub-systems: DMAIC and DMADV. The Six Sigma DMAIC process (characterizes, measure, break down, improve, control) is an improvement framework for existing procedures falling underneath particular and searching for steady improvement. The Six Sigma DMADV process (characterize, measure, examine, plan, confirm) is an improvement framework used to grow new procedures or items at Six Sigma quality dimensions. It can likewise be utilized if a present procedure requires something other than gradual improvement. Both Six Sigma forms are executed by Six Sigma Green Belts and Six Sigma Black Belts, and are directed by Six Sigma Master Black Belts.

Literature Review

Extensive association inside Ericsson with 400 people in 40 Scrum groups at three locales received the utilization of Communities of Practice (CoP) as a major aspect of their change from a customary arrangement driven association to lean and lithe.

For the situation association, CoPs were at first used to help the lithe change, and as a major aspect of the dispersed Scrum usage. As the change advanced, the CoPs additionally assumed the job of supporting constant authoritative upgrades. CoPs turned into a focal

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instrument behind the achievement of the huge scale dexterous usage for the situation association that alleviated probably the most squeezing issues of the deft change (Maria Paasivaara, 2014) [1].

LEAN administration implies making more an incentive for the client by utilizing less assets. Lean association realizes which esteems their clients require and centers its key procedures to persistently increase the value of the client. Disposal of misfortunes in the entire procedure rather than in specific pieces of the framework just makes forms that need less human exertion, less space, less capital and less time to build up an item or to play out an administration. On the opposite side, CRM as an idea and software instrument have fundamentally added to improving association with clients. Development of CRM framework is situated by xRM (Anything relationship the board). Procedures which can be secured with these arrangements are never again identified with relations with clients just, yet to a substantial number of different procedures, for example, overseeing associations with providers, overseeing representative relations and overseeing hardware upkeep. This work needs to demonstrate that consolidating ideas of xRM and Lean can prompt the expansion of effectiveness and straightforwardness of business forms. (Zeljko Stojkic, 2014) [2].

There is great proof for a fact reports and other writing that the lean stream ideas of on-request, esteem based planning and restricted work-in-advance are very compelling in numerous occasions of software development. The inquiry remains, be that as it may, in the event that they are similarly appropriate to the frameworks and undertaking designing found in huge or complex framework situations. Utilizing a surrogate situation got from the mind boggling associations of IT, installed frameworks, and human exercises in an extensive multifacility medical clinic framework, we give instances of how incorporated kanban-like builds can be made at every framework designing dimension from an individual task through the total capacities portfolio. (Richard Turnera, 2013) [3]

Lean Six Sigma associations have the ability to cultivate an atmosphere of ceaseless hierarchical change by adjusting the organization vision to the perfection demonstrate. At the point when top administration chooses to change the association culture, every one of the means must be made to achieve that. A decent correspondence and an administration dependent on representative inspiration can make essential strides in creating ceaseless improvement ventures. A committed representative may convey to an association benefits, in such a case that it feels that his work is imperative to his pioneer and that he is acknowledge he will be increasingly limited to his working environment and he will put a noteworthy exertion to carry out his responsibility at a greatest efficiency. (Rodica Pamfiliea, 2012) [4].

Great resistance and variety the board is basic to accomplish high esteem including items with savvy forms. The connection between Tolerance Engineering and prevalent assembling improvement methods of insight, for example, Lean and Six Sigma is, in any case, not generally that reasonable (Lars Krogstiea, 2013) [5].

Data Collection & Analysis

A) Selection of organisation

- 25 Indian Small & Medium Level Software Firms are selected on the basis of convenient sampling of Bengaluru Region during August 2014 – February 2015.
- These companies are also selected on the basis of top 50 companies ranked by Just Dial Rating.

B) Sampling population

- As many as 250 samples were included as part of data for the study. These samples were collected from middle management executives

C) Data collection

- An exhaustive questionnaire was prepared and data was collected with regard to Six Sigma in the firm. .

D) Stages of Data collection

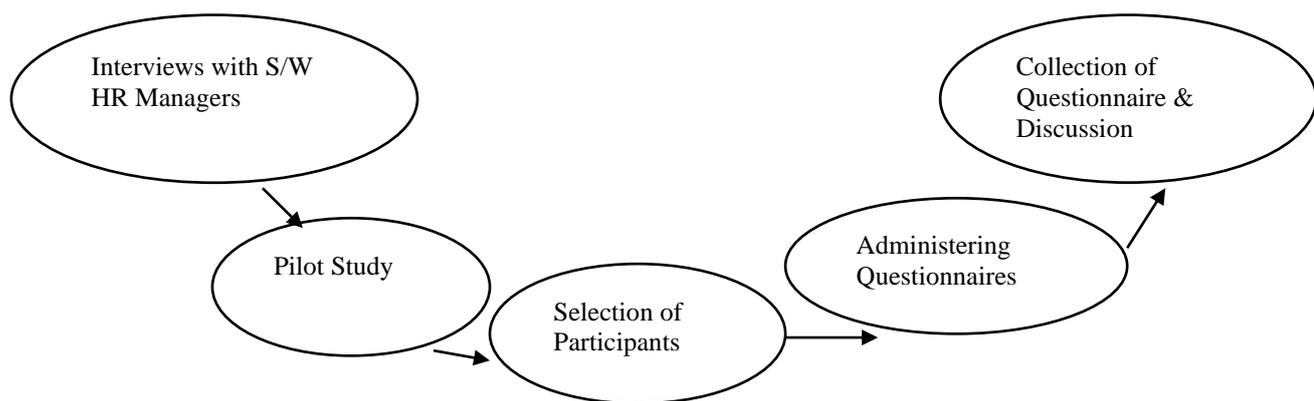


Figure 1: Stages of Data Collection followed by Author

Hypothesis

H1 - A positive relationship exists between Six Sigma activities of companies and Rejection Rate.

H2 – Six Sigma will help improve the Productivity of the company.

H3 – Six Sigma initiatives and its effective adoption by employees will help in High Profits

Results

The following Tables & Figures show the opinion of the participants. SPSS software package is used for statistical analysis.

Table 1 :Customer satisfaction is tracked and reviewed as part of management policies.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	8	3.2	3.2	3.2
Disagree	8	3.2	3.2	6.4
Neither Agree nor Disagree	24	9.6	9.6	16.0
Agree	130	52.0	52.0	68.0
Strongly Agree	80	32.0	32.0	100.0
Total	250	100.0	100.0	

Table 2 : My firm’s reputation is enhanced because it pays significant attention to their social responsibilities

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	4	1.6	1.6	1.6
Disagree	16	6.4	6.4	8.0
Neither Agree nor Disagree	56	22.4	22.4	30.4
Agree	96	38.4	38.4	68.8
Strongly Agree	78	31.2	31.2	100.0
Total	250	100.0	100.0	

Table 3: Current business operations are improved upon per analysing the operation.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	8	3.2	3.2	3.2
Disagree	23	9.2	9.2	12.4
Neither Agree nor Disagree	33	13.2	13.2	25.6
Agree	126	50.4	50.4	76.0
Strongly Agree	60	24.0	24.0	100.0
Total	250	100.0	100.0	

Table 4. Our firm Practices Six Sigma

	Frequency	Percent	Valid Percent	Cumulative Percent
YES	156	62.4	62.4	62.4
No	24	9.6	9.6	72.0
Planning To	70	28.0	28.0	100.0
Total	250	100.0	100.0	

Table 5 : Problem solving teams have a recognized leader who masters the methodology and tools and has the ability to provide guidance and support

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	6	2.4	2.4	2.4
Disagree	66	26.4	26.4	28.8
Neither Agree nor Disagree	80	32.0	32.0	60.8
Agree	68	27.2	27.2	88.0
Strongly Agree	30	12.0	12.0	100.0
Total	250	100.0	100.0	

Analysis & Interpretation

- The Data collected has been primarily tabulated & Master table was prepared
- Sample was tested for reliability using Cronbach's alpha
- Percentage analysis is the basic tool for analysis
- Regression analysis a statistical process for estimating the relationships among variables is used

Cronbach Alpha

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent (High-Stakes testing)
$0.7 \leq \alpha < 0.9$	Good (Low-Stakes testing)
$0.6 \leq \alpha < 0.7$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Case Processing Summary

		N	%
Cases	Valid	250	100.0
	Excluded ^a	0	.0
	Total	250	100.0

a. List wise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.978	10

Regression Analysis

Model Summary -1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.788 ^a	.620	.619	.594

a. Predictors: (Constant), **Our firm Practices Six Sigma**

Dependent Variable (X): Six Sigma activities of companies have helped in reduction of Rejection Rate

Independent Variable(Y): **Our firm Practices Six Sigma**

R², the Coefficient of Determination, tells how many points fall on the regression line. In Model Summary 1 – 0.788 means that 78% of the variation of y-values around the mean is explained by the x-values. In other words, 78% of the values fit the model.

Model Summary - 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.810 ^a	.657	.655	.525

Predictors: (Constant), **Our firm Practices Six Sigma**

Dependent Variable(X): H2 – Productivity of the company has been increased after six sigma adoption.

Independent Variable(Y): Our firm Practices Six Sigma

R², the Coefficient of Determination, tells how many points fall on the regression line. In Model Summary 2 – 0.81 means that 81% of the variation of y-values around the mean is explained by the x-values. In other words, 81% of the values fit the model.

Model Summary -3

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841 ^a	.708	.707	.522

Predictors: (Constant), **Our firm Practices Six Sigma**

Dependent Variable(X): H3 – Six Sigma initiatives and its effective adoption by employees helped in High Profits

Independent Variable(Y): Our firm Practices Six Sigma

R², the Coefficient of Determination, tells how many points fall on the regression line. In Model Summary 3 – 0.84 means that 84% of the variation of y-values around the mean is explained by the x-values. In other words, 84% of the values fit the model.

Limitation of the study

- The sample size is only 250 respondents , Much more elaborate study could be done
- There may be some positive & negative biases of the respondent.

Conclusion

Six sigma delivered immediate or circuitous connects to company's execution. A positive relationship exists between Six Sigma exercises of organizations and Rejection Rate. Six Sigma will help improve the Productivity of the organization. Six Sigma activities and its successful selection by workers will help in High Profits. Official Leadership incorporates the CEO and different individuals from top administration. They are in charge of setting up a dream for Six Sigma usage. They likewise engage the other job holders with the opportunity and assets to investigate new thoughts for leap forward upgrades by rising above departmental hindrances and defeating characteristic resistance to change. If six sigma is applied to all small and medium firms certainly there can be a rise in productivity.

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Investors Perception towards Mutual Funds Investments (With special reference to Prayagraj City(Allahabad), Uttar Pradesh)

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Abstract

Mutual funds in India play a vital role in mobilizing funds for capital and financial markets. The role of Mutual funds in India felt significant as it generates funds from small investors at large across the country. The main objective of the study is to elucidate the perceptions and behaviours of the small investors located in Prayagraj city (Allahabad) in the state of Uttar Pradesh.

The diversification of schemes provides variety of options to suit the individual objectives according to their age, financial position, risk tolerance and return expectations. In the past few years, we had seen a dramatic growth of the Indian Mutual Fund industry with many private players bringing global expertise to the industry. Investment in mutual funds is effected by the perception of the investors.

The objectives of the study are to identify the investor's perception on mutual funds and to analyze the factors affecting investors' perception towards mutual funds by using 250 convenience samples in Prayagraj city (Allahabad), Uttar Pradesh. The study found in Prayagraj city is that mostly the salaried class with Lower Net worth Individuals have positive approach towards investing in mutual funds

Keywords: Mutual Funds, Financial Asset, Fund, Objective, Investor's perception, Prayagraj

Introduction

Over the years, the financial services in India have undergone revolutionary changes and had become more sophisticated, in response to the varied needs of the economy. The process of financial sector reforms, economic liberalization and globalization of Indian Capital Market had generated and augmented the interest of the investors in equity. But, due to inadequate knowledge of

the capital market and lack of professional expertise, the common investors are still hesitant to invest their hard earned money in the corporate securities. The advent of mutual funds has helped in garnering the investible funds of this category of investors in a significant way. As professional experts manage mutual funds, investment in them relieves investors from the emotional stress

involved in buying and selling of securities.

Mutual funds are an efficient way to invest for three reasons:

1. The securities purchased are managed by professional managers.
2. Risk is spread out or diversified, because you have a collection of different stocks and bonds.
3. Low costs and high return as compared to other investment options.

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I. Review Of Literature

National Council of Applied Economic Research (NCAER) (1961) 'Urban saving survey' noticed that irrespective of occupation followed and educational level and age attained, households in each group thought saving for the future was desirable. It was desire to make provision for emergencies was a very important motive for saving and importance was given next to 'saving for old age'. Among motives for saving, provision for emergencies, old age, and purchase of house occur with same frequencies in all occupational and educational groups. The proportion of households expressing a preference for financial assets increase with the level of education. The preference for financial assets, especially bank accounts and small savings, while rising markedly with education, does not seem to increase with income, except at the lowest end of income distribution. Thus, it would appear that efforts must be made to popularize financial forms of savings particularly among the less educated members of upper-income group. Profitability seems to be the most important motive for determining saving preference. Safety is another significant consideration for most people and liquidity ranked third.

Mittal and Vyas (2008) have observed that investors have certain cognitive and emotional weakness which come in the way of their investment decisions. Over the past few years, behavioural finance researchers have scientifically shown that investors do not always act rationally. They have behavioral biases that lead to systematic errors in the way they process information for investment decision. Many researchers have tried to classify the investors on the basis of their relative risk taking capacity and the type of investment they make. Empirical evidence also suggests that factors such as age, income, education and marital status affect an individual.

Earlier studies have been carried out by Schmidt and sevak, (2006)²⁴ to determine the pattern of institutional investors Investment but studies dealing with Investment pattern of individual investors are very few. Previous studies mainly concentrate on differences in individual investing pattern on the basis of gender. Differences on the basis of Age in Investment pattern are a new avenue for research. Earlier studies conclude that women invest their asset portfolios more conservatively than their male counterparts. Women's investment has historically been lower than men's for several reasons, including social and various demographic concerns. However the differences continue to be significant even after controlling for individual characteristics. In making any Investment decision Risk Aversion and Financial Literacy are a major factor. Although different literatures available on risk define it variedly, in common the word risk refers to situations in which a decision is made whose consequences depend on the outcomes of future events having known probabilities.

Manoj Kumar Dashi (2010) in his paper titled 'Factors influencing Investment Decision of Generations in India: An Econometric Study' has stated that the modern investor is a mature and adequately groomed person. In spite of the phenomenal growth in the security market and quality initial public offerings (IPOs) in the market, the individual investors prefer investments according to their risk preference. For e.g., Risk averse people choose life insurance policies fixed deposits with banks and post office, PPF and NSC, Occasions of blind investments are scarce, as a majority of investors are found to be using some source and reference groups for taking decisions. Though they are in the trap of some kind of cognitive illusions such as overconfidence and narrow framing. They consider multiple factors and seek diversified information before executing some kind of investment transaction. The purpose of this study was to determine whether the variables such as

demographic characteristics (age, gender) and investment patterns could be used individually or in combination to both differentiate among levels of men and women investment decisions and risk tolerance and develop some guidelines to the investment managers to design their investment schemes by considering these views of individuals.

Raanganathan. S (2006) Finding is that financial markets are affected by the financial behavior of investor. He observed that consumer behavior from the marketing world and financial economics had brought together a need to study an exciting area of behavior finance'. With the reforms of industrial policy public sector, financial sector and the many developments in the money market and capital market. This study attempts to examine the related aspects of the fund selection behavior of individuals investors towards mutual funds in the city of Mumbai.

Rathnamani (2013) explained that many investors prefer to invest in mutual fund in order to have safety, Liquidity, high return at low level of risk. The world of investment has been changing day by day, so investor's preferences toward investment pattern has also changed. In the demographic profile, most of the investors are willing to invest only 10 percent in their annual personal income; around 39 percent of investors belong to age range of 31 to 40 years. In this study investors are willing to take moderate and low level risk; most of the investors belong to moderate investment style.

Mane (2016) examined the customer perception with regard to mutual funds that are the schemes they prefer, the plans they are opting, the reasons behind such selections and also this research dealt with different investment options, which people prefer along with and a part from mutual funds like postal saving schemes, recurring deposits, bonds and shares. The findings from this project are that of the people are hesitant in going for new age investments like mutual funds and prefer to avert risks by investing in less risky investment options like recurring deposits.

Singh and Chander (2006) pointed out that since interest rates on investments like public provident fund, national savings certificate, bank deposits, etc, are falling, the question to be answered is: What investment alternatives should a small investor adopt? Direct investment in capital market is an expensive proposal, and keeping money in savings schemes is not advisable. One of the alternatives is to invest in capital markets through mutual funds. This helps the investor avoid the risks involved in direct investment. Considering the state of mind of the general investor, this article figured out the preference attached to different investment avenues by the investors; the preferences of mutual fund scheme over others for investment; the source form which the investor gets information about mutual funds; and the experience with regard to returns from mutual funds. The results showed that the investors considered gold to be the most preferred form of investment, followed by NSC and post office schemes. Hence, the basic psyche of an Indian investor, who still prefers to keep his savings in the form of yellow metal, is indicated. Investors belonging to the salaried category, and in the age group of 20-35, years showed inclination towards close-ended growth (equity-oriented) schemes over the other schemes types. A majority of the investors based their investment decision on the advice of brokers, professionals and financial advisors. The findings also revealed the varied experience of respondents regarding the returns received from investments made in mutual funds.

Rajasekar (2013) carried out to know about the investor's perception with regard to their profile, income, savings pattern, investment patterns and their personality traits. In order to understand the level of investor's preference, a survey was conducted taking into consideration various parameters involved in investors decision making. A questionnaire survey method was selected as the investor population is vast a sample size of 150 was taken for the project. The data was analyzed using the statistical tools like percentage analysis, chi square, weighted average. From the findings, it was inferred overall that the investor is highly concerned about safety and growth and liquidity of investments. Most of the respondents are highly satisfied with the benefits and the service rendered by the reliance mutual funds.

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II. Research Objectives

- 1) To know the preference of people for investment in the city of Prayagraj (Allahabad).
- 2) To know the awareness of mutual funds among investors
- 3) To evaluate the knowledge among investors with regard to mutual funds investments.
- 4) To find out how the investor is influenced to make investment in Mutual Funds.

III. Research Methodology

(a) Sample Design

The survey was conducted among 250 respondents as per simple random sampling in Prayagraj city (Allahabad) U.P.

(b) Data Collection Method

The Primary data was collected by the researcher through Questionnaire. Open ended and close ended questions were included in the questionnaire.

The secondary data was from Journals, Books, Magazines, Reports and few other websites.

IV. Analysis & Interpretations

TABLE 1. DEMOGRAPHIC FACTORS OF INVESTORS

Demographic Factors	Male	Female	Total	Percentage
No. of Respondents	200	50	250	100
Age Group:-				
a. Below 30 years	60	10	70	28
b. 31 years - 40 years	65	20	85	34
c. 41 years - 50 years	50	16	66	26.4
d. Above 51 years	25	4	29	11.6
Education Level :-				
a. Under Graduates	92	25	117	46.8
b. Post Graduates	68	15	83	33.2
c. Professionals	40	10	50	20
Annual Income Level :-				
a. Below INR 1,50,000	60	18	78	31.2
b. INR 1.5 Lakhs -INR 3 lakhs	88	20	108	43.2
c. Above INR 3 Lakhs	52	12	64	25.6
Employment Sector:-				
a. Private Sector	119	20	139	55.6
b. Public Sector	44	10	54	21.6
c. Self Employed	37	20	57	22.8

Source: Primary Data

(a)The above table 1 depicts the demographic factors where in the information with regard to Mutual Funds are collected from 200 male respondents and 50 female respondents.

(b)From the above table we can say that 34% of the respondents are in the age group of 31-40 years, 28 % of them are below 30 years, approximately 26% are in the age group of 41-50 years and around 12 % are above 51 years.

(c)With regard to the education level the above table reveals that 46.8% of the respondents are Under graduates, 33% of the respondents are Post graduates and around 20% of them are Professionals. Among the respondents, people having basic graduation are more interested and positive to respond to the questionnaire.

(d)The income of respondents are scattered among the various income levels. With regard to the earning capacity, the annual income of 43% of the respondents are between INR 1.5 lakh – INR 3 lakh, approximately 31% of the respondents are below INR1.5 lakh as their annual income and only 26% of the respondents are having more than INR 3 lakhs as their annual income.

(e)From the above table we can say that Private sector employees are showing more interest to invest in mutual funds especially S.I.P. – Systematic Investment Plan as they believe investment in mutual fund will enable them to earn goods return with comparatively low risk and the volume speaks for themselves as they account for 56%. The respondents working in

Public Sector or are Self employed accounts to 22 % on an average.

TABLE 2. SOURCE OF AWARENESS OF MUTUAL FUND INVESTMENT.

Media	Frequency	Percentage
<i>Newspaper & Magazine</i>	110	44
<i>Television</i>	15	6
<i>Internet</i>	45	18
<i>Relatives & friends</i>	33	13.2
<i>Banks , Agents & Financial Advisors</i>	47	18.8
Total	250	100

Source: Primary Data

Table 2 says that 44% of the respondents are aware of the mutual fund investment through newspaper and magazine, approximately 19% of the respondents are aware through Banks, agents and financial advisors. 18% of the respondents are aware through internet, 13% of the respondents are aware of mutual fund investments through friends and relatives and 6 % of the respondents are aware through television.

Majority of the respondents are aware of the mutual fund investments through newspaper and magazines.

Bankers also play a vital role in influencing the respondents to invest in mutual funds and they try to convince the investor to invest in their banks mutual fund schemes.

TABLE 3. TYPE OF FUNDS HELD BY THE RESPONDENTS.

Type of Fund	Frequency	Percentage
<i>Equity</i>	80	32
<i>Balanced Fund</i>	60	24
<i>Debt Fund</i>	15	6
<i>Tax Planning Fund</i>	10	4
<i>Bond or Gilt Fund</i>	18	7.2
<i>Index Fund</i>	12	4.8
<i>Sector and Industry Fund</i>	22	8.8
<i>Money Market Fund</i>	33	13.2
Total	250	100

Source: Primary Data

From the table 3 it is clear that 32% of the respondents hold equity fund, 24% of the respondents hold balanced fund. Around 13% of the respondents hold Money market funds and approximately 9% of the respondents hold sector and industry funds, 7.2% of the respondents hold bond or gilt fund. 6% of the respondents hold Debt funds, 4.8% of the respondents are holding index fund and 4% of them hold tax planning fund.

The respondents' awareness level shows that many people have knowledge about Growth, balanced and Income Schemes rather than Dividend Schemes, Multicap and Gold related schemes in Mutual funds. .

Many Respondents have clear knowledge about the potential advantages of investing in mutual funds.

TABLE 4 . INVESTORS OPINION ABOUT THE FACTORS INFLUENCING INVESTMENT IN MUTUAL FUNDS

Factors		Most Important	Important	Neutral	Less Important	Not at all Important	Total	%
1. Capital Appreciation	Total	85	107	30	10	18	250	
	%	34 %	42.8 %	12 %	4 %	7.2 %		100
2. High Return	Total	140	55	30	22	3	250	
	%	56 %	22 %	12 %	8.8 %	1.2 %		100
3. Tax Saving	Total	68	120	27	23	12	250	
	%	27.2 %	48 %	10.8 %	9.2 %	4.8 %		100
4. Liquidity	Total	70	100	50	30	13	250	
	%	28 %	40 %	20 %	12 %	5.2 %		100
5. Safety and Security	Total	110	85	14	19	22	250	
	%	44 %	34 %	5.6 %	7.6 %	8.8 %		100
6. Regular Income	Total	55	110	48	24	13	250	
	%	22 %	44 %	19.2 %	9.6 %	5.2 %		100
7. Regular Savings	Total	55	110	48	24	13	250	
	%	22 %	44 %	19.2 %	9.6 %	5.2 %		100
8. Risk	Total	70	120	30	8	12	250	
	%	28 %	48 %	12 %	3.2 %	4.8 %		100

Source: Primary Data

(a) From the above table 4 it is clear that 42.8% of the respondents have given importance towards capital appreciation, 34% of them have given most importance towards capital appreciation, 12%, 4% and 7.2 % of the respondents have stated their opinion as neutral, not at all important and less important.

(b) 56% of the respondents have an opinion that high return from mutual fund is most important, 22% of the respondents considered as important, 12%, 8.8% and 1.2 % of the respondents opinion are neutral, less important and not at all important.

(c) From the above table we can say that 48 % of the respondents feels that MF are important from the tax point of view. From the liquidity point of view 40% of the respondents feels it as Important. 44% of the respondents feels that Mutual funds are an important instrument for regular Income and savings.

TABLE 5. PURCHASE OF MUTUAL FUND UNITS.

Mode of Purchase	Frequency	Percentage
<i>Direct Purchase</i>	65	26
<i>Through Brokers</i>	185	74
Total	250	100

Source: Primary Data

The above table 4 shows that majority of the respondents i.e. 74% of them purchase the mutual fund units through brokers and 26% of the respondents purchase the mutual fund units directly.

TABLE 6. AWARENESS OF THE RISK INVOLVED IN MUTUAL FUND INVESTMENTS.

Awareness	Frequency	Percentage
<i>Yes</i>	195	78
<i>No</i>	55	22
Total	250	100

Source: Primary Data

a) The above table 5 shows that majority of the respondents i.e. 78% of them are aware of the risk involved in the mutual fund investment, and remaining 22% of the respondents are not aware of the risk involved in mutual funds.

b) Some of the respondents were even knowing the importance of the fund managers and they believe that an inefficient fund manager can introduce an element of risk into their portfolio because change of a fund manager can also cause style drift and they know that this artist (fund manager) may contribute to the success of the returns.

c) Similarly, few of the respondents mentioned about the cost of investing in a mutual fund which eats in the returns. In high return years (like the last few years, where returns have been in the high approximately 15 % in equity, 2% costs may not make a material impact: however, at more moderate or negative returns, costs can be a big inch).

d) The other risk which few of the respondents were aware of was 'Style Drift.' If you invest in a large cap fund and it begins to invest in mid cap stocks, or if you invest in a long term debt fund but it starts to invest a greater proportion in cash instruments, you might not get the type of risk-return reward that you have been expecting.

e) Some of the respondents even mentioned that Mutual funds is a wonderful tool which always tries to maximise the returns on the funds invested through them, but all the funds cannot succeed and outperform each other or the benchmark because it depends upon the time when the investor enters the market and when he/she exits from the market. Hence, some of them under-perform the benchmark and therefore they need to be careful with regard to the timings .

f) Maximum respondents were well acquainted with mutual fund terms and some of the respondents do not know the technical terms like Entry load, Exit Load, Open Ended, and Close Ended funds.

TABLE 7. PROBLEMS FACED BY MUTUAL FUNDS INVESTORS.

Problems	Mean Rank	Final Rank
<i>1. Unable to aware market value</i>	2.9	1
<i>Delay in Selling unit</i>	3.65	2
<i>Fees and Commission</i>	3.7	3
<i>Low Income</i>	3.85	4
<i>Poor Service of Brokers & Advisors</i>	4.15	5
<i>Poor service of Mutual fund company</i>	4.40	6
<i>7. Non availability of branch office</i>	4.60	7

TABLE 8. FRIDMAN TEST .

Friedman test has been applied to find out if there is significant relationship between the mean rank and the problem faced by the Mutual Fund Investors

<i>N</i>	250
<i>Df</i>	6
<i>Chi Square</i>	39.576
<i>Asymp. Sig.</i>	.000

Based on the Friedman test, it is clear that all mean rank have significant relationship with the problem faced by Mutual Fund Investors at 5% level of significance. Hence the hypothesis is rejected.

V. General Suggestions And Recommendations

- (a.) Mutual fund companies should try to educate the investors to invest in mutual funds through regular awareness programs and should try to make them understand that disciplined investment is the key to wealth Creation. .
- (b.) Fund Managers should try to give clear information about the mutual fund terms and various Schemes and all aspects of investing on Mutual funds.
- (c.) Financial advisors, Brokers and Agents should try to explain and make the prospective investors understand the terms and conditions of the mutual fund schemes very clearly and create in the mind of the investors that mutual funds are market instruments and are associated with market risk hence mutual fund do not offer guaranteed income, and should not hide anything or mislead them.
- (d.) The growth of mutual fund tends to increase the share holdings in good companies, which will increase the fear of destabilizing the industrial groups, hence introduction of Non Voting shares and lowering the dept-equity ratio help to remove these apprehensions.
- (e.) Various schemes may be introduced to attract female respondents as the economy is leading towards Women's financial empowerment.
- (f) Lastly, mutual funds need to take advantages of modern technology like computer and telecommunications to render services to the investors.

VI. Findings Of The Study

1. The objective which is set to study the investors view towards mutual fund as per the sample size and test which is applied to the study. found that the investors are choosing and feeling confident in investing in mutual fund because they think that mutual fund are less risky compared to any other investment option.
2. In this study, graduate respondents have a good knowledge about mutual funds. The general understanding & awareness level among the individual investors is getting better with passing time. Mutual funds are cornering the maximum attention of the investors in today's scenario be it individual or corporate investors. This is because of the reason that there is a perception amongst these investors that mutual funds give quick and more returns as compared to other avenues and instruments of investments. This is the most prominent factor for the acceptance and growth of mutual funds amongst the investors in India in recent times.
3. The awareness level of mutual fund among the investors is good and they are understanding that mutual fund is associated with market risks and they need to be careful while investing.
4. The most preference of the conservative and senior citizens investors are the fixed deposit

because they feel it is the safest and returns are fixed and they don't fear of losing their money

5. Mutual fund are link with share market and investors are not taking advice from expert advisor to guide them for their investment in mutual fund so it creates the difficulty to select the mutual fund scheme which is beneficial for them. Apart from these it was also found that there are investors facing various problems in selecting mutual fund as an investment option because of share market uncertainties and risk associated with it so some investors avoid investing large amounts in mutual fund and they are very comfortable in SIP's.

6. In this chapter the attitude of investors are analysed. Regarding the factors influencing the investors, the significant difference among the small and large investors are identified in the case of type of fund, schemes portfolio, reputation of fund manager, liquidity factor and risk involved.

The analysis of pooled data reveals that the important variables influencing the investment on mutual funds among the investors are brand equity, schemes portfolio, reputation of fund manager, past performance of the fund, liquidity factors and risk involved. Investors expectations are studied with the help of factor analysis and the important factors extent the expectations of investors about mutual funds are promotion, performance and liquidity.

VII. Conclusion

In the past decade through fiscal 2018, India's mutual fund industry has grown at twice the pace of its global peers. The ratio of the industry's assets under management (AUM) to bank deposits has grown from 13% as of March 2016 to 22% as of March 2018.

Monthly SIP contributions and accounts have trebled in the past two years, which suggests more people are following the disciplined investment approach that the mutual funds industry has been advocating for long.

Good part is, this growth has not been just an urban phenomena. Assets under management from cities beyond the top 15 (B15) have grown at 32% annualised since 2014.

Encouraged by the regulator, the industry has also been adopting best practices, and improving transparencies such as through re-categorisation of schemes, daily disclosure on total expense ratio, and uniform and timely publication of data.

That said, individual participation remains concentrated in equity funds, though debt-oriented funds are also attractive and efficient, allowing investments across the rating spectrum. Their importance as a source of funding can't be overstated, especially because CRISIL's estimates show India needs to spend Rs 56 trillion to build out infrastructure in the five fiscals to 2023.

Another salutary development is increasing digitalization and technology adoption enhancing investor convenience. The government and the regulator have played a part in this, especially through their financial inclusion efforts.

Consequently, money entering mutual fund schemes through the digital route has multiplied from ~0.5% of gross inflows two years back to ~10% in June 2018.

I believe technology will continue to play a major role in the industry's growth and improve investor access to the capital market.

I would also like to acknowledge CRISIL for being associated with India's mutual fund industry and the capital market for over 3 decades now.

CRISIL is a leading, agile and innovative global analytics company driven by its mission of making markets function better. It is India's foremost provider of ratings, data, research, analytics and solutions, with a strong track record of growth, culture of innovation and global

footprint. It has delivered independent opinions, actionable insights, and efficient solutions to over 100,000 customers.

Their analytics and solutions, including the CRISIL Mutual Fund Ranking and benchmarks for the debt markets, are very useful and are widely followed by all the stakeholders as they provide critical inputs to decision making all across the country.

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JUDICIAL ACTIVISM

"Justice, Justices and Justicing & need of the Law"



Anju*

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Abstract

The executive, judiciary and legislature are three wings of Indian polity. Each wing has a work domain according to decline of separation of powers. Legislature plays a role of law making body, executive does administrative work and judiciary delivers justice to the people. The regular work of judiciary is to deliver justice but sometimes judiciary instead of delivering justice, assumes the character of activist. The process of assuming the character of activist gives birth to a expression which is commonly known as 'judicial activism'.

The term 'Judicial activism' was coined for the first time by Arthur Schlesinger Jr. in his article 'The Supreme Court : 1947', published in Fortune magazine in 1947. Though the history of judicial activism dates back to 1803 when the concept of judicial review was evolved by Chief Justice Marshall in celebrated case of Marbury vs Madison. The emergence of judicial review gave birth to a new movement which is known as judicial activism.

'Judicial activism' this term is very common in our democracy set up. Whenever judiciary does any work which comes under the domain of executive or legislature, it is called judicial activism. According to Black's dictionary 'Judicial activism' is a process where judges allow their personal view and perceptions to govern their decisions. The term judicial activism was coined by USA and now has become common all over the world. Judicial activism can be one or more of three possible actions : overturning laws as unconstitutional, overturning judicial precedents and eating against a preferred interpretation of the constitution.

India has a recent history of judicial activism originating after emergency through which efforts were made to control the actions and powers of judiciary. In recent years judiciary has passed directions, made decisions which are against the doctrine of separation of powers.

Power of Judicial Review

Judicial activism refers to a philosophy of judicial decision-making whereby judges allow their personal views about public policy, among other factors, to guide their decisions. The Constitution of India divides the powers to the government into three branches i.e. legislature, executive and judiciary. Unlike American Constitution, Indian Constitution itself provides scope or space for emergence of judicial activism by virtue of Articles 13, 32, 226, 141 and 142. Article 13 conferred wide power of judicial review to the Apex Court.

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Article 32 and Article 226 makes the Supreme Court and High Court respectively as the protector and guarantor of the Fundamental Rights. Article 141 indicates that the power of the Supreme Court is to declare the law and not enact it, but in the course of its function to interpret the law, it alters the law. Article 142 enables the Supreme Court in exercise of its jurisdiction to pass such order or make such order as is necessary for doing complete justice in any cause or matter pending before it.

The causes which gives rise to judicial activism includes expansion of rights of hearing in the administrative process, excessive delegation without limitation, expansion of judicial review over administration, promotion of open government, indiscriminate exercise of contempt power, exercise of jurisdiction when non-exist, over extending the standard rules of interpretation in its search to achieve economic, social and educational objectives and passing of judgement.

Like Jhalkathu banning, liquor sale banning in U.K. etc. there are some examples where judiciary performed the role of an activist. Recently the Supreme court directed Delhi Auto-Rickshaws to convert to natural gas to cut down pollution and ruled that politicians facing criminal charge could not seek re-election. These directions and orders owes its origin in inactiveness of legislature. Former Justice Krishna Ayyer has rightly said that Judiciary activist role is nothing but inertia in legislature. Judicial activism come in being whenever legislative or executive fails to perform its duties.

In years gone by a unlawful nexces developed between the legislature and executive. This resulted in scams of huge proportions in which billions of rupees were misappropriated. The executive would do nothing about the spreading corruption in public life. The legislature in unable to do anything except to paralyse itself. Having lost all hopes people look up to the higher judiciary as the only possible redeems of the despairing situation. Judiciary being guard of national interest has to step in to redress the grievances of public even at the risk of being dubbed as overactive. Former Justice A.M. Ahmedi has opined that the present situation is not really case of one democrated institution trying to exist itself over other, rather it is a case of citizens finding their ways in articulate their concerns for events accessing at the national level.

Ambedkar termed this provision as the 'heart of the constitution'. The scope of judicial remedies has three dimensions : First to ensure fair administration; secondly to protect fundamental rights of citizens and last but no lest is to rule on the questions of legislative competence between the centre and states. The Higher courts in its judicial review power may invalidate any law, by law, rule enacted by the legislature. If they are not according to the constitution it can declare then unconstitutional. Judiciary restricts the power of the legislature through its power of judicial review.

Public Interest Litigation

Public Interest Litigation is an important means of judicial activism. It has come into existence during era of justice P.N. Bagwati, who is normally known as father of P.I.L in India. The intent of this instrument to improve access to justice for those who are poor to move the courts or unaware of their entitlement. Through Public Interest Litigation, the Supreme Court has given recognition to the right of other to demand justice on their behalf. Under this practice anybody can draw attention of courts to grave injustice done to other just by writing a letter or an application. In most public interest litigation, the judges take on an active role in literal sense; For example Bandhua Mukhati Morcha case wherein the court directed the release of bonded labours.

The term judicial activism was explained by the Supreme Court in Golaknath's case wherein the court laid down the judicial principle of prospective overruling by giving wider beneficial interpretation of Article 13 of the Constitution. But in real sense, the history of judicial activism in India began in late seventies with the introduction of Public Interest Litigation (PIL).

The concept of PIL in India was started by justice Krishna Iyer and justice PN Bhagwati. The term 'Public Interest Litigation' means any litigation conducted for the benefit of public or for removal of some public' grievance. In simple words, it means any public spirited citizen can move the court for the public cause by filing a petition in the Supreme Court.

The concept of PIL is in consonance with the principles enshrined in Article 39A of the Constitution of India to protect and deliver prompt social justice with the help of law. Justice Bhagwati in SP Gupta vs Union of India case 1981 (judges transfer case) firmly established the validity of the Public Interest Litigation. The famous case of judicial Activism in India is the majority judgement in the Keshavananda Bharati case (the Commission Vs. State of Arunachal Pradesh, 2G Spectrum case 2012 are important of judicial activism.

If we look at the decision given by the Supreme Court in several PIL, it is evident that most of the PIL extends to environmental pollution, convicted prisoners under trials, personal liberty, corruption etc. The court has given several important directions to the executive as well as to the legislature at the instance of the PIL.

That the PIL strategy is a status-quo approach of the court to avoid any change in the system. Another criticism is that judicial activism is coming in between the concept of separation of power.

It is also believed that the PIL will further aggravate the issue of pending cases in the court. According to another view, the misuse of PIL has reached ridiculous stage and petitions are filed over petty issues like student-teacher strike, shortage of buses, painting of road signs and so on.

Judicial activism in India, in its truest sense, dates back to the commencement of the Constitution. Hence, the study of judicial activism in India from the historical perspective is confined from the period 1950 to 1977, the period of 1978 onwards being the judicial activism has risen mainly due to the failure of the executive and legislatures to act. It has arisen also due to the fact that there is a doubt that the legislature and executive have failed to deliver the goods. It occurs because the entire system has been plagued by ineffectiveness and inactiveness. The violation of basic human rights has also led to judicial activism. Finally, due to the misuse and abuse of some of the provisions of the Constitution, judicial activism has gained significance.

The provision of suo motu cognizance by courts is another important instance of judicial activism. Under this institution, the court may itself take cognizance of matters of public interest. It can take cognizance on the basis of video clipping or news paper reports.

Judicial activism is simply an institution to reduce the grievance of public Like other institutions, it has always been in controversy. The government blamed the judicial activism as over activeness of judiciary. Some jurists supports judicial activism but some are disagree with the functioning of judicial activism.

Arguments in favour of judicial activism

The support of judicial activism highlighted the benefits of judicial activism judicial activism provides a system of check and balance to other government branch judiciary plays as

watchdog of constitution and keep an eye on the functioning of all the institution of polity. As a result some kind of check and balance has established between the govt. branches.

- Judicial activism enhanced the trust or faith of public on judiciary.
- Judicial activism might works towards the greater good in the society.
- Judicial activism promotes constitutional democracy.
- Indicate activism establish rule of law.
- Judicial activism gives broader insight to fundamental rights by expanding their purview and utility. For example, implicit rights added in domain of right to live and personal liberty.

Argument against Judicial activism

The detractors of judicial activism has criticized this institution as unconstitutional. They said that judges are not appointed or elected by people of India so they can not represent the mandate of people.

- Judiciary has not been accountable to any one. Unlike legislature which are accountable to people or executive which is accountable to legislature, judiciary is not accountable to anyone in respect of its functioning.
- Sometimes, judicial activism convert into judicial overreach. There is a thin line between judicial activism and overreach, judiciary in few cases crossed this line. For example, in National antham case.

Conclusion

The power of judicial review is recognized as a part of the basic structure of the Indian Constitution. The activist role of the judiciary is implicit in the said power. Judicial activism is absolutely necessary for democracy because without an alert and enlightened judiciary, the democracy will be reduced to an empty shell. When out chosen representatives have failed to given us a welfare state, let it spring from the judiciary. Only thing the judiciary must keep in mind is that while going to deliver justice to common man, it must not overstep the limitations prescribed by sacrosanct, i.e. the Constitution.

No doubt, judicial activism protects fundamental rights of citizens. It has exposed the weakness and inactiveness of the legislature and executive. Judges being of unassuming character has potential to unearth the misdeeds of the government without any fear. Several scams like 2G Scame, Asian games scam and coal scam would gouotices but for judicial activism. It has become necessary in the view of the inactiveness of legislature. It has given a ray of hope to poor people. It has given a new lease to democracy.

During the past decade, many instance of judicial activism has gained prominence. Bhopal gas tragedy and the Jessica Lal murder case are among the top two. The later was open and shut case for all. Money and muscle power tried to win over the good. But lately, it was with the help of judicial activism that the case came to a strong decision.

In the 1980s, two remarkable developments in the Indian legal system provided a strong impetus to judicial activism in India. There was a broadening of existing environmental laws in the country and judicial activity through public interest litigation began and judicial activism' being converted into `judicial overreach' the Supreme Court issued the following directions

- The court must encourage genuine and bonafide PIL and effectively discourage and curb the PIL filed for extraneous considerations.
- The court should prima facie verify the credentials of the petitioner before entertaining a PIL.

- The court should be fully satisfied that substantial public interest is involved before entertaining the petition.

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Demographic and Trading Determinants of Risk Tolerance Behaviour of Retail Individual Investors in India

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Abstract

The paper aims to consider both demographic and trading characteristics of retail individual investors in order to understand their behaviour towards risk tolerance levels while incorporating their investment decision making process in the stock market in Indian context. A questionnaire was answered by 428 active investors in stock market investments from the Northern region of India by applying Chi-square analysis across demographic and trading characteristics of Investors. The results revealed that majority of investors in Indian context are risk lover, primarily males, working as professionals like doctors, lawyers, chartered accountants and belonged to higher income groups. It was observed that education and income levels were not significant variables while incorporating investment decisions in comparison to risk in financial markets.

Keywords: *Chi-square test, Demographic and Trading Characteristics, Investor Behaviour, Risk Tolerance Levels,.*

Introduction

In highly competitive financial markets, the investment decision of investors is influenced by rational or irrational factors which contribute to the efficiency or inefficiency of security markets. These inefficiencies are primarily pushed by behavioral biases of individual investors more than institutional investors, where investment is made by advices of intelligent and well-backed analyst, advisors, opinions in the market, thereby making investment decision-making of individual investors a complex decision making behaviour. This behaviour of retail individual investors is well documented in Odean (1998, 1999), Barber and Odean (2000, 2001), Hersh Shefrin (2007), Pompion (2006), Thaler (2009) amongst others.

The trading behaviour of individual investors had been the main focus of the emerging area of finance known as 'Behavioral Finance'. According to Riccardi and Simon (2000), behavioral finance defines reasoning patterns of investors which includes the emotional process and the degree to which they influence the decision-making process. Hersh Shefrin (2007) has also described behavioral finance as an interaction of psychology with financial action and the performances of practitioners (generally all types and categories of investors). Thus, the area of behavioral finance can be defined as a combination of understanding the psychology of financial decision making by investors with the financial theories so as to enable an interaction between the markets, personality, emotions and reason. In past, across many decades of research, it is found that the standard finance theories are based on the assumption that investors are rational, careful, well-informed, consistent and have little difficulty making financial decisions, thereby creates the scenario of efficient markets, where

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security prices reflect the true 'intrinsic value' of the assets. However, the reality doesn't match up with these assumptions and investors rarely behave according to the assumptions made in standard finance theory (Byrne and Utkas, 2013). Thus in present times, the real practice of retail individuals are that they make their judgments and decisions based on past events, preferences and personal beliefs by devising short cuts or heuristics which saves time and lead them away from rational and long time thinking (Baker and Riccardi, 2014).

Literature Review

In 1990s, there was a paradigm shift in the academic discussion from econometric analysis of prices, dividends and earning towards the development of behavioral models of human psychology relating to financial markets. The emerging research in behavioral finance has provided greater evidences that investors' financial decisions are largely affected by internal and external behavioral factors (Shefrin, 2000). Over a period of time, majority of economic and financial theories are based on the assumption that individuals act perfectly rational and appraise all available information when making economic decisions. More specifically, investors should gravitate towards the best desirable combination of the expected returns and risk which should be located at the tangency point along the investor's personal indifference curve and represents maximum utility in available investment opportunities (Pompion, 2006). In present times, with an influx of plethora of information and investment opportunities available in the financial markets, the retail individual investors' decision making process has become more complex, whereby they are undertaking risk on smaller and unprofitable companies to build stock portfolios in an increasing volatile stock market. As the number of individual investors have exploded and generated momentum in increasingly volatile stock markets, it has become increasingly more important to understand the minds, motivations, and decision-making styles of individual investors (Warren, Stevens and McConkey, 1990; Wood and Zaichkowsky, 2004). It is for this purpose, corporate and financial advisors need to understand the personality, styles, preferences and choices of investors and must have in-depth knowledge of the diverse classification of individual investors. In this complex, diversified market, understanding demographic and trading classification with relation to risk tolerance levels becomes extremely important in order to under the trading behaviour of individual investors' in order to selectively target and communicate to these individuals in financial markets. In the past, majority of research in this area of individual investor is on understanding individual biases (Pompion, 2006; Sahi and Arora, 2012), highlighting socio-demographic characteristics (Harrison, 2000; Funfgeld and Wang, 2008; Sahi, 2009; Riley and Chow, 1992; Lewellen, Lease and Schlarbaum, 1977), evaluating attributes of shares (Nagy and Obenberger, 1994; Clark-Murphy and Soutar, 2005), and lifestyle and demographic attributes of investors (Barnewell, 1987; Bailard, Biehl, and Kaiser, 1986, Rangarajan, 1997, 2003; Warren, Stevens and McConkey, 1990; Nagpal and Bodla, 2009). The present study thus investigates how demographic and trading characteristics of individual investors are associated with the risk tolerance behaviour of investors and thus attempts to fill in the gap of developing new demographic profiling of investors especially in Indian context. In this paper, we propose to study the retail individual investors in India with the following objectives: (1) to understand the demographic characteristics of individual investors, (2) to understand the demographic characteristics of individual investors, (3) to investigate whether statistical association exist among the demographic and trading characteristics of investors on the risk tolerance levels of individual investors.

Research Methodology

The data come from a questionnaire that was completed by 428 investors from the Northern region of India. The sample area comprised of the State of Punjab, Haryana, Union Territory of Chandigarh, Delhi (National Capital of India) and National Capital Region (NCR). Since only a certain segment of population is of interest from the point of view of fulfilling the objectives as stated in the study, the focus of data collection was subjective but relevant segments of the population (Sahi and Arora, 2012; Fungfield and Wang, 2009). Hence, only the investing class or people having financial savings and capacity to invest in various financial instruments were of significance to this study. The target population was individuals belonging to Social-Economic Classification (SEC) A and B households formed the universe. The sample of 428 were identified by snowball sampling method, since no previous list of investors were available, who utilized social media platform for incorporating their investment decision-making process, thereby the sample composition in terms of age, gender and other demographic characteristics came close to reflecting the respective proportions in India (Vogt, 2005). Around 500 individual investors were approached and were asked as to their interest in participating in the survey, out of which 428 responses were considered for further data analysis after validation checks. The questionnaire contains questions concerning demographic variables such as age, gender, trading experience, work experience, education, occupation, income, marital status etc. In addition to this, trading characteristics like trading frequency, information acquisition and media used for investments were also analyzed.

Demographic Profiles Of Retail Individual Investors

The analysis of the demographic characteristics of the respondents in the study is presented in this section which provides a comprehensive representation on the demographic characteristics of the retail individual investors in the study. It shows that majority of the investors using social media for investment purposes are males with 73.6 percent out of the total sample while females are 26.4 percent. In terms of age 38.1 percent of respondents as investors are young and in the age group of 23 to 30 years and are new to the area of investment management in financial markets, whereas 40.4 percent of the respondents were in the age group of 31 to 40 years. The remaining lies above the age of 40 years with only 8.4 percent respondents beyond the age of 50 years. Thus, majority of investors in the sample of the study are young and middle aged with a mean age of 35 years. The education level of respondents reveals that 26.9 percent are undergraduates, while 43.9 percent are having a post graduate degree and the remaining 29.2 percent obtained a professional degree. All investors in the sample were educated and their education level was high in order to enable them to make wise investment decisions. Regarding the income level of respondents, 36.7 percent earn income below 30000 per month and 35.3 percent in the income levels of 30000 to 50000 per month. Only 28 percent are rich investors with an income level of 50000 per month. With respect to marital status of the respondents, 63.3 percent of them are married and the remaining 36.7 percent are unmarried. Regarding the occupation of the respondents, 25.5 percent of respondents are in professional practice and 32 percent in private service, thus explains the fact that majority of the investors are found to be individuals engaged in private sector and professionals who are using social media for their investment decisions, whereas only 14.7 percent of respondents belongs to government sector and involved in social media use for investment decisions. The remaining respondents are either running their own business (18 percent) or retired ones (5.6 percent). The sample of the study is

comprised majority from Delhi and National Capital Region with 31.5 percent respondents followed by 29.2 percent respondents from Punjab. The remaining sample was derived from Chandigarh (Union Territory) with 19.4 percent and Haryana with 19.9 percent.

The second area in the study covered the trading characteristics of individual investors where the investors were asked questions related to the time frame of information acquisition regarding evaluation of stock indices and frequency of using social media for undertaking investment decisions. Questions were also asked about the mode of trading, trading experience and work experiences of individual investors which observed that that majority of investors (61 percent) utilize their smartphones for social media use towards investment decisions, while 32.2 percent use laptops for social media as a source of investment information. In case of the trading experience of the investors in stock trading, 50.2 percent of the respondents' have low experience with less than 5 years, followed by 25.5 percent with trading experience of more than 5 years. The remaining investors carried a trading experience between 5-10 years with 24.3 percent. The mean trading experience of all investors is 7.44 years. Similarly, the work experience of 36.2 percent investors were below 5 years, whereas 36.4 percent investors possessed more than 5 years of work experience. The mean work experience of all investors was 9.68 years. Therefore, the investors covered in the total sample of the study comprised of experienced investors both in terms of trading in stock markets and in their respective occupations.

Risk Tolerance Levels Of Individual Investors

There is a long and rich literature which deals with measurement of risk tolerance levels of individuals. Primary research started with the evaluation of individual choices by Von Neumann and Morgenstern (1947), referred to as expected utility theory (EUT), which in present times has changed to behaviorally oriented prospect theory (PT) promulgated primarily by Kahneman and Tversky (1979) and Thaler (1991, 1992). A number of studies have investigated how risk tolerance is based on the proportion of wealth allocation to risky assets. The major study on risk tolerance was put forth by Barnewell (1987) who classified investors into active and passive investors. Bailard, Biehl and Kaiser (BB&K) (1986) also classified investors into five categories and each category is shown to imply a different risk tolerance. Researchers have been trying to provide tentative evidence that there is a positive relationship between risk tolerance and individual demographics such as age, gender, education, income, occupation and wealth levels (Cohn, Lewellen, Lease and Schlarbaum, 1975; Warren, Stevens and McConkey, 1990; Riley and Chow, 1992; Lewellen, Lease and Schlarbaum, 1977; Wang and Hana, 1997; Schooley and Worden, 1999; Grable and Lytton, 1999; Kiran and Rao, 2005; Funfgeld and Wang, 2009; Nagpal and Bodla, 2009; Filbeck, Hatfield and Horvath, 2010; Wood and Zaichkowsky, 2010). Together, this literature establishes the bedrock of behavioral finance in terms of socio demographic profiling of individual investors and will contribute greatly to our understanding of decision-making.

This section provides categorization of investors based on their self-reported risk tolerance level in terms of risk averse investors and risk lovers in financial markets. Further association between demographic factors and risk tolerance levels alongwith association between trading characteristics and risk tolerance levels were investigated. Table 1 represents the two categories of risk tolerance levels of investors i.e. risk averse and risk lovers.

Table 1. Risk Tolerance Levels

Variables	Categories	Frequency	Percentage
Risk Tolerance Level	Risk Averse	178	41.6
	Risk Lover	250	58.4
	Total	428	100

Source: Author's Calculations

Table 1 reveals the fact that the investors selected in the sample represents very high level of risk tolerance levels (58.4 percent) and are risk takers representing a very high level of self-confidence and desires to have full control on their investment and investment related decisions. Generally these are non-conformists in nature, who tends to be a function of visceral instead of rational considerations.

Association between Demographic variables and Risk Tolerance Levels

Chi-square test is applied here in this section to understand the association between the select socio-demographic variables like gender, age, education, income, marital status and occupation with risk tolerance level of the respondents. Table 2 (a) and Table 2 (b) represents the final results of association between the select variables. The following hypotheses are tested in this connection:

H1: There is association between demographic variables and risk tolerance levels.

H1 (a): There is association between gender and risk tolerance levels.

H1 (b): There is association between age and risk tolerance levels.

H1 (c): There is association between education and risk tolerance levels.

H1 (d): There is association between income and risk tolerance levels.

Table 2(a). Demographic Variables and Risk Tolerance: Chi-square analysis

Demographic Variables	RISK TOLERANCE LEVELS		Total	Chi-square (Sig. Value)	Phi and Cramer's V (Sig. Value)
	Risk Adverse	Risk Lover			
Gender				11.14 (0.001*)	0.161 (0.001*)
Male (% within Gender)	116 (37%)	199 (63%)	315		
Female (% within Gender)	62 (55%)	51 (45%)	113		
Total (% within Gender)	178 (42%)	250 (58%)	428		
Age				31.66 (0.000*)	0.272 (0.000*)
23-30 years (% within age)	49 (30%)	114 (70%)	163		
31-40 years (% within age)	71 (41%)	102 (59%)	173		
41-50 years (% within age)	30 (54%)	26 (46%)	56		
Above 50 years (% within age)	28 (78%)	8 (22%)	36		
Total (% within age)	178 (42%)	250 (58%)	428		
Education				2.441	0.076
UG (% within Education)	45 (39%)	70 (61%)	115		
PG (% within Education)	86 (46%)	102 (54%)	188		

Professional (% within Education)	47 (38%)	78 (62%)	125	4.089 (0.129)	0.098 (0.129)
Total (% within Education)	178 (42%)	250 (58%)	428		
Income					
Below_30000 (% within Income)	59 (38%)	98 (62%)	157		
Between 30000 to 50000 (% within Income)	60 (40%)	91 (60%)	151		
Above_50000 (% within Income)	59 (49%)	61 (51%)	120		
Total (% within Income)	178 (42%)	250 (58%)	428		

***significant at 1% level; **significant at 5% level.**

Source: Author's Calculations

From Table 2 (a), it can be inferred that males are more risk tolerant in comparison to females. The results reveal that even in the category of gender, 63 percent males prefers to undertake risk than 55 percent females which are risk adverse investors. Since the χ^2 value is 11.14 with p-value of 0.001, thus H1 (a) alternative hypothesis is accepted, thus there is association between gender and risk tolerance levels. Further, Phi statistic of -0.161 with p-value of 0.001 is significant which reveals that there is negative association between gender and risk tolerance levels with low strength of relationships between the variables. Age is also associated with risk tolerance levels of investor with χ^2 value of 31.66 and p-value of 0.000 and significant at 1% level, thus H1 (b) alternative hypothesis is accepted. The strength of relationship between the variables is high as reflected in Cramer's V of 0.272 with p-value of 0.000. Majority of the investors are young and middle aged, where in the age group of below 30 years 70 percent are risk lovers. Similarly, in the age group of 31-40 years, 59 percent are risk lovers. Contrary to this, 78 percent of investors in the age group of above 50 years are risk averse investors, however 54 percent risk averse investors are there in the age group of 41-50 years. Overall 58 percent investors are risk tolerant, which comprised primarily of young investors, whereas 42 percent are risk averse comprised of old aged investors. The education level of investors is highly insignificant with χ^2 value of 2.441 and p-value 0.295, thus rejecting H1 (c) alternative hypothesis, resulting into the conclusion that risk tolerance limits are not associated with education levels of investors. Almost all the levels of education, investors are found to be same in risk tolerance limits, thus education level of investors is not a factor which can influence the investment decision abilities in financial markets. The strength of relationship among the variables is also very low and insignificant (Cramer's V=0.076, p-value=0.295). Similar findings are discovered in terms of income levels, where χ^2 value is 4.089 and p-value 0.129, thus rejecting alternative hypothesis of H1 (d) of any association between income and risk tolerance levels. At all levels of income, similar percent of investors are found at both risk averse and risk lover investors. The Cramer's V is also very low with insignificant p-value of 0.129 meaning very low strength of relationship among income and risk tolerance levels, thus investors risk levels are not dependent upon the earning capacities in the financial markets. Investor with low income and high income behave in similar fashion while undergoing the process of risk towards investment decisions in financial market.

Further Table 2 (b) represents the association between Marital Status and Occupation list of investors and Risk Tolerance Levels. In this connection, the following hypothesis are subjected to test:

H1 (e): There is association between marital status and risk tolerance levels.

H1 (f): There is association between occupation and risk tolerance levels.

H1 (g): There is association between area and risk tolerance levels.

Table 2(a). Demographic Variables and Risk Tolerance: Chi-square analysis

Demographic Variables	RISK TOLERANCE LEVELS		Total	Chi-square (Sig. Value)	Phi and Cramer's V (Sig. Value)
	Risk Adverse	Risk Lover			
Marital Status				7.319 (0.007*)	0.131 (0.007*)
Married (% within Marital Status)	126 (46%)	145 (54%)	271		
Unmarried (% within Marital Status)	52 (33%)	105 (67%)	157		
Total (% within Marital Status)	178 (42%)	250 (58%)	428		
Occupation				15 (0.01*)	0.187 (0.01*)
Government Service (% within Occupation)	29 (46%)	34 (54%)	63		
Professional Practice (% within Occupation)	43 (39%)	66 (61%)	109		
Private Service (% within Occupation)	47 (34%)	90 (66%)	137		
Own business (% within Occupation)	34 (44%)	43 (56%)	77		
Retired (% within Occupation)	18 (75%)	6 (25%)	24		
Others (% within Occupation)	7 (39%)	11 (61%)	18		
Total (% within Marital Status)	178 (42%)	250 (58%)	428		
Area				8.111 (0.044**)	0.138 (0.044**)
Punjab (% within Area)	62 (50%)	63 (50%)	125		
Chandigarh (% within Area)	37 (45%)	46 (55%)	83		
Haryana (% within Area)	35 (41%)	50 (59%)	85		
Delhi-NCR (% within Area)	44 (33%)	91 (67%)	135		
Total (% within Area)	178 (42%)	250 (58%)	428		

***significant at 1% level; **significant at 5% level.**

Source: Author's Calculations

Marital Status of investors is strongly associated with the risk taking abilities as the χ^2 value is 7.319 with p-value of 0.007 and is significant at 1 percent level, hence H1 (e) alternative hypothesis is accepted. There is a strong relationship between married and unmarried investors while undertaking risk in financial markets. Chi-square test shows that 67 percent unmarried investors are more risk lovers in comparison to married investors with only 54 percent. In addition to this, 46 percent married investors are risk averse in comparison with only 33 percent unmarried risk averse investors. Similar findings are exhibited in occupation levels and risk tolerance level of investors in Indian financial markets. Chi-square test is significant at 1 percent level ($\chi^2=15.0$, p-value=0.01) and there is a moderate level of strength in relationship between the said variables, thus H1 (f) is accepted. A total of 66 percent investors from private service and 61 percent from professional investors are risk lovers and prefers risky investments, whereas 75 percent of retired investors and 46 percent government employees in service are risk averse and are against any kind of excitements in financial markets and prefers stable returns than any fancy but risky investments involved with higher volatilities. In terms of the sample proportions from diverse geographical areas of Northern India, the Chi-square reveals a significant association between area and risk tolerance levels of investors ($\chi^2=8.111$, p-value=0.04), thus accepting alternative hypothesis H1 (g). Cramer's V is also significant with positive and moderate level of strength of relationship between the said variables (Cramer's V=0.138, p-value=0.044). The data reveals 67 percent of Delhi-NCR investors are risk lover and are the highest among other states, followed by 59 percent investors of Haryana as risk tolerant investors. The investors from Chandigarh are third with 55 percent and last is the investors of Punjab with only 50 percent risk taking abilities.

Association between Trading Characteristics and Risk Tolerance Levels

Chi-square test is applied to understand the association between the select trading characteristics like trading experience, work experience, media of interaction, information acquisition and social media usage frequency with risk tolerance level of the respondents. Table 3 represents the final results of association between the select variables. The following hypotheses are tested in this connection:

H2: There is association between trading characteristics and risk tolerance levels.

H2 (a): There is association between trading experience and risk tolerance levels.

H2 (b): There is association between work experience and risk tolerance levels.

H2 (c): There is association between media of interaction and risk tolerance levels.

H2 (d): There is association between information acquisition and risk tolerance levels.

Table 3. Trading Characteristics and Risk Tolerance: Chi-square analysis

Trading Characteristics	RISK TOLERANCE LEVELS		Total	Chi-square (Sig. Value)	Phi and Cramer's V (Sig. Value)
	Risk Adverse	Risk Lover			
Media Used				6.362 (0.042**)	0.122 (0.042**)
Laptop (% within Media used)	60 (43%)	78 (57%)	138		
Smartphones (% within Media used)	100 (38%)	161 (62%)	261		
Ipad/Tabs (% within Media used)	18 (62%)	11 (38%)	29		
Total (% within Media used)	178 (42%)	250 (58%)	428		
Trading Experience				8.034 (0.018**)	0.137 (0.018**)
0-5 years (% within Trading Experience)	75 (35%)	140 (65%)	215		
5-10 years (% within Trading Experience)	51 (49%)	53 (51%)	104		
Above 10 years (% within Trading Experience)	52 (48%)	57 (52%)	109		
Total (% within Trading Experience)	178 (42%)	250 (58%)	428		
Work Experience				9.484 (0.009**)	0.149 (0.009**)
0-5 years (% within Work Experience)	52 (34%)	103 (66%)	155		
5-10 years (% within Work Experience)	47 (40%)	70 (60%)	117		
Above 10 years (% within Work Experience)	79 (51%)	77 (49%)	156		
Total (% within Work Experience)	178 (42%)	250 (58%)	428		
Information Acquisition				16.786 (0.005**)	0.198 (0.005**)
Never (% within Information Acquisition)	10 (48%)	11 (52%)	21		
Once a Month (% within Information Acquisition)	57 (56%)	45 (44%)	102		
2-3 times a month (% within Information Acquisition)	45 (38%)	73 (62%)	118		
Once a week (% within Information Acquisition)	19 (26%)	53 (74%)	72		
2-3 times a week (% within Information Acquisition)	23 (44%)	29 (56%)	52		
Daily (% within Information Acquisition)	24 (38%)	39 (62%)	63		
Total	178 (42%)	250 (58%)	428		

*significant at 1% level; **significant at 5% level. Source: Author's Calculations

Table 3 explains a significant association between media of interaction and risk tolerance levels of investors ($\chi^2=6.362$, p-value=0.042), whereby 62 percent of risk lover investor uses smartphones as a medium of interactions in social media, followed by 57 percent risk loving

investor using laptops and the remaining as a user of Ipad/Tabs. Cramer's V at 0.122 with p-value of 0.042 is also significant indicating good deal of strength in the relationship between media used and trading characteristics. The data analysis of the trading characteristics in terms of trading experience with risk taking abilities of investors are concerned shows significant association ($\chi^2=8.034$, p-value=0.018). The major finding is that inexperience investors with less than 5 years (65 percent) are investing in risky stocks, whereas 51 percent of risk loving investors are having a trading experience of 5-10 years. However, investors with more than 5 years trading experience is a balanced investor whereby 48 percent are risk averse investors and 52 percent as risk lover investors. In terms of work experience, there is also a strong association with risk tolerance level and a positive strength of relationship with a significant Cramer's V of 0.149, p-value=0.009. Similar findings are obtained where 66 percent of investors are risk takers and working with less than 5 years of experience. 60 percent of risk lover investor carries a work experience between 5-10 years. In all the three cases, alternative hypotheses H2 (a), H2 (b) and H2 (c) are accepted, thereby establishing association between trading characteristics at 5 percent level of significance. The Chi-square is 16.786 with p-values 0.005 significant at 5 percent level, where H2 (d) as alternative hypothesis is accepted. The behaviour of investors shows that 74 percent of risk loving investors are acquiring information from once in a week to two-three times a week, whereas 62 percent of investors acquiring information are investing their time on daily basis for multiple times and investing in risky stocks.

Discussion

In this study, we examined the relationship between the demographic and trading behaviour of individual investors and their association with risk tolerance levels in stock markets for their investment decision making process. Majority of the respondents were risk lover (58.4 percent) in comparison to risk-averse respondents, where majority of risk loving investors were males (63 percent) and females as risk-averse investors (55 percent). In terms of risk tolerance levels, primarily younger investors (70 percent), professionals with higher education (62 percent), and higher income group (51 percent) were more risk tolerant investors towards their investment decisions in stock markets. The findings of the study support prior researches (Cohn, Lewellen, Lease and Schlarbaum, 1975; Warren, Stevens and McConkey, 1990; Riley and Chow, 1992; Lewellen, Lease and Schlarbaum, 1992; Wang and Hana, 1997; Schooley and Worden, 1999; Grable and Lytton, 1999; Kiran and Rao, 2005; Funfgeld and Wang, 2009; Nagpal and Bodla, 2009; Filbeck, Hatfield and Horvath, 2010; Wood and Zaichkowsky, 2010), and highlighted the issue of demographic variables and risk tolerance levels of investors. The study finally corroborates with pioneering work on risk tolerance levels of investors in behavioural finance as put forth by Barnewell (1987) who classified investors into active and passive investors and further supported the findings of Bailard, Biehl and Kaiser (BB&K model) (1986), which classified investors into five categories and each category is shown to imply a different risk tolerance. The present study has implication for the future research on social media in the field of behavioral finance, where the results demonstrates the influence of individual differences such as demographic variables on social media users. The study also incorporates risk tolerance levels of the investors across demographic variables, which can facilitate further research in the field of investor segmentations based on social media. Finally, the study investigated the users' continued behavioural intentions and actual usage towards social media based on demographics of investors in Indian market. The findings of this study

generates managerial implications for the corporates and financial advisors to facilitate a greater understanding of the individual behaviour in terms of targeting the desired information on social media platforms to engage and facilitate the investors in financial markets. Examining demographic groups of investors on social media instead of monitoring aggregate user behaviour can enable the service providers, corporates and financial advisors to strategize their information management system in an effective and efficient manner to reach their intended investors in financial markets.

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Elemental Analysis Of *Garcinia Mangostana* By XRF And ICP-AES Techniques And Chemical Fingerprinting Of Extracts

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Abstract

The analysis and quality control of herbal medicines are moving towards an integrative direction, in order to better address the authenticity and holistic nature of herbal medicines. An attempt was made to develop a method to determine the chemical fingerprint of *Garcinia mangostana* (Guttiferae). High-performance thin layer chromatography (HPTLC) was used to analyse Petroleum- ether, methylene dichloride, methanol solvent extracts of powdered rind of fruit. The analysis showed different soluble partitions of xanthone compounds in different solvent extracts. These chromatograms may serve as a chemical fingerprint of *G. mangostana* for quality control purposes in the preparation of drug formulations. Elemental analysis of various essential elements present in *G. mangostana* was done by XRF and ICP-AES techniques.

Key words: *Garcinia mangostana*, Guttiferae, HPTLC, XR, ICP-AES

Introduction

Herbal medicines are gaining more and more attention all over the world, due to their long historical clinical practice and less side effects. The traditional methods in the quality control of herbal medicines, including the various chromatographic methods and other methods, such as fingerprint and multi component quantification are now gaining more importance with techniques, like HPTLC HPLC, GC-MS. Chemical and chromatographic techniques may be used in identification of an herbal formulations or extract. Chromatographic technique such as TLC, HPTLC, HPLC and spectroscopic methods such as IR, NMR, and UV may also be used for fingerprinting¹. Standard marker compounds may be used to help and identify herbal materials and their formulations also set specifications for raw materials, standardize botanical preparations during all aspects of manufacturing processes and obtain stability profiles². Recently, HPTLC is routine analytical technique in which several samples can be run simultaneously by use of a smaller quantity of mobile phase than in HPLC^{3,4}. Important advantage of HPTLC is the repeated Scanning or detection of the chromatogram with the same or different solvent conditions. Consequently, HPTLC has been investigated for simultaneous various assay of several components present in a extract of multi-component formulation^{5,6,7}. With this technique, authentication of various species of plant possible, as well as the evaluation of stability and consistency of their preparations from different manufactures.

Mangosteen (*Garcinia mangostana*) is considered as "Queen of Fruits" in Thailand (Fig. 1). It is one of the most useful tropical fruit and has more demand because of its quality of

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colour, shape, flavor and its antioxidant and anticancer properties. In Thai folk medicine, the pericarp of fruit of Mangosteen has been used for many years for healing skin infections and wounds and for relief of diarrhea. It is a rich source of Xanthone compounds. The Antioxidant and anticancer activities of an extract of the pericarp of Mangosteen have been reported⁸. The Mangosteen peel extract contains a major component called α - mangostin, which is responsible for its antibacterial activity against staphylococcus aureus.⁹ α -mangostin and variety of other Xanthone compounds have been investigated for biological activities like antifungal¹⁰, anti-inflammatory¹¹ and antileukemia¹². It has been also found that some herbal products or extracts can have high level of heavy metals, which affects the metabolic system and shows the need to study their level in important medicinal plants¹³. *G. mangostana* also has a rich content of essential elements needed for various metabolic activities. The crude powdered plant materials were analyzed for various elements. The levels of Potassium, Calcium, Phosphorus, Copper, Cobalt, Nickel and some common elements were measured in these plants using XRF and ICPAES . This is an attempt to compile and document evidence of essential and non-essential heavy metals in these medicinal plants & highlight the need for research and development.

Plant Profile

Botanical Name : *Garcinia mangostana*

Family Name : Guttiferae

Common Name : Mangosteen

The tree grows from 7 to 25 meter tall.

Bark- It is dark brown and hard.

Flowers- They are parted, Bisexual borne singly or in pairs at the end of branchlets.

Fruit- It is Reddish black pericarp and rather hard.



Figure 1: (A) Whole Tree

(B) Flower

(c) Fruit

Materials And Method

Plant material

The plant of *Garcinia mangostana* was collected from Thailand airport. The fruit was botanically identified, confirmed and authenticated from the Department of Botany, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur. The fruit rind was dried and herbarium sheet was prepared. A voucher specimen of the fruit is available in the Department for further references. The specimen number is 9527.

Chemicals and reagents

All solvents used in this study were of analytical grade. Reference standard of α - mangostin (purity 92.2%) was procured from ChromaDex, LGC Promochem India Pvt Ltd. Bangalore, India. Post chromatographic derivatization of developed TLC plates was done using 10% sulphuric acid in ethanol.

Apparatus

A Camag's TLC scanner 3 was used for quantitative chromatographic evaluation of test spots. Camag's *Linomat 5* was utilized for nitrogen gas assisted and controlled application

of sample spots on to TLC plate and Camag Twin trough glass chamber was used for development of HPTLC plates in mobile solvent.

Optimization of mobile phase for chromatographic separation and determination of appropriate wavelength

Few mobile phases like, *n*-hexane-ether, benzene-acetone and chloroform-methanol were tried for separation and we opted for Chloroform:Ethylacetate:Methanol (8:1:0.5) as a mobile solvent. A qualitative TLC run performed using standard and extract in the selected mobile phase and scanned under 540 nm after post-chromatographic derivatization and its spectrum was scanned, which clearly indicated its λ_{max} . at 366 nm with satisfactory peak purity data.

Preparation of standard stock solution of α -mangostin

10 mg of standard α -mangostin was dissolved in 10 ml of methanol in a volumetric flask and sonicated for 5 minutes for homogenizing it completely. A stock solution of *α -mangostin* (1000 μ g/ml) was prepared in methanol.

Extraction and preparation of test samples

100 g of powdered pericarp was taken in thimble and extracted via Soxhlet extraction for approx 24 hours or 45 cycles, using petroleum ether, dichloromethane and methanol. Each extract was filtered through a Whatman no. 1 filter paper. The liquid extract was concentrated under vacuum to yield brownish residue which was analysed by HPTLC. 500 mg of each extract was re-dissolved in methanol and volume of each test sample made up to 10 ml and sonicated for 5 minutes. Prior to analysis, the test solutions were filtered through 0.45 μ m membrane filters. These test solutions were spotted against standard α -mangostin for assay.

Elemental Analysis:

In addition to this powder of fruit pericarp was analysed for various elements by taking XRF¹⁴ Scan on PW 2403 MagiX using IQ⁺ software. The ICPAES technique was also used to observe concentration of various elements on IRIS Intrepid II XDL, ICP-AES manufactured by Thermo Fischer Electronics Ltd., USA. Sample was ashed at 500⁰C in muffle furnace. 0.1 gm of ash was dissolved in hydrochloric acid and nitric acid on hot plate. This was filtered and made volume to 100ml. This stock solution was diluted for various elements as and when required.

Results and Discussion

An attempt was made to develop a method to determine the chemical fingerprint of *Garcinia mangostana* (Guttiferae). The fingerprint by HPTLC shows the separation of different Xanthenes present in methanol extract and in CH₂Cl₂ fraction of methanol extract.(Fig.2 and 3). It can be seen from the graphs that the peak at R_f = 0.46 may be of α -mangostin, which can be compared with the standard peak of α -mangostin ¹⁵ R_f = 0.46 (Fig.4). It may also be observed that the area of the peak obtained at R_f = 0.86 in methanol extract is small as compared to peak area in CH₂Cl₂ extract. From this observation conclusion was drawn that CH₂Cl₂ fraction of methanol was a better solvent for extraction as compared to methanol for identifying various fraction of extracts with comparison to standard compound.

Indian medical Traditional herbs are used for strengthening the body immune system due to presence of many essential and nutritional elements. Their excess or deficiency may disturb normal biochemical functions of the body ¹⁶. Most of the research of such medicinal plants explores the presence of their organic contents, viz. glycosides, vitamins, essential oils,

alkaloids and other active components having pharmacological or therapeutic effects. Besides, several organic compounds, it is now well established that many trace elements play a vital role in the cure of diseases^{17,18}. Several studies have reported elemental contents in plant extracts, which are consumed by us either as a herbal health formulations or medicine¹⁹⁻²⁰. Essential trace and ultratrace elements are required for growth and survival of cells and organism. It is also known that the elements that are supposed to be essential for the survival of the organism becomes lethal at higher concentration. Therefore, analysis of powder of fruit rind of *G.mangostana* for the presence of different essential elements by XRF and ICAPES was done.

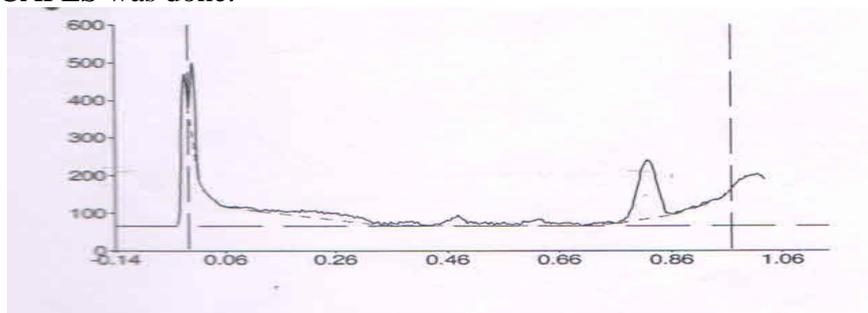


Fig 2 : HPTLC Fingerprint of *G. mangostana* of methanol extract

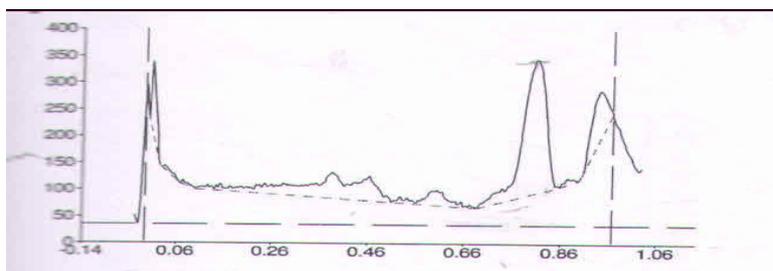


Fig3: HPTLC Fingerprint of *G. mangostana* of CH₂ Cl₂ fraction methanol extract

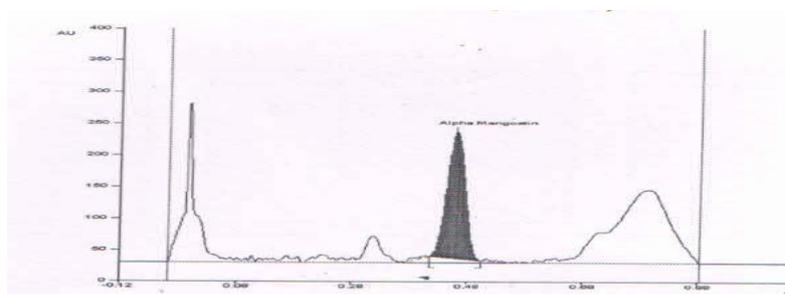


Fig 4: HPTLC Fingerprint of Standard α -mangostin

Table 1-XRF Analysis of *Garcinia mangostana*

K(%)	Ca(%)	Cl(%)	S(%)	Fe(%)	Al(%)	P(%)	Si(%)	Mg(%)
5.90	1.92	0.72	0.34	0.20	0.18	0.11	0.10	0.05

Table 2-ICPAES Analysis of *Garcinia mangostana*

Cd(ppm)	Co(ppm)	Cu(ppm)	Ni(ppm)	Mn(ppm)	Pb(ppm)	Zn(ppm)	Fe(%)	Al(%)
4.0	36	172	29	0.067	ND	0.19	0.19	1.45

(*ND-Not Detected)

This study revealed that investigated medicinal plants were found to contain elements like K, Ca, Cd, Co, Cu, P, Ni and other elements as observed in results included in [Table 1 & 2]. Iron, Cu, Mn, Co, etc., are important components of many antioxidant processes, a deficiency of any of these essential elements may impair the function of the overall oxidant system¹²¹. In studied plants, Cd concentration ranged between 4.0 ppm. The permissible limit set by WHO (1984)²¹ in edible plants was 0.21 ppm. After comparison, metal limits in the studied medicinal plants with those proposed by WHO (1984) it was found that all studied plants accumulate Cd above this limit. Cd causes both acute and chronic poisoning, adverse effect on kidney, liver, vascular and immune system. Co concentration was recorded as 36 ppm. Concentration of Cu was estimated as 172 ppm. The permissible limit set by WHO (1984) in edible plants was 3.00 ppm. The range of Fe in the studied plants was 0.19%. Fe is necessary for the formation of haemoglobin and also plays an important role in oxygen and electron transfer in human body. Ni accumulate maximum that is 29 ppm. The permissible limit set by WHO (1984) in edible plants was 1.63 ppm. After observing the metal limit in the studied medicinal plant with those proposed by WHO (1984) it is found that fruit rind powder accumulate Ni above this limit. Ni toxicity in human is not a very common occurrence because its absorption by the body is very low. Among the investigated medicinal plants, Pb concentration was not detected. Pb causes both acute and chronic poisoning, and also poses adverse effects on kidney, liver, vascular and immune system. The primary aim of this study is to establish the trace (Zn, Cu, Ni, Co, Cd, Pb, Mn and Fe) and major (K, P, Ca and Mg) elemental levels in, *Garcinia mangostana*. Secondly, whether, the use of these plants is safe for consumers according to the world health standards. However, in some cases they carry very high content of toxic metals, the main reason for this accumulation is the industrial pollution and irrigation by polluted waste water. Therefore, special care must be taken during the administration of routinely used medicinal plants. It is also important to have good quality control practices for herbal medicines screening in order to protect consumers from toxicity.

Conclusion

HPTLC analysis may serve as a chemical fingerprint for quality control purposes in the preparation of drug formulations. XRF & ICPAES analysis of powder of fruit pericarp revealed that it is a good source of essential elements. Medicinal herbs are easily contaminated during growth, development and processing. After collection and transformation into dosage form the heavy metals confined in plants finally enter the human body and may disturb the normal metabolism. It is important to have good quality control practices for herbal products and standardized extracts screening in order to protect consumers from toxicity.

Acknowledgment

We are grateful to the authorities of Indian Bureau of Mines, Nagpur for elemental analysis and pharmacognsy Department, R.T.M. Nagpur University for HPTLC analysis.

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Influence Of Social Media Marketing Communication On Young Consumers Attitude

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Abstract : Technology is transmuting a lot the way one is living today and has marked a glaring change on the lifestyles of younger age group. Social networking such as Facebook, Instagram, Twitter, etc. has become the staple part of the lives of young generation. The germination of new social transformation model has become the most effective and efficient dynamic tool for communication and earning more profits for marketers. The quasi universality of social media in our lifestyle has paved new way for exchanging information among various business models such as B2B, B2C, etc. The data provided by TouchPoint3 depicts that the eight in ten people between 15-24 age access social networking sites at least once in a week. The amount of use of social networking sites was on an average of an hour every day.

The objective of this study is to examine the influence of interactive social media marketing communication on India youth attitude component. The reason for selecting the youth as targeted segment is that they are the internet savvy and present and future decision makers. Thus considering the fact that youngsters are tomorrow's customers this is need of hour to analyze how current trend of social media marketing creates impacts on young consumer attitudes.

IndexTerms - Social Media marketing, Youngster, Attitudes, Social Networking Sites

1. Introduction

In present epoch, technology plays the valuable role in our society. Thus evolution is a mammoth to describe especially with refer to digital evolution. Evolution occurs with the advancement in the technology and internet. New methods of communication and accessing content are evolving every day and the young age group is the voracious adopters of these new technologies. As the internet grew globally with time and innovations took place it paved way for digital marketing to stem out. It grew out with the spread of the internet and development of various search engines like Google, Yahoo, etc. Later the first social networking site known as "Sixdegree.com" appeared in 1997. It was followed by various networking sites such as Orkut, Facebook and then twitter in 2009. Presently, LinkedIn is the most famous among professional. Mobile marketing, content marketing, social media marketing, etc. are some of the famous forms of digital marketing. In comparison with other industries the digital marketing is blooming at the faster rate in India i.e. 30% growth rate:^[1]

Group of internet based applications that uses Web 2.0 to create and exchange the user generated contents are known as Social media. Social media marketing is the means

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appropriate through which the marketers reach the ultimate target customers effectively and faster. It helps the marketers to fulfill their main objective i.e. to communicate and diffuse the information to the people. Facebook, Twitter, YouTube, etc. are the extraordinary dynamic tool that helps the marketers in building online relationships with the as much as customers. Online advertising is growing day by day with a rapid speed of 50% and it will reach up to 1000 crores by 2020. ^[1]

It was found that the major users of Facebook, blogs, twitter, etc. were youths and they were using it for diverse purpose. Nower days, the youths have made paradigm shift from traditional media to social media for information and entertainment. Marketers found that as youth are spending more time and dependent on social media then it can be as an avenue for forwarding their advertising message.

1.1 Attitude

Attitude is defined as the way in which individual thinks or perceives about something. It can also be stated as one's state of mind that affects the individual behaviours. Attitude has effect on the mental position that the individual will have on a certain matter and followed by behaviour. Consumers perceptions has transmuted drastically towards online marketing with the invention of internet. As majority of the young population are spending a lot of time on web daily the marketers are finding it the most appropriate platform for communicating with the general people. They are finding social media as the most convenient place to promote their products and in return they will get potential customer or perspective buyers.

1.2 Relationship Between Attitudes And Hierarchy Response Models

There are many advertising response model developed in past for marketing communication. Some of them are: AIDA, hierarchy of effect, etc. The hierarchy response model tells that the consumer go through the series of attitudinal stages before making final purchase. The consumer moves from cognitive stage (it result in awareness and knowledge) to affective stage (it result in liking and preferences) and then finally to behavioural stage (it result in intention to purchase and purchase).

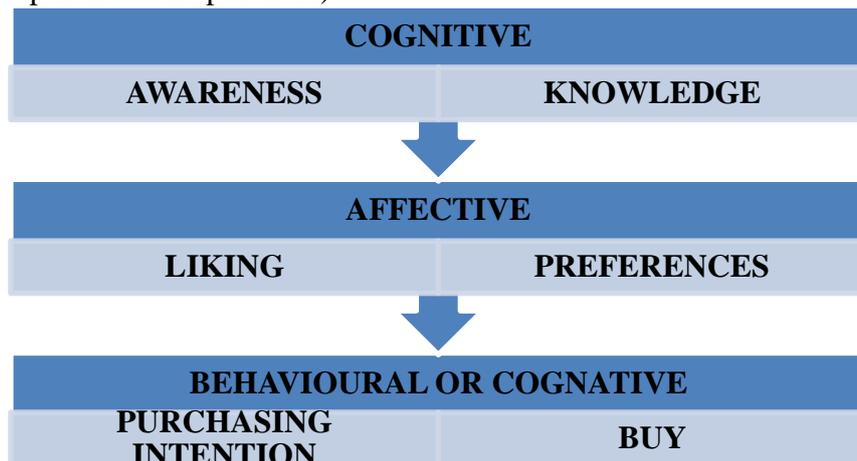


FIGURE: HIERARCHY RESPONSE MODEL^[2]

This paper work aims to illustrate the perception of young consumer attitudes with reference to the social media marketing. Thus, attitude towards marketing can also be stated as the proneness to respond in negative or positive manner with respect to particular advertisement and selling communication. As the social media is gradually becoming the advertising hub.

This paper also explores that whether young consumer respond to the advertising message on social media or not. If they respond then does it influence their attitude or not.

2. Literature Review

❖ Sita Mishra and Archana Tyagi (2015) found following:

- In today's scenario, both spouses are working. Due to the shortage of time and necessity of life they have positive attitude towards towards online shopping. Thus, the ease of use of social networking sites increases its usefulness.
- Secondly, the amount of risk perceived while making purchasing decision has negative and huge impact on consumer attitude. Thus, marketers need to develop new methods which can reduce these risks along with the increasing utilization of various social networking sites as a tool for communication and marketing.
- Thirdly, they also found the relationship between the personal use and attitudes. And the relationship was positive but not that much significant.

❖ Akashdeep Bhardwaj, Vinay Avathi and Sam Goundar (2017) found that social networking sites has helped in culture development, building self- identity, developing relationship and acquisition of social, communication and technical skills. They have also showed the time spend by youth is between 1 to 2 hours and they access more during morning.

❖ Dr. S. Sivasankaran (2017) found that in spite of accessing the digital media for communication most of the youngsters are not aware of its optimum utilization.

3. Objective Of The Study

To study the effect of social media marketing on the young consumers attitudes.

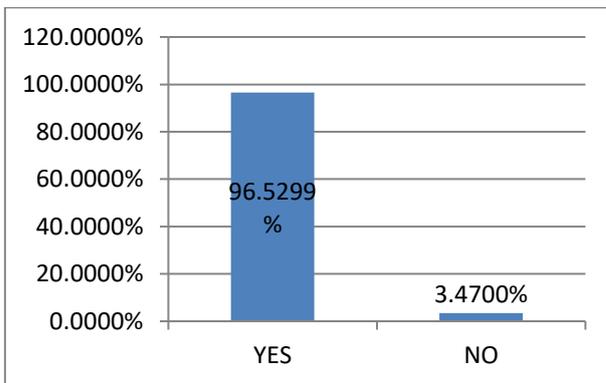
4. Research Methodology

- **RESEARCH DESIGN :** Descriptive Design
- **DATA COLLECTION METHOD:** The primary data is obtained through questionnaire.
- **METHOD OF SAMPLING:** convenience sampling under Non-probability sampling method is used.
- **SAMPLE AREA:** The research is totally based on the data collected from the young respondents of India.
- **SAMPLE SIZE :** A sample size of 634 respondents is collected and the respondents are between 18 years to 40 years.
- **RESEARCH APPROACH:** Quantitative approach is used for data calculation.

DATA ANALYSIS AND INTERPRETATION

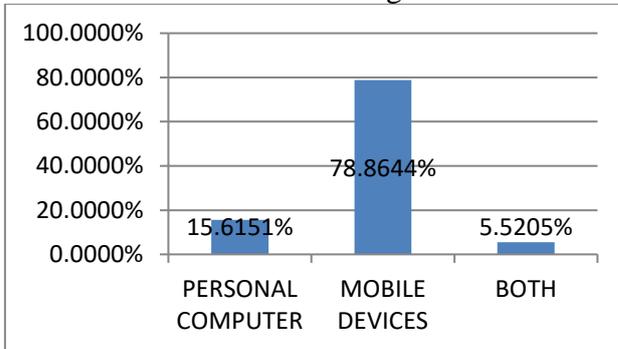
❖ **INFORMATION REGARDING USAGE OF SOCIAL MEDIA**

- Usage of social media



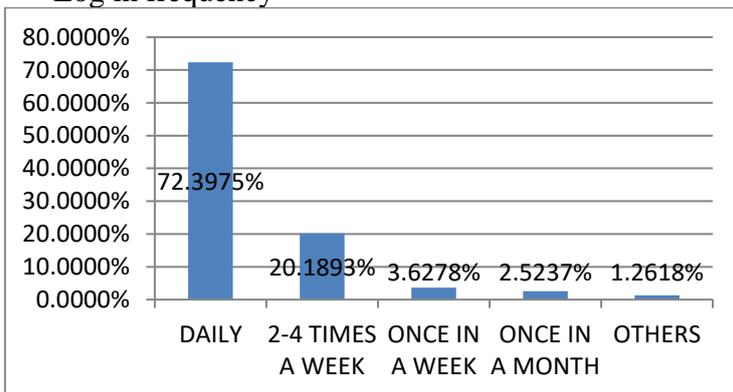
The data depicts that most of the respondents uses the social media and the reason is very simple. Everyone wants to take the advantage of the technology and facilities available to make their life simple and easy.

• Social media access through



There is clear indication that majority are using social media through mobile phones and the reason is simple because they never log out from the phone as the phone always remains in their hands and secondly they find it simple and quick to access through phone, so Akashdeep (2017) notion is not true fully.

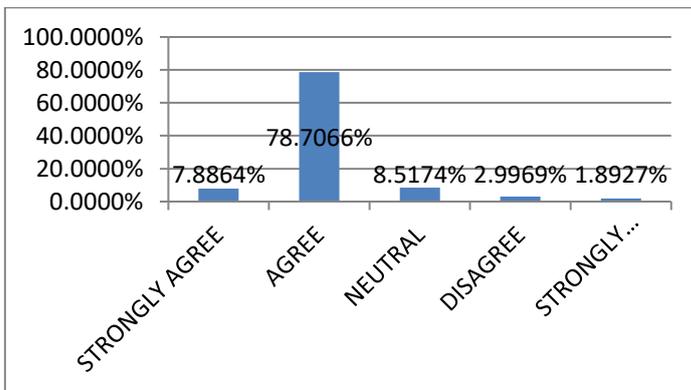
• Log in frequency



Many of the people who have replied are using social media daily. The result depicts that the social media has created huge space the lives of the people. The open their accounts multiple times in a day that is whenever they get even 5 minutes they open their account.

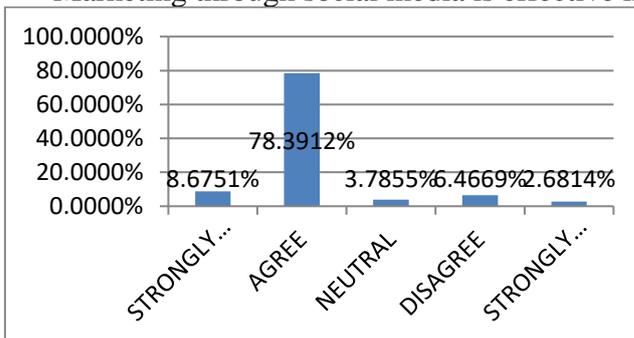
❖ **INFORMATION REGARDING SOCIAL MEDIA MARKETING**

• Advertisement notice on social media



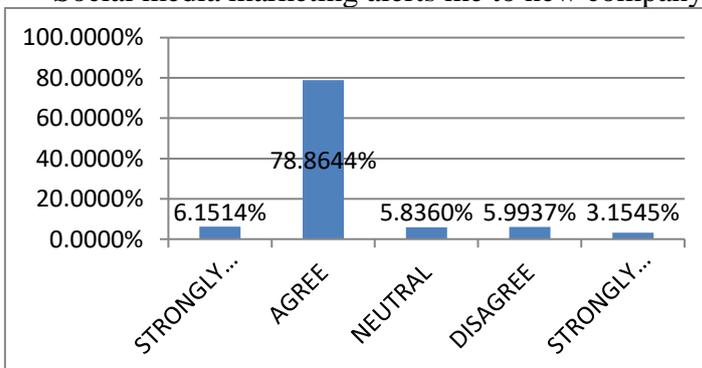
The percentage of people noticing the advertisements on social media are much more than those who are not noticing it. The reason is simple they get attracted and highly influenced by the way the corporate houses release attractive advertisement campaign on the social media. Several companies like Flipkart, Coffee Café Day, Samsung, Godrej, Sony, etc. are actively engage in social media throughout globe.

- Marketing through social media is effective in creating brand awareness



The major portion of respondents has agreed that the marketing through social media is helping them in increasing their knowledge about various brands. Thus, when various firms communicate through social media many times in a day then people remember and become aware about the presence of several brands available in that particular market segment.

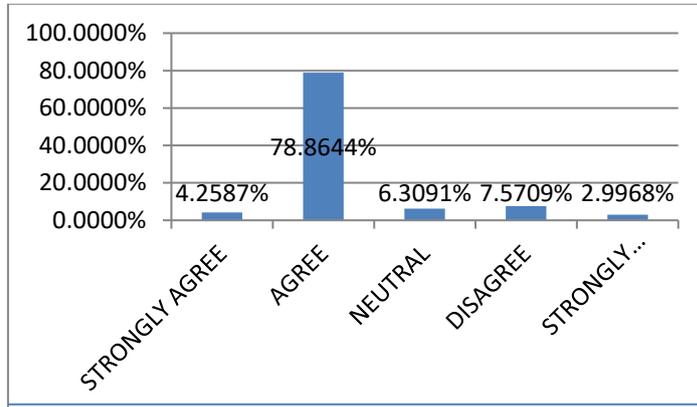
- Social media marketing alerts me to new company offering



Most of the youngsters have agreed that social media marketing has given them knowledge about the new product range launch in marketing along with detail offer. The reason behind agreeing is that the youngsters are assessing more of the social media on regular basis. Thus, when the companies advertise about their recent offer frequently on social media the young people note it and become aware about the new offer the firm is providing. For example,

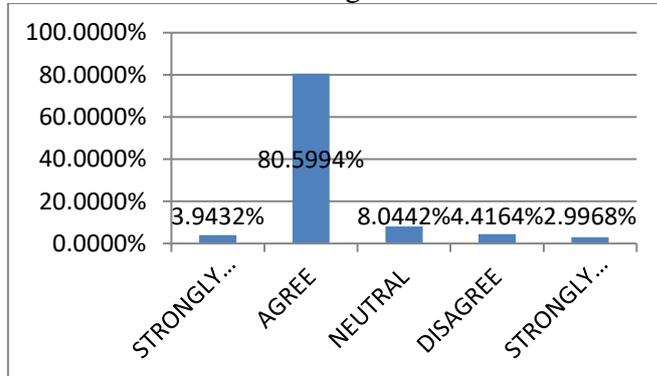
when it comes with the launching of new mobile phones then the company advertise and sell it online firstly and then offline. And the youngsters have more knowledge about it because they gain it from the advertisement the companies does on social media platform.

- Click on the advertisement on social media to find new information about products



The reason behind having such a huge percentage of respondents clicking on the advertisements that are shown on social media is quite obvious. The first reason is the appealing way in which the advertisements are made, secondly the click to gain the knowledge about the company and its products and lastly it is the simplest and easy way through which both the marketers and consumers can interact with each other.

- Social media marketing has made me like the brands more



The young people have agreed that marketing through social media has helped to like more brands then before. This is because the time they spend on social media and the way the leading business organizations are marketing through social media. For example, Swiggy has captured as much as market share through social media marketing and young people first preference for ordering the food is through Swiggy.

6. Limitations Of The Study

- The study did not focus or analyse any particular social media platform.
- The study did not focus on any specific brand.
- The study has not been done with respect to any specific sector.

7. Conclusion

Under the advancement of innovative conditions, at present social media marketing communication in India are in spotlight due to the blast in online networking among the adolescent. In the present atmosphere, young purchasers have turned out to be versatile customers; so it can be very well said that organizations may profit by online networking in

their promoting efforts to achieve youth buyer. Young customers carry their cell phones with them all over. Therefore, web based life is imperative for organizations to give a viable connections their young customers. Social networking sites such as Facebook, YouTube, Instagram, etc. have created space for fascinating advertising for organizations occupied with web showcasing. Thus, Indian marketers such as Myntra, Uber, Vodafone, etc. have begun optimally utilizing them as a promoting instrument.

The research conducted was done for the academic purpose and it demonstrated the impact of internet based life advertising correspondence on India young shoppers regarding the embraced chain of command reaction attitude stages. Social media marketing communication was found to positively affect every frame of young mind, yet on a declining scale, which looks at to the buy pipe. The most vital components of the study determined that youths who got to online life through cell phones on regular schedule showed the best positive reactions crosswise over the majority of the frame of mind segments towards advertising interchanges. More female young people were additionally bound to show the most positive frames of mind towards web based life promoting correspondence.

The first two components of attitude that is cognitive and affective were highly influenced social media marketing communications but the behavioural component was not. The reason behind not influencing behavioural components to that level is that young people even though are attracted and see the online advertisement but before purchasing they want to see or touch the product in reality not virtually. They do not get satisfied through just viewing them pictorial or by seeing the positive comments posted by others.

Thus, marketers need to utilize internet based promoting correspondences to influence young shoppers through extraordinary frame of attitude stages (mindfulness, learning, loving, inclinations, and aim to buy and buy) but with expanded collaboration with young purchasers.

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Artificial Intelligence in Medical Arena

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Abstract

Artificial Intelligence is processed the act or mimic of human intellectual functions. it broadly uses in health sector for prediction, probability of any disease like diabetes, breast cancer, Alzheimer etc in future. Artificial Intelligence is a combination of new technologies enabling the medical instruments and machines to artificial to artificial sense, understanding, act and learn. Artificial Intelligence uses the machine learning technique.

Artificial intelligence in medical arena reduces the burden of medical procedures. It will be very helpful for the disease which is curable if diagnosed in early stage of disease. Medical staffs ready to supports Artificial intelligence which is beneficial to mankind. It may reduce the over burden medical arena due to shortage of medical paramedical and increasing population ensure standard protocols of treatments. It is very useful for general population. It may help reducing errors in medical arena.

Keywords- Artificial intelligence, probability, prediction, Intellectual, Mankind etc.

1 Introduction

Artificial intelligence executes the mime of human intellectual functions. The broadly uses of Artificial Intelligence in medical arena can be show as a combination and collaboration of new technologies empowering and allow the medical instruments and machines to understanding, act, unreal sense and learn..Theoretically, AI can use a person's genome to recommend the most effective treatment option with the least side effects.

Management of Alzheimer, diabetes, breast cancer with Artificial intelligence

Early detection of breast cancer is of utmost importance. There are a growing number of breast cancer patients throughout world and there is need for new techniques in diagnosis related with such type of patients and prediction of cancer in its different forms. Diabetes and Alzheimer can detect in early stage with AI and it can reduce the unnecessary expenditure. Screening tests can help in detected the cancer in early stage.

2 Objectives

- Impact of Artificial Intelligence in Hospital from patient and non patient point of view.
- Impact of Artificial Intelligence in hospital from workers of health sector point of view.

3 Literature review

There is convincing attestation that artificial intelligence in medical arena can play an energetic role in assisting the hospitalist to performing health care efficiently. There is little bit uncertainty that these approaches and techniques will serve to ameliorate and complement the 'medical intelligence' of the future hospitalist.

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(Reddy, 2018)The complexity in delivering healthcare is arising because of the ample data that is generated in the execution of healthcare. Which has to be explained in an intelligence arena? This need can address by the artificial intelligence systems with their problem solving approach. Artificial intelligence has many techniques for problem solving of human healthcare. Healthcare delivery has been become so expensive so stakeholders are finding to solution that can minimize the expensive materials in patient care.

(Ramesh1, 2004)Describing the designed supportive techniques for healthcare workers for their day to day tasks, execution of data manipulation and knowledge like Artificial neural networks (ANNs), evolutionary computation, hybrid intelligence systems and fuzzy experts systems.

(Fei Jiang, 2017) fei jiang analyzed the motivation of using artificial intelligence in medical arena purposed the numerous healthcare data that artificial intelligence has evaluated and surveyed the most common and major disease types that artificial intelligence has been expand. They were focused on the popular techniques like SVM (Support vector machine), neural network and modern deep learning technique. The Machine learning for handling structured data (images, EP data, genetic data) and the Nature language processing components for mining unstructured texts, these components must be integrate for the successful artificial intelligence The hurdles comes from regulations and data exchange.

4. Research Methodology

Data collection – The achievement of objective of this research project requires use of primary as well as secondary data. So the primary data has been gathered by means of structured questionnaire developed and semi-structured interview conducted on medical staff. Secondary data were collected through Internet, books, Articles, websites, newspapers etc.

Sample size- several questionnaires filled by several patients and their corresponding family members.

Sampling unit-The sampling unit only covered in Uttar Pradesh.

Sampling Techniques

Convenient sampling would be used, because response from the market or other segments would be easily available.

Research Design

Descriptive Research design would be used.

5. Data Analysis

A survey was conducted for 135 respondents through questionnaire (drafted with the help of Google forms) and also by the conduction of a set of semi-Structured interview questions with the medical staff of health sector.

S.N	RESPONDENTS	INTERVIEW QUESTION NO1.	INTERVIEW QUESTION NO2.	INTERVIEW QUESTION NO3.	INTERVIEW QUESTION NO4.	INTERVIEW QUESTION NO5.
		May I know your current role in hospital?	What are your views on Artificial Intelligence in medical field?	How Artificial intelligence useful in the health sector?	Will you support and suggest Artificial Intelligence implementation in health sector?	What can be future scope of Artificial intelligence in health sector and its effects?
1.	Ejaz Ahmed	Junior resident, department of medicine BRDMC, Gorakhpur	Not yet fully explored in Indian scenario	It can be used to minimize human effort and in surgical interventions and for achieving accuracy of procedures	Yes, we will support anything which is beneficial to mankind.	Depends on the development of AI in the future.
2.	Anil Kumar Yadav	Senior resident in orthopedics BRDMC, Gorakhpur	AI may help in reducing errors in medical field	It reduces burden of medical arena of increasing population.	Yes, AI needs caution implementation as human bodies,	AI will play the important roll in recognizing the disease in early stage and will be reduce the burden of medical staff and provide the help to general population.
3.	Dr. Shalini Gupta	Asst prof BRDMC, Gorakhpur	Huge amount of data in the relevant field of medical diagnosis and treatment are matched with language and culture information that could offer reliable and safe system of health care delivery.	Artificial intelligence will help reduce death rates by prioritizing those in more urgent need.	Yes truly it can prove very effective in the field of health sector as it can remove human errors which may further improve the quality of medical treatment and care.	AI system not only can be used to collection and categorization of scans but to analyze these medical images like bony fracture to pneumonia to cancer.

4.	SHAILENDRA UPADHYAY	Senior resident, Anesthesia Deptt BRDMC, Gorakhpur	AI may help in reducing errors done due to negligence of various workforce of medical arena but will need a constant supervision as human body isn't a machine and various responses may be elicited to a similar response.	It may reduce the overburden of medical arena due to shortage of medical /paramedical and increasing population, ensure standard protocols of treatments,	Yes, but with a caution. ai needs cautions implementation as human bodies exhibit different response to similar response.	As already stated, standardized treatment protocols, reduction of manpower which is already overburden is expected from AI.
5.	Dr. KC Gandhi	Junior resident, department of paediatrics	It is one of the latest field or research which is under development. it reduces the errors and provides the accurate or secure prevention in early stage of some disease.	It reduces burden of medical, department and improves the quality of performance of technology of medical field.	Yes we think that by applying this technology in medical sector, improves the quality of the prevention.	It should be applied in health sector because it reduces all aspects of health sector.
6.	Dr. Ritesh Gupta	Junior resident, department of orthopedics	Very useful for general population, but yet to be worked on specificity and sensitivity of test designed.	Yes we are ready to support the artificial intelligence in medical sector.	It will be very helpful for the disease which is curable if diagnosed in early stages of disease.	It should be implemented in medical sector and it will provide the support to medical staff and as well as patient.

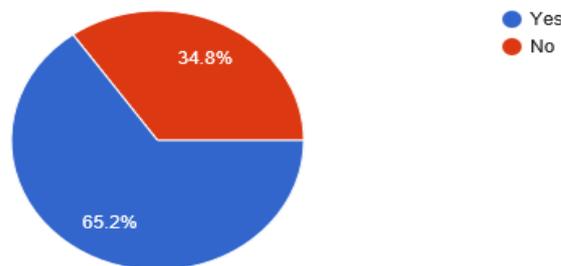
6. FINDING OF SEMI- STRUCTURED INTERVIEW

This semi structured interview was conducted for the workers of medical sector and respondents were from the staffs of BRD Medical College Gorakhpur. We figure out the following key points of findings of entire semi-structured interview-

- Artificial Intelligence is the latest field of new technology and it is used by the medical sector in broadly. It is a newly developed system which helps in treatment of different disease.
- It is an advance system which uses the historical data and recognizes symptoms to predict the future illness of patient.
- Artificial intelligence based diagnostic system leads to self-diagnosis tools and provides the treatment facilities for disease in early stage or curable stage.
- It gives the better treatment and better diagnosis to the patient in comparison to without AI based system technology or tests,
- Deterring a patient diagnosis is a vital aspect of health care medical researcher alike can see the useful potential of using AI to replace the human ability to identify illness and disease diagnosing patient according by examine medical image is a candidate for the application of AI system to improve both the speed and accuracy of performing the task.

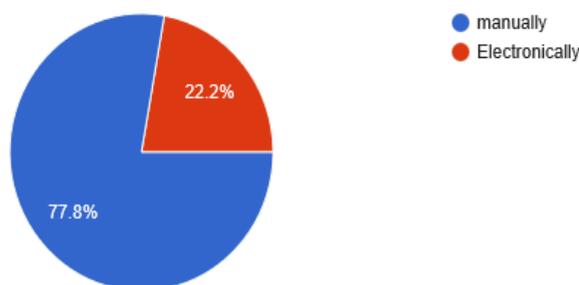
- Ai system not only can be used to perform the collection and categorization of scans but to analyzed these medical images like bony fracture to pneumonia to cancer.
- Artificial intelligence eliminates the need for additional or supported staff. so it is a cost efficient system. it reduces the overhead expenses.
- It reduces the human error because it works on the automated software.
- It also improves the productivity of medical practices and reduces clinical wastes, complexity and save the time.

1.



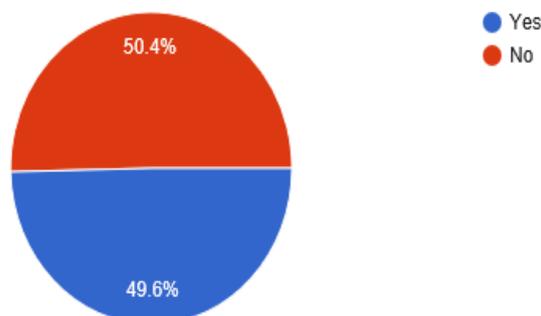
The question was to know about the respondents ever received the reminder from hospital for the treatment. And result found the 65.5% respondent's received the reminder from hospital and 34.8 % respondent's never received the reminder from hospital.

2.



The question was to know about the respondents which mode respondents feel reliable or easy to pay money in hospital. Are they comfortable with technology? And the result found the 77.8% respondents reliable to pay money in hospital manually and 22.2% respondents reliable to pay money in hospital electronically.

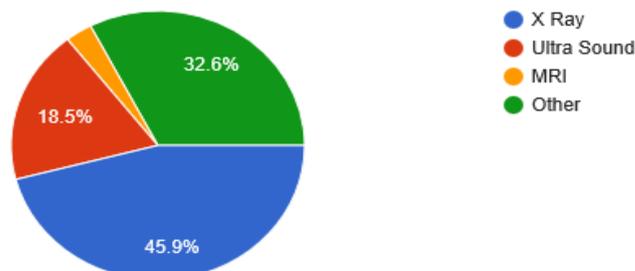
3



The question was to know about the respondents use any online application for purchasing any medicine. And the result found the 49.6% respondent's use any online application for

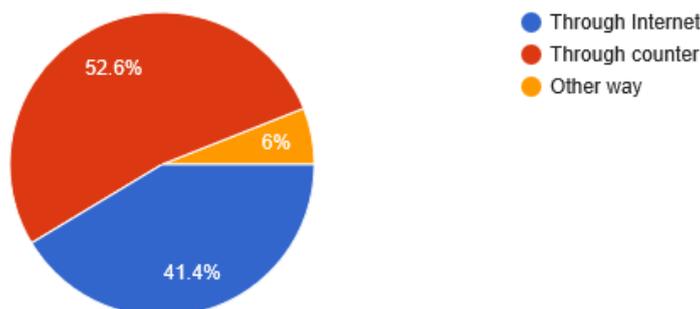
purchasing any medicine and 50.4 % respondents never use any online application for purchasing any medicine.

4.



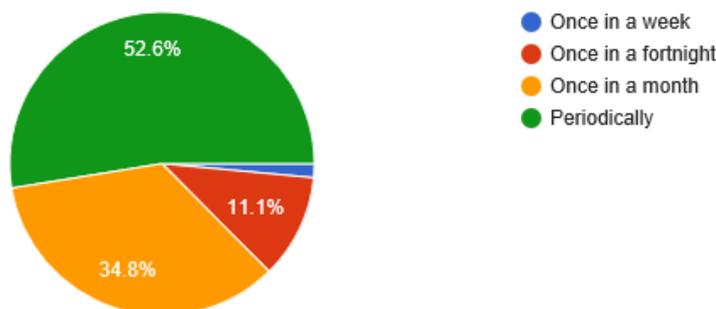
The question was to know about the respondents release money digitally for X-ray, Ultra sound, MRI and others? And result found the 45.9% respondents release money digitally for X ray, 18.5% respondents release money digitally for Ultra sound, 15.2 % respondents release money digitally for MRI and 18.5% respondents release money digitally for other tests.

5.



This question was to know about how many patient done registrations in hospital. And result found the 41.4% respondents done registration through Internet, 52.6% respondents done registration through counter and 6% respondents done through other medium.

6.



This question was to know about the frequency of visiting the hospital by respondents. The result found is that 52.6% respondents are goes in hospital in periodically,34.8% respondents are goes hospital in once in a month, 11.1% respondents goes in hospital in once in fortnight and 8.2% respondents goes hospital in once in a week.

7. Findings

- Artificial intelligence in medical arena reduces the burden of medical procedure.

- It will be very helpful for the disease which is curable if diagnosed in early stage of disease.
- Medical staffs ready to support Artificial intelligence which is beneficial to mankind.
- It may reduce the overburden medical arena due to shortage of medical paramedical and increasing population ensure standard protocols of treatments.
- It is very useful for general population. It may help reducing errors in medical arena.
- In Indian scenario it's very difficult to let familiar or aware to general population with artificial intelligence system because general population comfortable with ability of human treatment. they didn't feel much comfortable with robotics treatment and new technology system of artificial intelligence.

8. Conclusion

Artificial intelligence has the combination and collaboration of new technology refers to executes or perform the predictive or anticipating, prescriptive and descriptive area of functions in health sector.

In Indian scenario, currently Artificial intelligence in health care amplifies human capability instead to replacement human workforce generally. Artificial intelligence system are face the certain challenges-it need an effective core or framework of laws to security and privacy. Through the use of AI India can resolve many health care related difficulties.

Combination of big data and computing power provide the proper insight of genomics, medical history of family and specific genetic changes which can become the reason of future cancer. Artificial intelligence reduces the overburden of medical support staff and also reduces the medical errors and this quality attracts the medical professionals they are ready to acceptance of clinical trials and regulations of artificial intelligence in health sector.

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Leaf Disease Detection and Classification using Feature Extraction and Disease Classification

Miss. Dhanashri Tambakhe*

Prof. P. D. Thakare **

Abstract

In India, About 70% of the economy depends on agriculture. Due to environmental changes such as rainfall, temperature, the crop yield gets affected severely. This paper presents a review on Tea Leaf Disease Detection and Classification. Tea is a popular drink all around the world, and in India the cultivation of tea plays a vital role. Many diseases influence the proper growth of tea leaves leading to its diminution, thus hindering of the production of tea. The leaf gets severely affected by fungus *Alternaria alternata*. Development of automatic detection system using advanced computer technology such as image processing helps to support the farmers in the identification of diseases at an early or initial stage and provide useful information for its control. Therefore the present study was carried out on automatic disease detection of plant leaf of *Phaseolus vulgaris* (Beans) and *Camellia assamica* (Tea) using image processing techniques. It involves image acquisition, image preprocessing, image segmentation, feature extraction and classification. In this paper, K-NN classifier (K-NN) is used to recognize the diseases. Thirteen features are analyzed during the classification. These features are then used to find the most suitable match for the disease (or normality) every time an image is uploaded into the K-NN database. When a new picture is uploaded into the system the most suitable match is found and the disease is recognized. The approach is novel since the number of features compared by the K-NN classifier is reduced by three features compared to previous researches, without adversely sacrificing the success rate of the classifier, which retains an accuracy of more than 96%. This also speeds up the identification process, with each leaf image taking 200 ms less processing time compared to previous research using K-NN, thus ensuring a greater number of leaves can be processed in a given time frame. The proposed solution increases in efficiency of the detection, identification, and classification process will enable the tea industry in India to become more competitive globally, by reducing the losses suffered due to diseases of the leaf, and thus increasing the overall tea production rate.

Index Terms—Image processing, *Camellia assamica*, Disease detection, Disease recognition, feature extraction, Support Vector Machine.

I. Introduction

In India, Tea leaf disease is one of the crucial causes that reduces quantity and degrades quality. Most of the Indian people start their day with a cup of tea. Assam has become an important tea producing country. Today the country has 172 commercial tea estates. The districts that produce tea are Maulvibazar, Habiganj, Sylhet, Chittagong, Panchagarh, Brahmanbaria, and Rangamait. Almost the entirety of the district of Tea production in India is greatly hindered due to a number of pests and diseases, caused by a variety of insects, mites, nematodes, bacteria, algae, fungi, weeds, and other diseases which are caused due to

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the environmental condition of that particular region. India is an agricultural country where more than 75% population rely on agriculture directly or indirectly. Approximately 20% to 30% of the tea leaves are lost due to various diseases each year.

Tea Leaf disease is impairment to the normal state of the plant that modifies or interrupts its vital functions such as photosynthesis, transpiration, pollination, fertilization, germination etc. The change in the leaf colour is the important aspect for the notification. When the physical condition of the tea plant is at good stage then the color of the leaf is different but as soon as the leaf is affected by some harming pathogens, the color changes automatically. The emergence of plant disease has become more common now a day as factors such as climate and environmental conditions are more unsettled than ever. Tea plant diseases are usually caused by fungi, bacteria, alga and viruses. Also there are other diseases which are caused by adverse environmental conditions. There are numerous characteristics and behaviors of such plant diseases in which many of them are merely distinguishable. So the ability of tea leaf disease recognition in earlier stage is an important task. Hence an intelligent system for recognition, prevention and control of tea leaf diseases is needed. Technological advancement is gradually finding its applications in the field of agriculture. The information and communication technology (ICT) application is going to be implemented as a solution in improving the status of the agricultural sector. The idea of integrating ICT with agriculture sector motivates the development of an automated system for tea leaf disease classification and its recognition. Some works have been done on recognition of rice diseases, citrus diseases, crop diseases, wheat leaf diseases, Betel vine plant diseases etc. But in case of tea leaf diseases recognition there is no significance improvement in the research area. So we tried to develop the tea leaf diseases recognizer which will help the tea industry of India as well as of the world.

II.Literature Review

From many years leaf disease recognition is gradually increasing and in case of rice, wheat, betel vine there is a lot of examples out there. But in case of tea leaf disease recognition there is no such work specially in India. Most of the research works done on leaf recognition used various types of approach for getting high accuracy. But none of them able to reach to the point.

Recognition and Detection of Tea Leaf's Diseases Using Support Vector Machine

The main goal of this research is to develop an image processing system that can identify and classify the two most widespread tea leaf diseases in India, namely brown blight disease and the algal leaf disease, from a healthy leaf. Disease identification is the first step; there are many methods that have been used for identifying the leaf disease. In this paper, Support Vector Machine classifier (SVM) is used to recognize the diseases.

An Image Processing Approach for Detection, Quantification, and Identification of Plant Leaf Diseases -A Review

In this paper, the authors evaluate mainly in three well regulated manners: first Detection of Leaf Disease, second Classification i.e. recognizes the type of disease and the last one is Quantification of Disease i.e. measures the severity of Disease.

Plant Leaf Disease Analysis using Image Processing Technique with Modified SVM-CS Classifier

Provides an autonomous approach of modified SVM-CS is introduces. Here, concept of cuckoo search is considered to optimize the classification parameters. These parameters

further help to find more accurate solutions. This autonomous approach also extracts the healthy portion and disease affected leaf portion along with the accuracy of results.

The Cultivation and Marketing of Tea. 3d. Ed. Oxford: Oxford University Press Kholis Majid, et al. [7], has added to a portable application for paddy plant malady identification framework utilizing fuzzy entropy and Probabilistic neural system classifier that keeps running on Android Versa Tile's framework. It includes the identification for all sorts of maladies, in particular brown spot, leaf blast, tungro and bacterial leaf blight. The exactness of paddy sicknesses distinguishing proof is 91.46 percent.

Potential of radial basis function-based support vector regression for apple disease detection Elham Omrani et al. [10], used Support Vector Regression (SVR) based on radial basis functions to identify and classify diseases of the apple tree. It is a three step process. First, the captured images of the leaves had to be changed into a device independent color space, such as CIELAB, from a device depended format such as Red-Green-Blue (RGB) color space. Then, the image was segmented to extract the infected area from the overall leaf image. The segmentation technique employed was a region-based one using K-means clustering, wavelet, and grey-level co-occurrence matrix. This features extracted using this type of segmentation are the color, shape, and texture. These types of segmentation techniques are normally used for region.

III. Proposed Methodology & It's Stages

This research work is based on the detection of tea plant disease. This paper proposes a tea leaf diseases detection that identify and classified affected leaf of the tea plant. The input of this proposed system is the images of leaf of tea. The proposed system combines feature extraction [11] and neural network for training that gives a better performance. A Neural Network consists of a set of independent trained NN whose predictions are combined by various methods.

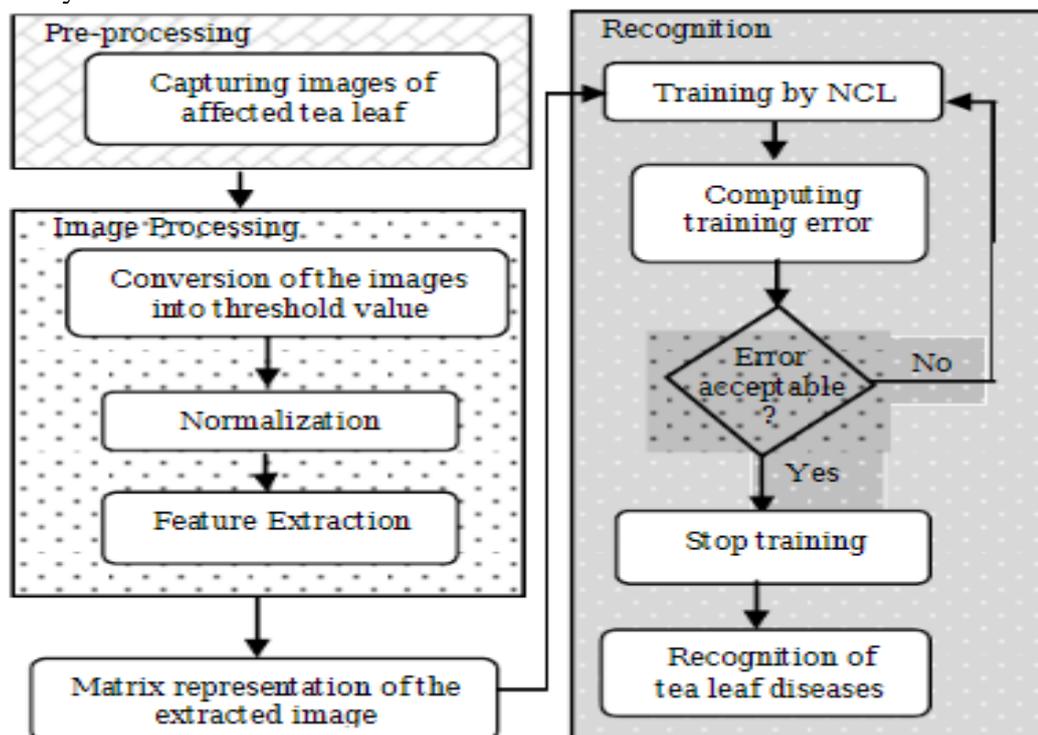


Fig 3.1: Block Diagram of Proposed work system

Different Stages of Proposed System

1) Image Pre-processing

This process starts through the detection of affected leafs of the tea tree. Noise gets added during acquisition of leaf images. So we use different types of filtering techniques to remove noise. We create device independent color space transformation structure. Thus we create the color transformation structure that defines the color space conversion. The next step is that we apply device-independent color space transformation, which converts the color values in the image to color space specified in the color transformation structure. The color transformation structure specifies various parameters of transformation. A device independent color space is the one where the resultant color depends on the equipment used to produce it. For example the color produced using pixel with a given RGB values will be altered as brightness and contrast on display device used. Thus the RGB system is a color space that is dependent. To improve the precision of the disease detection and classification process, a device independent color space is required. In device independent color space, the coordinates used to specify the color will produce the same color regardless of the device used to take the pictures. CIE L*a*b is a device independent color space in which a & b components carry color information.

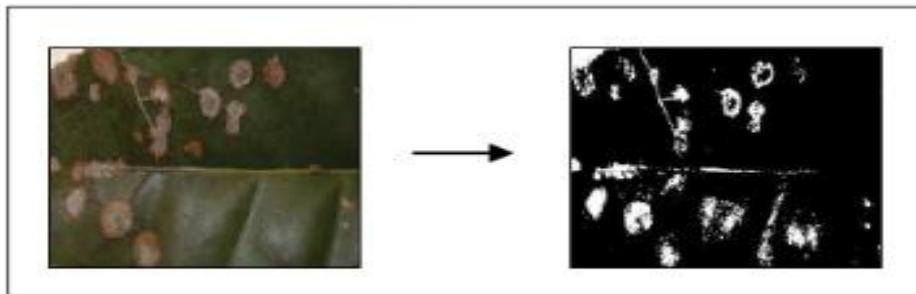


Fig : 3.1.1 Conversion into threshold image.

2) Image segmentation (k-means clustering)

Image segmentation is the process used to simplify the representation of an image into something that is more meaningful and easier to analyse. K-means clustering is a partitioning method. The function 'kmeans' partitions data into k mutually exclusive clusters, and returns the index of the cluster to which it has assigned each observation. Unlike hierarchical clustering, k-means clustering operates on actual observations (rather than the larger set of dissimilarity measures), and creates a single level of clusters. The distinctions mean that k-means clustering is often more suitable than hierarchical clustering for large amounts of data. K-means treats each observation in your data as an object having a location in space. It finds a partition in which objects within each cluster are as close to each other as possible, and as far from objects in other clusters as possible.

3) Masking green pixels

In this step, we identify the mostly green colored pixels. After that, based on specified threshold value that is computed for these pixels, the mostly green pixels are masked as follows: if the green component of the pixel intensity is less than the pre computed threshold value, the red, green and blue components of the this pixel is assigned to a value of zero. This is done in sense that the green colored pixels mostly represent the healthy areas of the leaf and they do not add any valuable weight to disease identification and furthermore this significantly reduces the processing time.

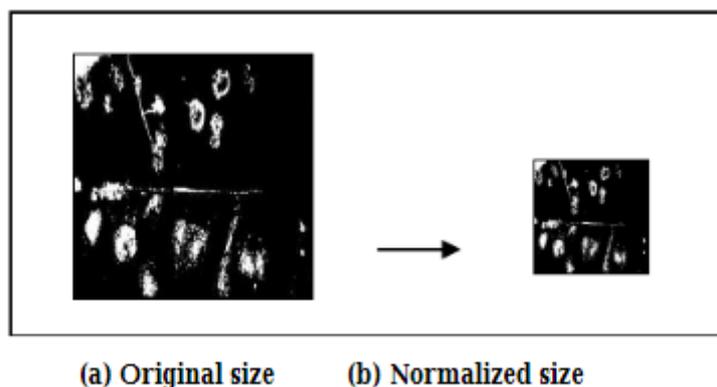


Fig 3.3 : Normalization

4) Removing the masked cells

The pixels with zeros red, green, blue components as well as pixels on the boundaries of infected cluster are completely removed. This is helpful as it gives more accurate disease classification and significantly reduces the processing time. Infected cluster is converted from RGB to HSI color format.

5) GLCM methodology

Gray level Co-occurrence matrix (GLCM) is generated for each pixel map

1. The graycomatrix function creates a gray level co-occurrence matrix by calculating how frequently a pixel with the particular intensity value i occurs in a specified spatial relationship to a pixel with the value j .
2. By default this spatial relationship is the pixel of interest and its immediate right pixel.
3. However we can specify some other spatial relationship between twos. To create multiple GLCMs, specify an array of offsets to the graycomatrix function. These offsets define pixel relationships of varying direction and distance.
4. Calculating statistics from GLCM matrix also known as SGDM

IV. Conclusion And Future Scope

As per our knowledge is concered, this tea leaf diseases's proposed system of recognition is the first initiative in India. The method mentioned in this paper can identify tea leaf which are infected and thus preventive action can be taken well in advance so that the complete production can be saved from whole damages. The methodology begins with image acquisition. Captured images are processed and after feature extraction the extracted features are used as input which appropriately identifies tea leaf diseases. Once the disease identified its treatment advisory can be provided. The method of detecting the disease is low cost effective and non-destructive as it only requires the digital photograph of the tea leaf samples in random.

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Review Paper on Image based Identification System of Pests in Farmland

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Abstract

Agriculture sector is the backbone to the living being that plays a vital role to any country's development and economy. Pest Identification and detection of diseases in agricultural crops is important to ensure good productivity. The productivity of plants will decrease due to diseases and existence of pests. Image processing technique can be used to identify the pests and thereby can reduce the use of pesticides. Image processing involves capturing the image and applying various preprocessing techniques and identify the pest in the image. By using the classifier techniques we can classify the pests and plant diseases. This paper present the study of different image processing techniques and applications to detect and extract insect pests by establishing an automated detection and extraction system for estimating pest densities in paddy fields.

Keywords - Image Processing, Segmentation, Feature Extraction, Classification, Pest Identification, Disease Detection, object extraction.

I. Introduction : Agriculture plays an important role in the development of human civilization. Research in agriculture focuses on increasing the productivity and food quality. The quality and quantity of agriculture production is affected by environmental parameters and biological parameters. Millions of dollars have been spent worldwide for the safety of crops, agricultural produce and good, healthy yield. The major biological parameters are pests and plant diseases. In a country like India, approximately 18% of crop acquiesce is lost due to pest attacks every year which is valued around 90,000 million rupees. Diseases and insect pest are the major problems in the agriculture. These require careful monitoring, diagnosis and timely handling to protect the crops from heavy losses. The naked eye observation is the commonly used method for detection of pest and identification of plant diseases. This needs continuous monitoring. But it is not practical in the case of large farm. Also it is not accurate, expensive and time consuming. Also In agriculture, Most of the farmers used the traditional pest management techniques which is the used of regular spray program based on schedules rather than the presence of insect pests on the paddy fields. These chemicals kill useful insects which eradicate pests in crops. Therefore, it is a our first priority to find an effective technique to reduce the level of their infestation in the paddy fields. In order to address these problem, several image processing based pest identification and pest detection and control methodologies comes into the action.

In this study paper, we introduce a narrative segmentation algorithm based on image processing to successfully identity pests on the leaves itself, instead of the sticky traps. The image processing can be used in various agriculture applications such as to detect diseased

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leaf and stem, to identify the affected area, to determine color of affected area etc. Automatic detection of plant diseases with the help of image processing technique provides more accurate pest detection and guidance for disease management. This new methodology combined with the robotic pest detection vehicle discussed in can be incorporated in farms and provide an immediate cost effective measure to eradicate pests in real-time. It also provides a viable measure to reduce the amount of pesticide sprayed thus reducing the harmful effect on the environment. We are choosing hundreds of image data of whiteflies as the pest of interest for this paper since it is the most hazardous pest causing widespread destruction to a large number of crops such as tomato, cabbage, broccoli etc. Also, the whitefly due to its small size is very difficult to identify and poses a challenge to image processing based pest detection systems. Till the date different papers have been published which explicate different method, including image processing for detection of objects, extraction of features and identification of pests based on different factors such as color, background color, boundary, foreground color, intensity of pixels etc. We have reviewed papers that have been researched on pest identification with the intent of getting a light idea about the methods which are efficient and useful.

II. Literature Review

C. Jongman et al, Monitoring agriculture pest insects is currently a key issue in crop protection. Detection of pests in the farms is a major challenge in the field of agriculture; therefore effective measures should be developed to fight the infestation while minimizing the use of pesticides. The techniques of image analysis are extensively applied to agricultural science, and it provides maximum protection to crops, which can ultimately lead to better crop management and production. At farm level it is generally operated by repeated surveys by a human operator of adhesive traps, through the field. This is a labor- and time-consuming activity, and it would be of great advantage for farmers to have an automatic system doing this task. This project is a system based on identification of insects and to determine the quantity of pesticides to be provided according to the growth of the pest insect. The system will determine the quantity of pesticides according to the lifespan of the insect of common pests and will suggest methods of controlling. The proposed system classify the pest insects according to their categories using SVM classifier. This system is thus beneficial to farmers for providing pesticides in correct proportion.

Nieyu-man, Wang yong-ping, Cao ping-guo, Leijian-he, Songquan-jun et al.

This paper presents a method for obtaining the dynamic characteristics of pests in farmland based on machine vision. First, the pests and the background images are segmented by color feature and thresholding methods. Then, the shape features and the number of pests were obtained by Gaussian filtering. Finally, the quantity of pest motion is obtained by frame-to-frame differencing method. The experimental results show that the accuracy rate of the experimental sample is 99%. It can provide quantitative information of pest activity for plant protection personnel. This system can also be applied in large-scale crop pest monitoring.

Johnny et.al developed a pest identification system using neural network. In this system for object detection they use background subtraction technique. Then the feature extraction and segmentation performing is done. To identify the insect Kohonen Self Organizing Maps neural network is used. Kohonen Self Organizing Maps neural network requires necessary and sufficient data in order to develop meaningful clusters. The weight vectors must be based on data that can successfully group and distinguish inputs. Lack of data or extraneous data in the weight vectors will add randomness to the groupings. The difference of the reference

and input image should have to be determined next and the input image will now be used as the reference image. Based on this comparison, the output image will be

Based on his comparison, the output image will be

$$O_{RI}(x, y) = \begin{cases} 255 & ; \text{ if } R(x, y) = I(x, y) \\ I(x, y) & ; \text{ if } R(x, y) \neq I(x, y) \end{cases}$$

Then the output image is served as the input to the next phase.

Carino Kenmore and Dyck et al. In the study of enact by Carino Kenmore and Dyck includes several sampling techniques and devices for pest management decision-making; the light trap, that involves varying size sample which is good for comparing seasonal and yearly catches of insects, but catches are subject to changes in insect behavior and do not catch none flying insects; the sweep net (catching insect using fishnet), is a fast method, very economical, and good for sampling arthropods staying in canopy of rice, tapping the rice, this is a sampling method that utilize a collecting pan with soap solution or oil with water to collect arthropods at the base and stem of the rice. After tapping, arthropods are identified and counted immediately in the field; the visual counting and data recording can be done on field but also subject to human error and very costly in labor; sticky trap is also economical, it measures insect movement and colonization but does not catch non flying insect; yellow pan trap is also economical; it measures insect migration, easy sorting and counting of samples, but the attraction is due to color stimulus and does not catch none flying insects.

Alexander et.al developed a three-level NN system for segmentation of the color images of crop infected by diseases. A three layer neural network with back-propagation training is used for segmentation. For each type of diseases they trained an individual neural network.

Ajay A. Gurjar et al [16] present an approach for cotton leaf image pest identification using Eigen feature regularization extraction. Image space spanned by the eigenvectors of the within class scatter matrix is decomposed into subspaces. Eigen features are regularized differently in these subspaces. Feature extraction and classification will be performed. Set of images are recognized using the classifier.

Technique	Advantages	Disadvantages
K-nearest neighbor(KNN)	Simple implementation.	It is lazy learner. Computationally expensive.
Radial Basis Function	Trains faster, Hidden layer is easy to interpret	It is slower in execution
Probabilistic Neural Networks	Tolerant of noisy inputs.	Long training time.
Back propagation network	Simple implementation.	Slow and inefficient.
Support Vector Machine(SVM)	Less over fitting, Robust to noise.	Computationally expensive.

Table. 1 Comparison of Classification Techniques

III. Proposed Methodology & Techniques

Our proposed system is based upon three different steps, In the first stage pest will be detected. Pest detection consist of preprocessing to reduce noise and to prepare the image for further processing. After pre-processing step, Image will be segmented using k-mean clustering algorithm. In the Second step is to extract the features of the detected pest. Then

last step is classification of the pest on the behalf of extracted features. A detail flow of proposed system and working shown in Fig. 3.1 At first step system will acquire the image using different technique or devices. These previous level images are not a appropriate thing for the classification. It will be preprocessed.

Basic steps of plant disease detection algorithm are :

- Image Acquisition
- Image Preprocessing
- Feature Extraction
- Classification
- Diagnosis

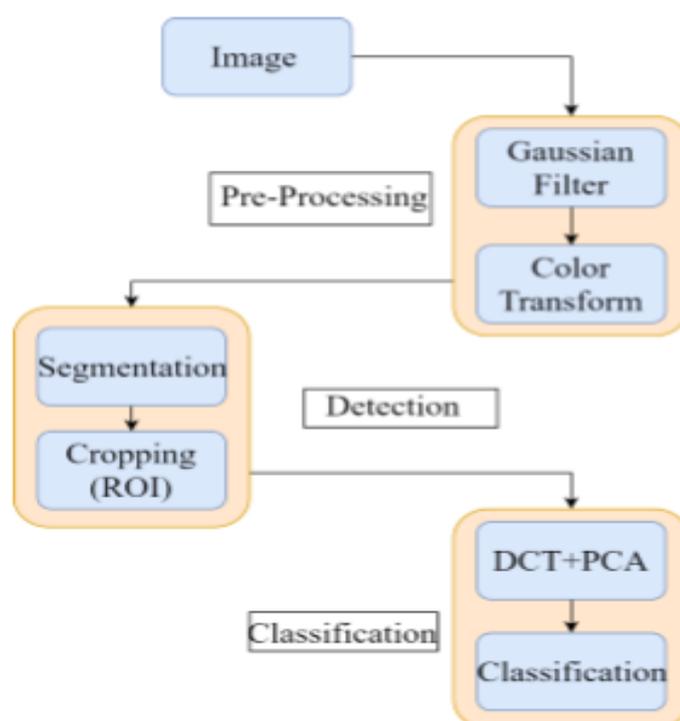


Fig Flow 3.1 of Pest Identification Techniques

a) Image Color Conversion Digitally acquired images of the crops (leaves) are obtained with the help of a low resolution color camera. Color conversion is performed on this picture from (Red, Green and Blue) RGB to luminance and chroma components (YCbCr). Based on experiments either Y, Cb

b) **Image Pre-processing** creates an enhanced image that is more useful in processing the still image. In RGB color structure, each color appears in its primary spectral components of red, green, and blue. The color of a pixel is made up of three components; red, green, and blue (RGB), described by their corresponding intensities. RGB color image require large space to store and consume much time to process. In image processing it needs to process the three different channels so it consumes large time. In this study, grayscale image is enough for the method so the authors convert the RGB image into grayscale image with the following formula:

$$I(x, y) = 0.2989 \times R + 0.5870 \times G + 0.1140 \times B$$

c) **Feature Detection** Detection of Pests in the Image The detection mechanism used to detect the insect pests in the image is simple and yet efficient. The authors compared the image pixel values of the successive captured images from the camera. Two images are used in detecting the difference. The first image served as the reference image that represents the reference pixel values for comparison purposes, while the second image served as the input image. The two images were compared to each other and the differences in pixel values were determined. To determine the difference of the reference and input image, the following equation will be used:

To determine the difference of the reference and input image, the following equation will be used:

$$O_{RI}(x, y) = \begin{cases} 255, & \text{if } R(x, y) = I(x, y) \\ I(x, y), & \text{if } R(x, y) \neq I(x, y) \end{cases}$$

where $I(x, y)$ is the input image and $R(x, y)$ in the reference image in coordinate (x, y) .

d) **Filtering** is a process of cleaning up the appearance of the image from noise caused by different lighting conditions. Digital image processing required filtering to yield a usable and attractive end result. There are different techniques available and the best options depend on the image and how it will be used. In this study the authors use median filter. Median filter looks at its nearby neighbor's pixel values to decide whether or not it is representative of its surrounding pixels and replaces with the median of those values.

e) **Extraction** of the Detected Pests This phase is the extraction of the detected insect pest from the image. The output image which was obtained at the end of the previous phase was used in this phase. The image pixel values of the output image will be scanned both horizontally and vertically to determine the coordinates of each insect in the image. The width and height of the extracted image was determined by using its starting and ending coordinates. Once the start and end coordinates of the objects are determined, the width and height of the matrix as defined by those coordinates will take note and the matrix will be saved.

IV. Conclusion

This paper is based on the on image-processing techniques and how to addresses the disease analysis and pest detection is possible in agriculture field. In this review paper, different image processing techniques for pest detection disease detection are studied. When a pest is recognized by using five main phases that which pest is this, after we can recognize it as a friend or enemy pest but still as invtion is neved ended, so this work could be extended in future, which will be more direction oriented to reduce the pesticide usage. The image processing technique proved as an effective machine vision system for agriculture domain. In this paper we also have reviewed various feature extraction techniques and classification techniques.

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A Comparative Analysis On The Financial Performance Of The TJSB Sahakari Bank With Bharat Cooperative Bank Limited

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Abstract

Financial performance is important for taking financial decisions for effective functioning of banks. The study was conducted to measure the financial performance in terms of profitability of the two Urban Scheduled Co-operative Banks in India viz. TJSB Sahakari Bank and Bharat Co-operative Bank Ltd. established in the same time line. For the study, various profitability ratios such as return on Interest, Return on Deposit Ratio, Return on Equity Ratio, Return on Borrowings Ratio, Return on Assets Ratio and Return on Advances Ratio were used. The study was based on secondary data collected from the five annual reports from the FY 2013-14 to 2017-18. The analysis was done with the help of Ratio analysis, Statistical tool SPSS was used to calculate mean, median and standard deviation. This analysis helped to compare the past five years' performance of the two co-operative banks and the study concluded that even though both the banks were established in the same time line, better growth stable Performance was recorded by TJSB Sahakari Bank than Bharat cooperative bank Ltd. The findings and suggestions were helpful for the development, growth and improvement of Urban Co-operative banks.

Key Words: Financial Performance, Profitability, Financial Ratio Analysis, Statistical tool SPSS

Introduction

Cooperative banks in India are registered under the Cooperative Societies Act and they are regulated by RBI. In India Cooperative banks are not nationalized by the Government. In Cooperative Banks, members living in particular area are usually shareholders. The rate of interest for deposits is usually high and for the loans is low.

The second schedule of RBI contains a list of banks which are described as 'Scheduled Banks'. A bank in order to be designated as scheduled banks should have paid up capital and reserves as prescribed by the Act. They are also required to maintain with RBI a deposit in the form of CRR based on its demand and time liabilities at prescribed rate. Non scheduled banks are those which are not included in the Second schedule of RBI.

Presently there are 54 Urban Scheduled Cooperative banks that are listed by RBI. The study deals with the comparison of the financial performance in terms of profitability of the two listed urban scheduled cooperative banks in India viz. TJSB Sahakari Bank established in the year 1972 and Bharat Cooperative Bank Ltd. established in the year 1978. For analyzing the profitability of the two Cooperative banks, the data from annual reports related to past

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five years viz.2017-18 to 2013-14 have been taken. Various techniques such as financial ratio analysis, Statistical tool SPSS is also used to draw conclusion for the study.

Objectives Of Study

- To measure and compare the financial performance of the two Co-operative banks.
- To measure how effectively a bank can manage its assets to attain profits.
- To compare the rate of return on borrowing done by the Co-operative banks.
- To know the return on capital and to compare the equity ratio of the two Co-operative banks.
- To know the proportion of advances provided by the two Cooperative banks
- To suggest measures to overcome the inefficiencies

Literature Review

1. **Prof. Bharat R. Hirsmath**, in his study '**Analysis of the financial performance of Cooperative Banks in Bijapur District (Karnataka State):A Comparative Study**', (August 2015) financial performance of Cooperative banks of Bijapur District was studied and found that the CBs in Bijapur District were facing problems of high cost of business operations, low capital base, inadequate loan appraisal and credit planning, high level of NPA, lack of professional skills and low level of customer satisfaction.
2. **Soyeliya Usha L**, in the study titled '**A Study On Cooperative Banks in India**', (September 20) was based on a single bank. It was undertaken to know the lending practices of Cooperative banks in India. The study also mentioned the satisfaction level of the customers regarding the time for processing of loans, formalities and mode of repayment of installments. It concluded that the respondents preferred housing loan from the banks and majority preferred to have long term loan for more than three years.
3. **Dr. P. Sanjeevi and Mr. P ManojBabu**, in their study on '**Operational and Financial Performance of Urban Cooperative banks in India, (December 2017)**', found that the operational performance of scheduled banks is progressive, whereas non scheduled banks are fluctuating. The study showed that the financial performance of both scheduled and non scheduled banks were at the same level.
4. In the study on '**Comparative Analysis of the Performance of Selected Co-operative Banks In Pune District**', was aimed to review the functioning of the selected Co-operative Banks in Pune City. For the study five Co-operative banks viz. Cosmos Co-operative Bank Ltd, Saraswat Co-operative Bank, Janata Co-operative Bank Ltd. Pune, Vishweshwar Sahakari Bank, Shri Sarada Co-operative Bank are selected. The study concluded that the Audit classification of selected five Urban Co-operative Banks Pune city have 'A' grade during the period from 2006-07 to 2010-11.

Scope Of The Study

Financial performance of the banks plays a major role in economy. In fact no research study has been conducted to analyze the financial performance of the two urban Cooperative Banks which was established almost in the same time line. Therefore 'A Comparative Analysis On The Financial Performance Of The TJSB Sahakari Bank With Bharat Cooperative Bank Limited' is undertaken to fill the research gap of the financial performance analysis of the two urban Cooperative Bank that were established in 1970's. The two cooperative banks TJSB Sahakari Bank and Bharat Cooperative Bank Ltd. was chosen as they are within the same time line and the comparison will be much accurate and meaningful.

Limitations Of The Study

- The data has been taken only for past five years' annual reports of the two Cooperative banks.
- Only secondary data has been used for the study and no primary data has been used.
- Findings of the study may not be useful for others.

Research Methodology

The study is based on secondary data. The secondary data consist of the annual reports of the TJSB Sahakari Bank and Bharat Cooperative Bank Ltd. The present study covers the annual reports for the five years viz. 2007-18 to 2013-14. The data is analyzed by using Ratio analysis, Statistical tool SPSS to calculate mean, median and standard deviations.

1. Return on Interest

Interest received by the bank is an income earned either from advances or Investments.

Return= PAT/Interest on Investment + Interest on advances

2. Return on Deposit Ratio

Accepting deposits is one of the main function performed by any banks. Higher deposit ratio indicates that the financial performance of the bank is good while the other has weak financial performance.

Return on Deposit=PAT/Deposits*100

3. Return on Equity Ratio

Shareholders' equity is calculated to see the profitability of owners' investment. ROE indicates how well the firm has used the resources.

ROE=Net Profit/Equity*100

4. Return on Borrowing

This ratio is calculated to know the proportion of deposits and borrowings with the net profit after tax

Return on Borrowing=Net Profit/Deposit + Borrowings*100

5. Return on Asset Ratio

The return on assets ratio, is a profitability ratio that measures the profitability of a business in relation to its total assets. In other words, the return on assets ratio or ROA measures how efficiently a bank can manage its assets to generate profits during a period.

ROA= PAT/Total Assets*100

6. Return on Advances Ratio

Money is the important factor for any firm to survive and earn profits. However, banks meet their working capital requirements by raising funds through advancing loans. Moreover banks receive interest for the amount advanced even though it include credit risk, Market risk and so on. Return on Advances ratio is calculated by dividing advances with net profit after tax.

Return on Advances=PAT/Advances*100

Table-1: TJSB Sahakari Bank Ratio analysis

Year	Return on Interest	Return on Deposit	Return on Equity	Return on Borrowings	Return on Assets	Return on advances	Total
2017-18	0.14	1.27	12.79	1.23	1.03	2.30	18.76
2016-17	0.11	1.09	11.67	1.05	0.87	2.04	16.83
2015-16	0.12	1.24	12.49	1.19	1.02	2.11	18.17
2014-15	0.12	1.40	13.50	0.32	0.12	2.30	17.76
2013-14	0.14	1.51	14.02	1.45	1.21	2.30	20.63
Mean	0.13	1.30	12.89	1.05	0.85	2.21	-
Median	0.12	1.27	12.79	1.19	1.02	2.30	-
Standard Deviation	0.01	0.16	0.91	0.43	0.43	0.13	-

Source: Computed from annual reports

From the Table-1 it can be interpreted that as the average of the profitability ratios increase, the actual deviation decreases. The deviations is less for every ratios. It indicates that the financial performance is in clustered manner and nor spread out i.e., almost all the ratios equally contribute towards the profitability of the TJSB Sahakari Bank.

The return on interest is stable throughout the year. The mean value 0.13 and the median value 0.12 is not much deviated. It shows that interest for the five years had proportionately contributed for the best performance of the bank. Return on assets shows a mixed trend and it can be interpreted that the mean value 0.85 and the median value 1.02 are not similar. Therefore it is understood that for the five years, there was unequal contribution towards the profitability of the bank. Even though for return on equity, return on deposit and for return on advances showed slight decrease towards profitable contribution in the year 2016-17, there were not much deviations observed in mean and median value and recorded good financial performance. Return on borrowings though had an increasing trend from the year 2014-15, later decreased and then improved.

Table-2: Bharat Cooperative bank Ratio analysis

Year	Return on Interest	Return on Deposit	Return on Equity	Return on Borrowings	Return on Assets	Return on advances	Total
2017-18	1.07	0.87	8.76	0.86	0.73	0.78	13.07
2016-17	1.12	0.95	8.75	0.95	0.81	0.87	13.45
2015-16	1.13	1.12	11.22	1.12	0.97	1.03	16.59
2014-15	0.13	1.45	16.15	1.45	1.26	1.34	21.78
2013-14	1.04	1.33	15.27	1.33	1.15	1.22	21.34
Mean	0.90	1.14	12.03	1.14	0.98	1.05	-
Median	1.07	1.12	12.22	1.12	0.97	1.03	-
Standard Deviation	0.43	0.25	3.52	0.25	0.22	0.23	-

Source: Computed from annual reports

From the Table-2 it can be interpreted that mean value when compared with the standard deviations, recorded high and low variation. It indicates that the profitability ratios that contributed towards best financial performance was not equally distributed.

The return on interest for the five years shows mixed variation. In the year 2015-16, it was able to recover up to 1% though there was a decrease in the ratio. Return on deposit and return on asset showed a moderate decreasing trend throughout the FY as it can be observed from the variations in the value of median and standard deviation. Return on equity, Return on Borrowings, Return on Advances also showed moderate decreasing trend. For all the ratios except return on interest, the mean and median value was almost similar and can be understood that more or less good contribution were made by all profitability ratios for the best financial performance by the Bharat cooperative bank Ltd.

Findings

The study presents the major findings of the financial performance of TJSB Sahakari Bank and Bharat Cooperative Bank Ltd. in India for the five consecutive annual report from 2013-14 to 2017-18.

- Even though both the banks were established in the same time line, better growing Performance was recorded by TJSB Sahakari Bank than Bharat cooperative bank Ltd.
- It is observed that by analyzing the past five financial performances, TJSB Sahakari Bank having high mean value 0.13 for the return on interest contributed for the best financial performance. Whereas, Bharat cooperative bank Ltd. Only had 0.90 contribution.
- It is founded that for return on deposit ratio Bharat cooperative bank Ltd. had an average contribution of 1.14 which was lower than the other bank.
- Even though there was not much variation in the return on asset by the Bharat cooperative bank Ltd, a good average 12.89 was made towards the profitability Performance by TJSB Sahakari Bank.
- It is observed that for the return on borrowings Bharat cooperative bank Ltd made best average contribution of 1.14 for the profitable growth of the bank while the other bank only contributed 1.05.
- It is observed that for the return on asset ratio Bharat cooperative bank Ltd made best average contribution of 0.98 for the profitable growth of the bank while the other bank only contributed 0.85.
- It can be understood that TJSB Sahakari bank received good interest amount through advances as this indicated the bank highest contributed 2.21 than 1.05 by Bharat cooperative bank Ltd.

Suggestions

- For an improved profitability and growth TJSB Sahakari Bank should make the equal contribution of asset towards the ratio.
- Efforts should be made by TJSB Sahakari Bank to increase its interest income whereas Bharat Cooperative Bank Ltd. should enhance other income.
- Bharat Cooperative Bank Ltd. should attract more loan customers by offering attractive schemes.

Conclusion

It can be concluded that even though the banks under study were established in the same time line, both the banks have been performing well. However, TJSB Sahakari Bank's performance is slightly better than Bharat Cooperative Bank. More branches can be opened

by the banks to increase the volume of business and to extent banking facilities to more areas where sufficient banking services are lacking. A bank cannot survive depending mostly on interest income and therefore the banks should diversify their operations to attract more income from other sources.

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A Study On The Impact Of Goods And Service Tax On Tourism Industry With Special Reference To Kochi

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SHABU K.R**

Abstract

The newly introduced GST has both negative and positive aspects in the field of tourism economy. On taking into consideration the Kochi Tourism Industry the prospective paper scrutinizes the possible impacts of GST upon tourist. The acceptability of GST and their opinion on it is also put into question within the boundaries of Kochi city. The area of study spreads across the field of hospitality like hotels that has its trends changed from the previous system of VAT. The data collected is in simple random sampling with 100 respondents. The respondents from whom data is collected are tourists and traders. The study is limited to Kochi city. As GST was introduced two years back, it may take time to be understood by the consumers and traders. As from this study we can find that GST has both positive and negative impacts on consumers as well as traders.

Keywords: GST, Tourism Industry.

Introduction

Tourism is one of the fast growing industries of the world. As years pass all the incidents become history or the remains become a fascinating story where people love to indulge into the past and that is the thought that provoke people to learn about past, which ends up in tourism. India tourism, emerged in the past 21st century has a incredible tourist base of 10 million. From the years 1997 to 2018 the industry has shown a commendable growth. Coming to Kochi tourism, the industry is major revenue add on to Indian tourism. The places like Bolgatty, Marine drive, Fort Kochi, Mattancherry drives the enthusiasm of the travelers. For the last 2 years about 9, 77,479 tourists have visited the place. Hence tourism is a major revenue generating industry.

GST is a new tax regime which was introduced on July-1-2017. It created a big impact on Indian economy. The tax system prevailing before GST was service tax, VAT etc. All this indirect taxes were replaced by one tax that is GST. The cascading effects of VAT have been reduced to a large extent.

Tourism represents world's third largest export avenue in terms of global earnings after fuel and chemicals. Modern tourism is closely linked to socio- economic development. Tourism is responsible for one out of 11 jobs and 10% of the world's economic output. Apart from providing employment, income and foreign exchange for the country, the trade in the tourism sector has an economically positive impact on other associated industries such as food manufacturing, services, construction, agriculture, handicrafts etc

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Hospitality is not only a high foreign exchange grosser; it is also among the largest tax generators. There are multiple taxes charged on the same Service/ Product offering by the Central as well as State Governments. It is an understanding that the Taxes levied on Inbound Tourism is amongst the highest in the country, and this is one of the major reasons for India losing Foreign Tourists to competing South East Asian Countries

Literature Review

This chapter relates to the survey of literature. It reviews the important studies relating to Tourism and Pilgrimage Tourism in India as well as Abroad.

- **Dr. R. Vasantha Gopal (2011)** “GST in India: A Big Leap in the Indirect Taxation System “this study states that the replacement of the Central excise duty of the government of India by Central Value Added Tax (CENVAT) and sales tax system of the State governments by the VAT marked a major milestone in the reform process of indirect taxes in India.
- **Vinay Kumar (2016)** “GST-A BOON OR A BANE FOR INDIA” the study implies that There is still uncertainty about the final GST rate or rates. The GST is likely to be at 18 per cent. The GST is worldwide accepted system. GST is framed in India to remove the cascading effects of tax and increase the tax base. It will be beneficial for the country or not that can't be finalized now.
- **Edward, Manoj, George, Babu P (2008):** The analysis provides a solid theoretical rationale for the spectacular performance of Kerala tourism in recent years across a number of fronts. However, negative gaps have been observed for a few vital attraction elements, broadly suggesting the need for modifying area specific development efforts to enhance the tourists experience with these attraction elements. Based on the findings of the study, the need for a moderately different emphasis in guiding both the product and promotional development activities were identified. In addition, this paper gives a glance into the development and prospects of tourism in the state of Kerala.
- **Rao, P. Punna and Reddy M. Sudarshan (2001):** Human Resources Development: Mechanisms for Extension Organizations have mentioned the importance of Human Resource Development for Agriculture Extension. They realized that there is a need for fresh look at efforts to build the capacity and capability for HRD in the emerging areas.
- **Akanksha Khurana (2016):** Impact of GST on Travel and Tourism: It can be said that GST will provide relief to producers and consumers by providing wide and comprehensive coverage of input tax credit set off, service tax set off and subsuming the several taxes. Efficient formulation of GST will lead to resource and revenue gain for both Centre and States majorly through widening of tax base and improvement in tax compliance. It can be further concluded that GST have a positive impact on various sectors and industry. Although implementation of GST requires concentrated efforts of all stakeholders namely, Central and State Government, trade and industry. Thus, necessary steps should be taken
- **Shefali Dan (2016):** Impact of GST on Travel and Tourism: The proposed GST regime is a half-hearted attempt to rationalize indirect tax structure. More than 150 countries have implemented GST. The government of India should study the GST regime set up by various countries and also their fallouts before implementing it. At the same time, the government should make an attempt to insulate the vast poor population of India against the likely inflation due to implementation of GST. No doubt, GST will simplify existing indirect tax system and will help to remove inefficiencies created by the existing current

heterogeneous taxation system only if there is a clear consensus over issues of threshold limit, revenue rate, and inclusion of petroleum products, electricity, liquor and real estate. Until the consensus is reached, the government should resist from implementing such regime.

- **Paul.v .Mathew(2017):**The authors had studied on the topic “Impact of responsible tourism on destination sustainability and quality of life of community in tourism destinations”.The study reveals the importance of tourism and implications for the successful management of tourism businesses as well as the community sustainability and their well-being.
- **Gupta (1999):** In this study praised Indian religious tourism which grew for many years without causing negative environmental, cultural and social impacts. The author viewed that pilgrimage had less burden on environment, benefited local communities, was seasonal and provided economic benefits to the local community. The author recommended to develop such type of modern tourism which benefited local communities without harming natural environment.
- **Noronha (1999):** in his study highlighted that tourism in Goa lead to increasing land prices, increasing consumption level, rapid unplanned development, drug abuse and prostitution arousal. Moreover, local people felt threatened and degraded by inappropriate behaviour of the tourists. The study also revealed that the benefits from tourism were not utilized for the development of the local people in Goa. The author recommended that strategies must be formulated by the state government to manage tourism trade and plug back profits received from tourism trade for the development of local people in Goa.
- **Cheerath (2002):** in his study found that the main reason behind foreign tourists' attraction towards Kerala was ayurveda. It revealed different types of ayurvedic treatment techniques like nasyam, snehapanam, sirovasthi, shirodhara and vasthi etc. used in Kerala for treatment of both domestic and foreign tourists. Foreign tourists joined short term courses of ayurveda treatment in Kerala as after that they were able to run parlours abroad. However, a large number of untrained people who entered in the field of ayurveda generated negative publicity for health tourism. The study suggested that appropriate tourism policies must be formulated by Kerala government to prevent such activities.

Statement Of Problem

The tourism industry is modernizing and expanding rapidly along with the growth of Indian economy. Nowadays most of the tourist have preferences such as cruise tourism, mass tourism etc. The study is basically concerned to investigate the attitude and behavior of the tourist towards the impact of GST on tourism with regards to Cochin City.

Impact of GST on tourism has brought in various attributes such as reduction in price, convenience and transparency in billing etc that makes it unique from the previous prevailing tax rates formats; hence it is necessary to know various attributes of the tourism. Tourist preferences are changing day by day; these variations are due to several factors which influence them such as price rates, services provided, welcoming staff and service quality. Therefore this study is conducted also to identify the pre and post impact of GST on tourism industry with special reference to Cochin City

Scope Of The Study

The study is conducted on “the pre and post impact of GST on tourism industry in Kochi city” which was limited to few tourist and travelers both of domestic and international nature. This study aims to analyze why travelers choose their destination as Cochin city reasons behind their choices.

Objectives

The current research has some specific purpose:

1. To know the importance of Kochi tourism
2. To study the impact of GST on Tourism
3. To study the system prevailed before introduction of GST
4. To study the impact of GST on retail shops
5. To study the awareness level among tourists on GST

Methodology

Primary Data: Questionnaire and personal interview method along with mailing of questionnaire has been used for primary data collection.

Secondary Data: Secondary data has been collected through research papers, newspapers, websites, books, reports for acquiring the theoretical concept of GST, tourism and so on.

Sampling Design: The method of sampling used in random sampling in which 50 respondents that has significant knowledge of the topic has been randomly selected for questionnaire.

Analytical tool: The data collected is analyzed with the help of percentage analysis method and is graphically presented.

Analysis And Interpretation

The study was conducted on tourist and traders regarding the pre and post impact of GST on Tourism Industry with special reference to Kochi city with a sample size of 100 respondents which are travelers and 50 respondents who are in tourist industry. The results are stated below:

Responses from various persons in Hospitality Industry

1: Number of years been there in the industry

Number of Year	Responses	Percentages
0-3 years	5	10%
3-6 years	15	20%
Above 6 years	35	70%
TOTAL	50	100

SOURCES: Primary data

Interpretation: From the above table it can be seen that about 70% of the business personnel had been there in this tourism and hospitality industry for more than 6 years. Around 20% belong to the category of 3-6 years. And others had just started the journey.

2: Implementation of GST is a benefit for the tourism and hospitality management.

RESPONSES	RESPONDENTS	PERCENTAGES
Yes	35	70%
No	15	30%
TOTAL	50	100%

SOURCE: Primary data

Interpretation: As from the above table it can be seen that 70% of the respondents agreed to the fact that implementation of GST is a benefit to the business. The remaining 30% is against the notion.

3: Customers concern over increased tariff rates

RESPONSES	RESPONDENTS	PERCENTAGE
Yes	5	10%
No	35	70%
Maybe	10	20%
TOTAL	50	100%

SOURCE: Primary data

Interpretation: As the above table shows around 70% of the customers are not concerned of the increase in the tariff rate since implementation of GST eliminates the cascading effect, around 20% of the customers suggested that it may depend upon the situation and the rest 10% are concerned about the rise in prices.

4: Is there any technological burden

RESPONSES	RESPONDENTS	PERCENTAGE
Yes	34	68%
No	16	32%
TOTAL	50	100%

SOURCE: Primary data

Interpretation: As the above table show 68% agreed that they have experienced technological burden as GST implementation is just two year old, slowly they are getting familiarized with it. The rest have disagreed to it.

5: Do you give any discount to compact GST

RESPONSE	RESPONDENTS	PERCENTAGE
Yes	10	20%
No	40	80%
TOTAL	50	100%

SOURCE: Primary data

Interpretation: As the above table shows 80% have disagreed to give discounts to compact GST and rest 20% have agreed to it.

6: Do you find difficulty in filing process.

RESPONSES	RESPONDENTS	PERCENTAGE
Yes	10	20%
No	40	80%
TOTAL	50	100%

SOURCE: Primary data

Interpretation: As from the above table it can be seen that around 80% have said it is not difficult and user friendly, where as 20% have gone against the notion.

RESPONSES FROM TRAVELERS

TABLE 1: Age Group

AGE GROUP	Responses	Percentages
20-30	65	65%
30-40	20	20%
40-50	10	10%
Above 50	5	5%
TOTAL	100	100%

SOURCE: Primary Data

Interpretation: As shown in the above table it can be seen that around 65% of the traveller belongs to 20-30 years age group and the rest belongs to other age group.

TABLE 2: Persons visiting Kochi for first time during the recent time

Respondents	Responses	Percentages
Yes	40	40%
No	60	60%
TOTAL	100	100%

SOURCE: Primary Data

Interpretation: As from the above table it can be seen that the number of person visited Kochi for the first time is 40% are visiting the place for the first time and the other 60% have visited for more than one time as because of its beauty.

TABLE: 3 Purpose of the visit

Purpose	Respondents	Percentages
Enjoyment	60	60%
Pilgrimage	25	25%
Research	10	10%
Others	5	5%
Total	100	100%

SOURCE: Primary Data

Interpretation: As above table shows 60% of the TRAVELERS visit the place for enjoyment other 25% visit for pilgrimage as its a hub for different religious visit, the remaining is for research and others.

TABLE 4: Visited Kochi after July 2017

Responses	Respondents	Percentages
Yes	60	60%
No	10	10%
Maybe	30	30%
Total	100	100%

SOURCE: Primary Data

Interpretation: As the above table shows it can be seen that 60% of the TRAVELERS have visited the place after July 2017 and the rest don't remember when did they visit this place last.

TABLE 5: Awareness regarding the taxes prevailing before July 2017

Responses	Respondents	Percentages
Yes	80	80%
No	20	20%
TOTAL	100	100%

SOURCE: Primary Data

Interpretation: As the above table shows around 80% were aware of the taxes prevailing before the introduction of Goods and Service Tax and the remaining 20% are not the aware about the fact.

TABLE 6: Preference of stay while visiting Kochi

Places to stay	Respondents	Percentages
Hotel Rooms	25	25%
Home stay	5	5%
KTDC	70	70%
TOTAL	100	100%

SOURCE: Primary Data

Interpretation: As above table shows 70% of the respondents prefer to stay at KTDC an initiative provided by the Kerala Government as they provide the best service at a low cost, 25% prefer Hotel rooms and the rest 5% prefer Home stay.

TABLE 7: Which factor attract to stay in these places

Factors	Respondents	Percentages
Price	65	65%
Service	20	20%
Transportation availability	10	10%
Others	5	5%
TOTAL	100	100%

SOURCE: Primary Data

Interpretation : As the above table shows maximum of 65% of the TRAVELERS prefer the stay on the basis of price as it is one the most important factors for the stay then comes 20% prefer services as the factor and the rest 10% have told transportation facility and others.

TABLE 8: Showing Interest towards Kerala Handicrafts

Responses	Respondents	Percentages
Yes	90	90%
No	10	10%
TOTAL	100	100%

SOURCES: Primary Data

Interpretation: As the above table shows about 90% are interested in buying Kerala products as the travelers want something unique from different products and, product from Kerala have a freshness in its own such as chekutty dolls etc

Findings

- The new tax regime GST has reduced the cascading effect of tax which was prevailing under service tax regime.

- The compliance under GST is simple so that most of the participants of the industry is duly complying with the new regime.
- It created a harmony among the industry participants as black money has reduced to a large extent.
- The number of tourists visiting to India as well as within India to Kochi has increased tremendously as the prices and cost of travel is minimal in Kochi.
- The arrival of foreign tourists than domestic tourists is more in Kochi as most the respondents were foreigners.
- The study shows that 80% of the TRAVELERS were aware of the prevailing tax before the introduction of Goods and Service Tax.
- In determining the study it can be seen that 65% of the traveller belong to 20-30 years age group.
- It can be seen that number of person visiting Kochi for first time during the recent time is 60%.
- From the study reveals that 60% of TRAVELERS have visited Kochi for enjoyment purpose and remaining for pilgrimage since it is a hub for different religious shrine, research etc..
- The number of TRAVELERS who visited Kochi after July 2017 is 60% and they mostly prefer KTDC around 70% as it is a initiative of Kerala tourism which provide the best facility at low cost.
- The factor which attract for staying them is price that is preferred by 65% of the travelers.since the basic perception of a consumer is to get the best quality services at cheap price.
- 90% of the travelers have agreed that they have a special interest towards the Kerala handicrafts which include such as lacquer ware, chekuty dolls etc.
- The study show that basically 70% of the shopkeepers have been there in the tourism and hospitality industry for more than 6 years.
- 70% of them have agreed that implementation of GST is a benefit for the tourism and hospitality management. Shopkeepers have held that 70% of customers are not concerned about the tariff rate as after the introduction of GST rate have been reduced.
- 68% of the shopkeepers have said that they experience technological burden.
- 80% of the shopkeepers said that they do not produce discount to compact GST as GST itself reduce cascading effect.
- As GST is just 2 years old it still needs to be familiarized by the shopkeepers so about 80% have said that they have experienced filling difficulty.

suggestions

- Sudden change of the tax system made a fear among the hotel industry that their profits will be reduced.
- Hoteliers should not implement GST on price including VAT. It should be charged on selling price.
- It should be made aware that GST is a boon not a bane and the registrations should be duly complied with.
- The traders in Hospitality Industry should focus beyond profit motive. The other small traders should initiate ideas in order to come in par with these big giants.
- Goods and Service Tax (GST) implementation and its filing in Tourism industry should be taught with more clarity to the traders.

- Since implementation of GST is just two years old the procedures should be more simplified in a way that could be understood by the common man.
- Government should take initiative regarding the prevailing tax rates in India to make people understand its importance and different method should be adopted.
- Kerala handicrafts are the most beautiful creations and the tourist are being attracted because of it, there are so many products such as lacquer ware, and coconut derived products which still needed to be known so government should take adequate steps and methods to provide publicity.

Conclusion

The question which arises here is whether the impact is good or bad. Of Course as a coin has a head and tail, the impact of the new tax regime also has a monster as well as a sattvic face. The introduction of the Goods and Services Tax (GST) is a very significant step in the field of indirect tax reforms in India. By amalgamating a large number of Central and State taxes into a single tax, GST will mitigate ill effects of cascading or double taxation in a major way and pave the way for a common national market. Regarding the impact of GST on tourism industry of Kochi, it has a great good impact. Towards all the groups of the society, it has decreased a huge amount of cascading effect of tax. The total commodity prices or service charges regarding hotel industry and retail handicraft industry which is a part of tourism has gone down by which people get more attracted towards tourism.

As the biggest revenue generation, the enhancement or growth of the industry paves a good way to the economic department. Since 2017 after introduction of GST the tourism seemed to grow as a impact of GST but on the later and early 2018, because of floods of Kerala the tourism industry saw a big break. But the fact is that we are rebuilding and GST will always seek the attention of people because people are never ready to give away their hard earned money. So they select the best place with fewer expenses. Hence Kochi Tourism the all time hit still continue to be the hit and the impact of GST enhances its value.

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A Study On The Factors Influencing The Purchase Decision With Respect To Maruti Suzuki Hatchback Car Models

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Abstract

In Present Marketing Scenario, a study on how consumers prefer various automobiles have become essential. Consumers are the kings of markets. Without consumers no business organization can exist for a long period. In order to develop a framework for the study, it is helpful considering those factors which impacts consumer buying behaviour. As described in this article, a set of dimensions can be identified in the literature, which can be used to characterize and distinguish, the various perspectives on how customers are making decision regarding the purchase of maruti suzuki hatchback car models. The main aim is to have a better understanding on the factors that influence consumers in buying the car model. This article aims to identify different streams of thought that could guide future research.

This research paper mainly focuses on Automobile (Four wheeler) Customers and their buying interest towards a particular marutisuzuki model car in ernakulam. Descriptive type research design used in the study. Their preferences with regard to favourite Maruti hatchback model, their satisfaction level with the same ,financing options used by them etc are considered in this study. Sample size is 100 Customers who own a car. Convenience sampling technique is used in the research. Data is collected through structured questionnaire.

Keywords: CONSUMERS , BUYING BEHAVIOUR , MARUTI SUZUKI HATCHBACK CAR MODELS , AUTOMOBILES , FINANCING OPTIONS.

Introduction

Human behaviour is seldom easy and sometimes difficult to generalize. Human minds in general are complex and difficult to predict it when comes to decision making. Each individual is a unique combination of heredity, environment and experience. It is a difficult and complicated task, filled with uncertainties, risks and surprises to predict the behaviour of people. Accurate predictions can yield vast fortunes and inaccurate predictions can result in the loss of millions of rupees. Today, business around the world recognizes that the consumer is the king. Knowing why and how people consume products helps marketers to understand how to improve existing products ,what types of products are needed in the market place or how to attract consumers to buy their products. The era of liberalization, privatization and globalization has brought changes in society and lifestyle of people.

Only when marketers are able to understand consumers wants and satisfy them, they can justify their existence. Although it is important for the firm to understand the buyer and accordingly evolve its marketing strategy, the buyer or consumer continues to be an enigma

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– sometimes responding the way the marketer wants and on other occasions just refusing to buy the product from the same marketer. For this reason, the buyer's mind has been termed as a black box, which should be opened by the seller to be a successful marketer.

The study of consumer behaviour helps us to have an understanding on how individuals make decisions to spend their available resources (time, money, effort) on consumption related items. That includes what, why, when, where, how often they buy it, how they evaluate it after the purchase and the impact of such evaluation on future purchase. The need to understand consumers and consumer behaviour has become a hot topic around the globe more than ever before, from boardroom and executive suites to universities and hospitals. An analysis of factors that influence purchase decisions and product use is also included in the study of consumer behaviour.

Understanding how consumers make purchase decisions can help marketing managers in several ways. For example, if a manager knows through research that fuel mileage is the most important attribute for a certain target market, the manufacturer can redesign the product to meet that criterion. If the firm cannot change the design in the short run, it can use promotion in an effort to change consumers' decision making criteria. For example, a house and a car provide more satisfaction than a toothbrush. A car satisfies the need of owners for transportation. They also obtain psychological satisfaction from the possession of products like a car.

For the purpose of this study, the personal variables like age, income, education, occupation etc., have been selected and the influence of these personal variables on the consumers' perception, their buying behaviour and the decision process have been analysed.

Literature Review

Kotler & Armstrong (2011) "Principles of Marketing" There are various methods for finding customers satisfaction. The satisfaction of the customers is reflected if the customers come for the repurchase, also in one method the customers are interviewed directly, the other method is preparation of questionnaire and with the help of the filled up questionnaire the customers satisfaction is measured.

Dr. Sarika R. Lohan & Dr. Oprakash Sharma (2012) identified the customer satisfaction and evaluating the opinion of the customers preferences and parameter to improve the same. The company will get clear cut the idea about the customer purchasing models and patterns of the customer expectations.

Chidambaram and Alfred (2007) suggested that there are few factors which help in affecting preferences of customers. The study unveiled the important factors which influence preferences as fuel efficiency, brand name, good quality, reasonable, durability.

Sudhakar and Venkatapathy (2009) established the significance of peer group in the purchase behaviour of car pertaining to Coimbatore District. It also revealed the impact of friends which is bigger for the purchase of small sized and mid-sized cars.

Banerjee, Ipsita (2011) investigated about Car Acquisition & Ownership Trends in Surat city of motorized vehicle owning households. It concluded that household income is the prime factor of the number and size of cars that household buys, besides that family size is proved to be irrelevant factor as it was found that smaller vehicles were preferred even by larger family.

Satya Sundaram (2008) analysed how the competition makes the automobile manufacturer to launch at least one new model or a variant of the model every year. This survey also

pointed out that diesel cars are becoming popular in India and the announcement of reductions in excise duties by the government has helped to some extent to boost the demand.

Brown et al (2010) analysed the consumers' attitude towards European, Japanese and the US cars. The country-of-origin plays a significant role in the consumers' behaviour. The brand name, lower price and distributor's reputation completely have a significant impact on the sale of passengers' car.

Mrs Beena John, Dr. S. Pragadeeswaran titled —"A study of small car consumer preference in Pune city", investigated impact of profile of respondents and influencing factors in purchasing decision. They concluded that the income fluctuation and enhanced petrol prices are the factors driving demand of small cars in India. Small car sector offers immense potential as penetration and consumption of small cars is very less in Pune compared to its population.

Guiles (2008) identified that fuel economy and lower maintenance cost have it's an impact on the consumers' behaviours towards the passenger car.

Dornoff et al (2008) identified the market segment is the primary determinant of the consumer behaviour in the passenger car market. The level of expectation and perception on various attributes of car differ from consumers in one segment to another.

Purohit (2009) identified that consumers are mainly satisfied by the company, durability, driving comfort, brand popularity, spare parts availability, travel convenience and overall look. Good product features led the consumers to purchase Maruti product than the others.

Joseph and Kamble (2011) evaluated the behavioural pattern shown by passenger car customers in Dakshina Kannada district of Karnataka state. They found that one of the most important factors that influence purchase of passenger cars in India is the availability of auto finance or consumer credit.

Donnelly, Mellahi & Morris (2002) examined how European car companies have responded to global challenges both at home and abroad. The main responses of the European producers in the home market have been to reduce costs, shed labour, rationalize plants, raise productivity and improve their relationships with suppliers in attempts to boost efficiency.

Aboobakar, Siddique & Arvindhraj (2010) "A Project Report On Customer Preference For DSC Hyundai Motor Pvt Ltd. Chennai". The idea that customers prefer one product or one service over another is not new. The ability to identify and measure the elements of such preference decisions with any accuracy and reliability has only recently become available.

Enderwick, Peter, Ritter & Larissa (2010) "Marketing with special reference to Korean car manufacturers". With the recent ascend of Korean car manufacturers to major competitors in the global automobile market in less than three decades, questions arise how these car producers succeeded to rise in such a mature industry and what competitive strategies they follow. It furthermore shows a change in direction from late entrants impelled to catch-up with established firms in terms of technology, design and other inalienable business skills, to threatening innovative rivals.

Statement Of The Problem

Emergence of globalization and liberalization has led to a stiff in competition among the variety of car industries which are focusing attention in capturing the Indian markets. Cars though considered as luxury once, now occupies an important part in day to day life and has become a necessity. Ernakulam City which is selected for the study is one of the main growing markets for car manufacturers. At present, the demand for the hatchback cars is on

the increase in the country. To be a successful marketer it is absolutely essential to read the minds and perceptions of the prospective buyers of cars. The present study attempts to analyse the variables that affect the buyer behaviour today.

With the proliferation of the many passenger car makes and models in India, which are mostly offering similar value proposition in the passenger car segment, the car segment has largely been differentiated. The problem of the study is intended to explore and unearth the differentiating parameters in such a homogenous and synchronized passenger car market, thus influencing the consumer purchase behaviour of passenger cars in the City of Ernakulam. Automobile no more considered as luxury once, now occupies a part of day-to-day life and has become a necessity. Customers have now changed their attitude that yesterday's luxuries are today's necessities. To be a successful marketer it is absolutely essential to study the perceptions of the prospective buyers and track their drivers of those perceptions.

Objectives

The purpose of this research is to study the buying behaviour of consumers, perception of product attributes and level of satisfaction. The following are the objectives:

- To analyse the factors influencing the customers with regards to the purchase of Maruti hatchback cars.
- To evaluate the brand loyalty of customers towards the brand.
- To analyse the finance facilities and assistance provided to customers.
- To evaluate the customers perception regarding after sales services.

Research Methodology

Collection Of Data

The study is designed to cover consumers in Ernakulam district. The study is done by using both primary and secondary data. The primary data were collected through questionnaire and through direct interview.. The secondary data has been collected from various published articles, through internet, journals and magazines.

Sample Frame

A sample of 100 consumers was selected for the present study around Ernakulam City which is in Kerala. It consists of consumers from Ernakulam Urban and consumers from Ernakulam Rural.

- Deciding who is to be surveyed (Deciding Sample Unit) – Urban and Rural Consumers in Ernakulam City.
- How many people should be surveyed (Deciding Sample Size) –100 Urban and Rural Consumers.
- How many people in the sample to be chosen (Deciding about sampling procedure) – 100 (that is 50 Urban and 50 Rural consumers) will be chosen.

The type of sample design used by us in the survey was that of Non - Probability Quota sampling method since the sample will be chosen at random.

Stratified random sampling is generally applied in order to obtain a representative sample. Here under stratified random sampling method the population is divided into different sub-populations called "Strata" which are more homogeneous than the total population and then we select items from each stratum to constitute a sample. Since each stratum is more homogeneous than the total population, we are able to get more precise estimates for each stratum and by estimating more accurately each of the component parts; we get a better estimate of the whole, which results in more reliable and detailed information.

Tools For Collection Of Data

A structured questionnaire was designed and administered among the respondents to give a fair representation to various attributes of the consumer. The questionnaire was finalized by holding discussions with supervisors ,executives and consumers.

Analysis & Interpretation

The data collected for the study were tabulated and analysed by employing simple quantitative tools like percentage, Likert ‘s scale etc.. Diagrams were used to present the tabulated data.

Table 1 Gender

S.No.	Gender	Frequency	Percentage
1.	Male	55	55
2.	Female	45	45
Total		100	100

Source: Primary Data

Interpretation:

It is found from the above table that 55 percent respondents are male and the rest 45 percent respondents are female. Demographic variables and buying behaviour have high correlation rate as reviewed in various literature, inclusive of articles and studies and researches. Gender has also received a great deal of attention in buying behaviour studies. Studies suggesting that gender does not affect job satisfaction are available, and data can be found to suggest that either man are most satisfied or that women are generally more satisfied.

Table 2 Marital Status

S.No.	Marital Status	Frequency	Percentage
1.	Married	75	75
2.	Unmarried	25	25
	Total	100	100

Source: Primary Data

Interpretation

From the above table it is identified that, out of 100 respondents, 75 percent of the respondents are married and 25 percent of the respondents are unmarried or single.

Table 3 Educational Qualification

S.No.	Educational Qualification	Frequency	Percentage
1.	High School	15	15
2.	Graduate	50	50
3.	Post Graduate	15	15
4.	Others	20	20
	Total	100	100

Source: Primary Data

Interpretation:

From the above table it is clearly mentioned that out of 100 repondents, 15 percent has completed their high school education,50 percent are graduates,15 percent are post garduates and rest of the 20 percent possess various other educational qualifications.

Table 4 Occupational Status

S.No.	Occupation	Frequency	Percentage
1.	Professional	14	14
2.	Business	20	20
3.	Govt. Employee	14	14
4.	Private Employee	30	30
5.	Others	22	22
	Total	100	100

Source: Primary Data

Interpretation

From the above table, it is concluded that out of 100 respondents 14 percent are professionals, 20 percent are business people, 14 percent are govt. Employees ,30 percent are private employees and the rest 22 percent are related to various other jobs or occupation.

Table 5 Number Of Members In The Family

S.No.	Family Strength	Frequency	Percentage
1.	2	10	10
2.	3 – 5	60	60
3.	5 – 8	20	20
4.	More than 8	10	10
	Total	100	100

Source: Primary Data

From the above table ,it is analysed that, from the sample of 100 respondents, 10 percent of the respondents have only 2 members in their family, 60 percent respondents have 3 – 5 members in their family, 20 percent of the respondents have 5 – 8 members in thier family and 10 percent have more than 8 members in their family .

Table 6 Age Limit

S.No.	Age Limit	Frequency	Percentage
1.	Upto 30 years	30	30
2.	31 – 40 years	56	56
3.	Above 40 years	14	14
	Total	100	100

Source: Primary Data

Interpretation

It is inferred that 30 percent of the respondents are below 30 years of .age, 56 percent of the respondents are between 31 years and 40 years, the rest 14 percent of the respondents are above 40 years of age.

Table 7 Area

S.No.	Area	Frequency	Percentage
1.	Urban	75	75
2.	Rural	25	25
3.	Others		
	Total	100	100

Source: Primary Data

Interpretation

In this study, the 100 sample respondents are constituted with 75 percent of urban respondents and 25 percent of rural respondents. It is clear from the above table.

Table 8 Hatchback Car Model Of Maruti Suzuki Preferred Or Owned Or Influenced By The Respondents

S.No.	Car Model	Frequency	Percentage
1.	Maruti Alto 800	10	10
2.	Maruti Alto K10	19	19
3.	Maruti Wagon R	5	5
4.	Maruti Celerio	15	15
5.	Maruti Swift	20	20
6.	Maruti Ritz	15	15
7.	Maruti Wagon R Stringray	14	14
8.	Others	2	2
	Total	100	100

Source: Primary Data

Interpretation

Out of 100 respondents 10 percent of them owns Alto 800, 19 percent of them owns Alto K10, 5 percent of them owns Maruti Wagon R, 15 percent of them owns Maruti Celerio, 20 percent of them owns Maruti Swift, 15 percent of them owns Maruti Ritz, 14 percent of them owns Maruti Wagon R Stringray and 2 percent owns Maruti Zen Estilo which belongs to Others. It is clearly depicted in the above table.

Table 9 Satisfaction Level Of The Respondents On Hatchback Models

S.No.	Satisfaction Level	Frequency.	Percentage
1.	Highly Satisfied	42	42
2.	Satisfied	40	40
3.	Neutral	14	14
4.	Dissatisfied	3	3
5.	Highly Dissatisfied	1	1
	Total	100	100

Source: Primary Data

Interpretation

From the above table it is clear that 42 percent of the car owners are highly satisfied with the various hatchback car models of the Maruti Suzuki. 40 percent the car owners are satisfied with the various hatchback car models of the Maruti Suzuki, 14 percent of the car owners have a neutrality with the hatchback car models of Maruti Suzuki, 3 percent of the customers are dissatisfied and 1 percent is highly dissatisfied with hatchback car models of the Maruti Suzuki.

Table 10 Period Of Usage Of The Hatchback Model By The Respondents

S.No.	Period	Frequency	Percentage
1.	Upto 3 years	37	37
2.	4 – 5 years	45	45
3.	Above 5 Years	18	18
	Total	100	100

Source: Primary Data

Interpretation

37 percent of the total respondents are using hatchback cars for period of 3 years. 45 percent of the total respondents are the users of the hatchback car for a period of 4 – 5 years. 18 percent of the total respondents are using hatchback cars for more than 5 years.

Table 11 Average Drive Per Day In Kilometers

S.No.	Kilometres	Frequency	Percentage
1.	Less than 10 kms	30	30
2.	10 – 25 kms	34	34
3.	25 – 50 kms	26	26
4.	50 – 80 kms	10	10
	Total	100	100

Source: Primary Data

Interpretation

From the above table it is inferred that 30 percent of the total respondents drive less than 10 kms in a day, 34 percent of the respondents drive 10 – 25 kms in a day, 26 percent of the respondents drive 25 – 50 kms in a day, 10 percent of the respondents drive 50 – 80 kms in a day.

Table 12 Sources Of Information Obtained By The Respondents With Regards To Maruti Suzuki hatchback Cars For Making Buying decision.

S.No.	Sources	Frequency	Percentage
1.	Internet	24	24
2.	Product Advertisement	42	42
3.	Friends/Family/Relatives	15	15
4.	Automobile Mechanic	5	5
5.	Showroom/Dealer Staff	5	5
6.	Auto Expo/Exhibitions	6	6
7.	Buyers Without Information Search	3	3
8.	Others		
	Total	100	100

Source: Primary Data

Interpretation

Majority of the respondents found to make a prior search from various sources such as friends, dealer staff, and product advertisements etc. before taking a buying decision .From the table it is clear that vast number of purchasers of passenger car (42 percent) relies on information obtained product advertisements. Also, as we know high involvement products are being bought after going through a complex decision process, similarly passenger car being the high-involvement product has a considerable impact of influencer on its purchasing decision. The list of the main influencers to the respondents is mentioned in the table. For majority of passenger car buyer’s major influencer found to be product advertisements (42 percent) followed by the internet (24 percent) and friends, family and relatives (15 percent), automobile mechanic(5 percent), showroom dealer staff (5 percent), auto exhibitions(6 percent) and buyers without information search(3percent).

Table 13 Various Means That The Respondents Had Considered For The Clarification Of Doubts

S.No.	Means	Frequency	Percentage
1.	Showroom/Dealer	10	10
2.	Email To Manufacturer	10	10
3.	Brochure/Leaflet/Advertisement	25	25
4.	Automobile Mechanic	25	25
5.	Internet Surfing	10	10
6.	Others	20	20
	Total	100	100

Source: Primary Data

From the table it can be easily studied that, 10 percent of the total respondents clear their doubts from the showroom /dealer, 10 percent of the the respondents clears their doubts by sending E-mail to customers, 25 percent clear their doubts from an automobile mechanic and through automobile mechanic, 10 percent clears their doubts from internet surfing and the rest 20 percent from various as other means.

Table 14 Various Factors Influencing The Purchase Decision

S.No.	Factors	Very High%	High%	Medium%	Low%	Very Low%	Total
1.	Price	50	10	20	10	10	100
2.	Style/Design	15	45	20	10	10	100
3.	Fuel Efficiency	6	47	28	13	6	100
4.	Powerful Engine	8	36	38	10	8	100
5.	Pick Up	10	42	15	24	9	100
6.	Warranty	15	15	39	14	17	100
7.	Comfort/Luxury	12	15	47	16	10	100
8.	Financing Schemes	13	14	20	41	12	100
9.	Internal Space	15	10	49	20	6	100
10.	Safety	20	51	15	6	8	100
11.	After Sales Service	22	44	16	10	8	100
12.	Models/Variants	9	25	38	20	8	100
13.	Brand Image	54	26	10	5	5	100
14.	Colour	62	20	8	6	4	100
15.	Availability	46	22	16	11	5	100
16.	Innovative Technology	27	45	17	6	5	100
17.	Maintenance Cost	28	20	37	8	7	100
18.	Durability	21	29	41	5	4	100
19.	Re-Sale Value	2	5	22	17	53	100
20.	Insurance Facility	9	27	43	13	8	100
21.	Free Gift Offers	13	38	23	16	10	100
22.	Price Offer	13	22	37	19	9	100

Source: Primary Data

In countries like India often evaluation is done on price consideration which one can afford. In case of a car, consumers decide first the price range which is in their reach or affordability or their willingness to spend upon a product. Then they examine those brands within their budget. 50 percent of the respondents viewed that price has played very high influence followed by high influence with 10 percent, 20 percent expressed that they were medium influenced by price, 10 percent respondents are less influenced and 10 percent of the respondents are very less influenced.

15 percent of the respondents viewed that style or design has played very high influence followed by high influence with 45 percent, 20 percent expressed that they were medium influenced by style/design, 10 percent respondents are less influenced and 10 percent of the respondents are very less influenced.

6 percent of the respondents viewed that fuel efficiency has played very high influence followed by high influence with 47 percent, 28 percent expressed that they were medium influenced by fuel efficiency, 13 percent respondents are less influenced and 6 percent of the respondents are very less influenced.

8 percent of the respondents viewed that powerful engine has played very high influence followed by high influence with 36 percent, 38 percent expressed that they were medium influenced by powerful engine, 10 percent respondents are less influenced and 8 percent of the respondents are very less influenced.

10 percent of the respondents viewed that pick up has played very high influence followed by high influence with 42 percent, 15 percent expressed that they were medium influenced by pick up, 24 percent respondents are less influenced and 9 percent of the respondents are very less influenced.

15 percent of the respondents viewed that warranty has played very high influence followed by high influence with 15 percent, 39 percent expressed that they were medium influenced by warranty, 14 percent respondents are less influenced and 17 percent of the respondents are very less influenced.

12 percent of the respondents viewed that comfort or luxury has played very high influence followed by high influence with 15 percent, 47 percent expressed that they were medium influenced by comfort or luxury, 16 percent respondents are less influenced and 10 percent of the respondents are very less influenced.

13 percent of the respondents viewed that financing schemes has played very high influence followed by high influence with 14 percent, 20 percent expressed that they were medium influenced by financing schemes, 41 percent respondents are less influenced and 12 percent of the respondents are very less influenced.

15 percent of the respondents viewed that internal space has played very high influence followed by high influence with 10 percent, 49 percent expressed that they were medium influenced by internal space, 20 percent respondents are less influenced and 6 percent of the respondents are very less influenced.

20 percent of the respondents viewed that safety has played very high influence followed by high influence with 51 percent, 15 percent expressed that they were medium influenced by safety, 6 percent respondents are less influenced and 8 percent of the respondents are very less influenced.

22 percent of the respondents viewed that after sales service has played very high influence followed by high influence with 44 percent, 16 percent expressed that they were medium

influenced by after sales service,10 percent respondents are less influenced and 8 percent of the respondents are very less influenced.

9 percent of the respondents viewed that models and variants has played very high influence followed by high influence with 25 percent ,38 percent expressed that they were medium influenced by models or variants,20 percent respondents are less influenced and 8 percent of the respondents are very less influenced.

54 percent of the respondents viewed that brand image has played very high influence followed by high influence with 26 percent ,10 percent expressed that they were medium influenced by brand image,5 percent respondents are less influenced and 5 percent of the respondents are very less influenced.

62 percent of the respondents viewed that colour has played very high influence followed by high influence with 20 percent ,8 percent expressed that they were medium influenced by colour,6 percent respondents are less influenced and 4 percent of the respondents are very less influenced.

46 percent of the respondents viewed that availability has played very high influence followed by high influence with 22 percent ,16 percent expressed that they were medium influenced by availability,11 percent respondents are less influenced and 5 percent of the respondents are very less influenced.

27 percent of the respondents viewed that innovative technology has played very high influence followed by high influence with 45 percent ,17 percent expressed that they were medium influenced by innovative technology,6 percent respondents are less influenced and 5 percent of the respondents are very less influenced.

28 percent of the respondents viewed that maintenance cost has played very high influence followed by high influence with 20 percent ,37percent expressed that they were medium influenced by maintenance cost,8 percent respondents are less influenced and 7 percent of the respondents are very less influenced.

21 percent of the respondents viewed that durability has played very high influence followed by high influence with 29 percent ,41 percent expressed that they were medium influenced by durability,5 percent respondents are less influenced and 4 percent of the respondents are very less influenced.

2 percent of the respondents viewed that resale value has played very high influence followed by high influence with 5 percent ,22 percent expressed that they were medium influenced by resale value,17 percent respondents are less influenced and 53 percent of the respondents are very less influenced.

9 percent of the respondents viewed that insurance facility has played very high influence followed by high influence with 27 percent ,43 percent expressed that they were medium influenced by insurance facility,13 percent respondents are less influenced and 8 percent of the respondents are very less influenced.

13 percent of the respondents viewed that free gift offers has played very high influence followed by high influence with 38 percent ,23 percent expressed that they were medium influenced by free gift offers,16 percent respondents are less influenced and 10 percent of the respondents are very less influenced.

13 percent of the respondents viewed that price off offers has played very high influence followed by high influence with 22 percent ,37 percent expressed that they were medium influenced by price off offers,19 percent respondents are less influenced and 9 percent of the respondents are very less influenced.

Table 15 After Sales Services Offered By The Dealers

S.No.	Rating	Frequency	Percentage
1.	Excellent	35	35
2.	Very Good	20	20
3.	Good	20	20
4.	Average	20	20
5.	Below Average	5	5
	Total	100	100

Source: Primary Data

Interpretation

35 percent of the total respondents responds as excellent to the after sales services offered by the Maruti Suzuki. 20 percent of the respondents responds as very good to the after sales service offered by Maruti Suzuki. 20 percent of the total respondents responds good to the after sales service offered by the Maruti Suzuki . 20 percent of the respondents gives an average response to the after sales service offered by the Maruti Suzuki. 5 percent of the respondents are responding as below average to the after sales service provided by Maruti Suzuki.

Table 16 Financing Options Adopted By The Respondents

S.No.	Financing Options	Frequency	Percentage
1.	Cash Price	20	20
2.	Leasing	18	18
3.	Hire Purchasing	36	36
4.	Exchange Options	24	24
5.	Others	2	2
	Total	100	100

Source: Primary Data

Interpretation

Out of 100 respondents 20 percent of the respondents adopted cash pricing, 18 percent of the respondents opted leasing, 36 percent of the respondents opted hire purchasing, 24 percent of the respondents have selected exchange options and 2 percent of the respondents chooses another means of financing options.

Table 17 Means Of Finance

S.No.	Means Of Finance	Frequency	Percentage
1.	Loans From Public Banks	16	16
2.	Loans From Private Finance Institutions	13	13
3.	Manufacturer offered Finance	9	9
4.	Credit Unions	11	11
5.	Friends	7	7
6.	Dealership	8	8
7.	Online Traders	6	6
8.	Self Financing	20	20
9.	More Than One Means Of Finance	10	10
10.	Others		
	Total	100	100

Source: Primary Data

Interpretation

16 percent of the total respondents have taken loan from public banks to buy the car. 13 percent of the total respondents have taken loan from private finance institutions to buy the car. 9 percent of the total respondents have accepted the manufacturer offered finance to purchase the car. 11 percent of the total respondents adopted credit from various credit unions. 7 percent of the total respondents obtain finance from their friends. 8 percent of the total respondents obtain finance from their respective dealers. 6 percent of the total respondents obtain finance from online traders. 20 percent of the total respondents are self financed to buy the car. 10 percent of the total respondents opted the combination of various means of finance.

Summary Of Findings And Suggestions

The present study was undertaken with the objective of assessing the factors that influences the purchase decision with respect to Maruti Suzuki Hatchback car models. Important factors are analysed and studies in the course of field survey. The Present study is conducted by considering both primary and secondary data.

Findings

Major findings are summarized as follows:

1. 55 percent of male respondents and 45 percent of female respondents are considered for the study.
2. 50 percent of the respondents are graduates.
3. Majority of the respondents are private employees.(30percent).
4. About 60 percent of the respondents have 3 to 5 members in their family.
5. Majority of the respondents belongs to the age class of 31 – 40 years.(56 percent).
6. About 75percent of the respondents belongs to the urban area.
7. About 20 percent of the respondents are the owners of the Maruti Swift.
8. 42 percent of the respondents are highly satisfied with the Maruti Suzuki Hatchback car models.
9. 45 percent of the respondents are using Maruti Hatchback car models for a period ranging between 4 to 5 years.
10. 34 percent of the respondents make average drive about 10 to 25 kms a day.
11. With respect of their buying decision,42percent of the respondents obtain information regarding cars through product advertisements.
12. About 25 percent of the respondents clear their doubts regarding various car models with the help of an automobile mechanic and through leaflets and brochures.
13. 50 percent of the respondents considered price as a very high factor while making purchase decision.
14. 45 percent of the respondents considered style / design as a high factor while making purchase decision.
15. 47 percent of the respondents considered fuel efficiency as a high factor while making purchase decision.
16. 38 percent of the respondents considered powerful engine as a medium factor while making purchase decision.
17. 42 percent of the respondents considered pick up as a high factor while making purchase decision.

18. 39 percent of the respondents considered warranty as a medium factor while making purchase decision.
19. 47 percent of the respondents considered comfort/ luxury as a medium factor while making purchase decision.
20. 41 percent of the respondents considered financing schemes as a low factor while making purchase decision.
21. 49 per cent of the respondents considered internal space as a medium factor while making purchase decision.
22. 51 percent of the respondents considered safety as a high factor while making purchase decision.
23. 44 percent of the respondents considered after sales services as a high factor while making purchase decision.
24. 38 percent of the respondents considered models/varients as a medium factor while making purchase decision.
25. 54 percent of the respondents considered brand image as very high factor while making purchase decision.
26. 62 percent of the respondents considered colour as a very high factor while making purchase decision.
27. 46 percent of the respondents considered as a very high factor while making purchase decision.
28. 45 percent of the respondents considered innovative technology as a high factor while making purchase decision.
29. 37 percent of the respondents considered maintainance cost as a medium factor while making purchase decision.
30. 41 percent of the respondents considered durability as a medium factor while making purchase decision.
31. 53 percent of the respondents considered resale value as a very low factor while making purchase decision.
32. 43 percent of the respondents considered insurance facility as a medium factor while making purchase decision.
33. 38 percent of the respondents considered free gift offers as a high factor while making purchase decision.
34. 37 percent of the respondents considered price off offers as a medium factor while making purchase decision.
35. About 35 percent of the respondents rate the after sales services offered by dealers as excellent and 20 percent as very good.
36. About 36 percent of the respondents opted hire purchasing as an optimum financial option for buying a car.
37. About 46percent of the respondents acquired finance from public banks,through self financing and by combination of various means of finance.

Suggestions

1. To ensure that a product finds a place in the minds of consumers,the manufacturers should position their products through sales promotional activities such as advertisements through the media. Indian youth/consumers are very strongly influenced by testimonials of sports personalities, film stars and celebrities. For positioning, the consumer durables like cars, the manufacturers can utilize the endorsement of these

- celebrities. They should confirm whether or not the perception sought to be created by them has really been created or not. They should have a research and development devoted to marketing that conducts periodical surveys about their products.
2. The demand for small car segment is increasing because of the growing number of nuclear families as well as parking problems. Hence the manufacturers should find out the needs, wants, tastes and preferences of the consumers in order to design the products.
 3. Car owners feel that the hospitality shown by the dealers is more during their visits to the places of dealers before and immediately after the purchase. But after some time they face a problem with their dealers regarding after sales service. Therefore, it is suggested that the services rendered or to be rendered should be properly explained, friendly approach and reliability in service are to be further improved.
 4. Vehicle manufacturers must improve customer education for operation and maintenance by well written operating and maintenance manuals and network of approved service points.
 5. Due to steady increase of petrol/diesel prices, fuel efficiency needs to be improved. Constant improvement and technical up gradation for better fuel efficiency alone will attract more customers.
 6. Price of the car should be at par or slightly low so that the customers may be retained instead of switching over to other vans, as small cars have large potential.
 7. Majority of the respondents reported that they formed their expectations through the product advertisements and therefore it would be beneficial if the extent of influence of product advertisement is studied.

Conclusion

Consumer Behaviour consists of all human behaviour that goes in making purchase decisions. An understanding of the consumer behaviour enables a marketer to take marketing decisions which are compatible with its consumer needs. There are four major classes of consumer behaviour determinants and expectations, namely, cultural, socioeconomic, personal and psychological. The socio-economic determinants of consumer behaviour consist of age, marital status, occupation, education, income, family size etc. Realizing the importance of passenger car industry in the present economic situation, the researcher has analyzed the perceptions and behaviour of consumers related to this product. From the discussions made in the previous chapters, there are certain product attributes which are identified in the study as influencing the purchase decision and satisfying the consumers. Manufacturers should concentrate on these features as they influence the choice of more prospective buyers. The growth of population in India and the increasing number of middle class consumers have attracted the attention of car manufacturers and marketers. The manufacturers and marketers who study the behaviour of consumers and cater to their needs will be successful. It may be concluded that consumer behaviour has a greater role to play in the LPG era of economic activities and future research may be directed towards the study of eco friendly fuel cars.

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A Study On Impact Of GST On Wholesalers And Retailers

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Abstract

The Goods and Services Tax which was passed by parliament on 29th March, 2017 and came into effect on 1st July 2017, is an indirect tax which is an inclusive, multiple stage tax collected at the place of consumption. GST is applied at various tax rates: 0%, 5%, 12%, 18% and 28%. The tax reforms can be divided into two Direct tax reforms and Indirect tax reforms. After GST got implemented retailers and wholesalers have to present their bills digitally where the GST platform will monitor them. GST will eradicate Cascading tax system hence lower Tax burden, GST is also uniform Tax system across all states of the country, thus will smoothen flow of goods from one state to another. The basic objective of the study is to know more about the new born reform GST and its impact on the life's of the wholesalers and retailers. There is a need to study GST as is also said to be a critical reform in spurring growth in economy and will be going to impacting the trading sector the most.

Keywords: GST, Wholesalers, Retailers, Tax system, Economic growth.

Introduction

Goods And Services Tax

The Goods and Services Tax which was passed by parliament on 29th March, 2017 and came into effect on 1st July 2017, is an indirect tax which is an inclusive, multiple stage tax collected at the place of consumption.

GST is applied at various tax rates: 0%, 5%, 12%, 18% and 28%.

GST is further divided into-

Central Goods and Services Tax (CGST): It is tax collected by central government on intra-state sale. State Goods And Services Tax (SGST): It is tax collected by state government on intra –state sale; Integrated Goods And Services Tax (IGST): It is Tax collected by Central Government on inter-state sale.

Key tax reforms in India

Direct tax reforms

National securities depository Limited (NSDL) on behalf of Income Tax Department started Tax Information Network (TIN); Electronic return acceptance and consolidation system (ERACS) is an internet supported system for upload of electronic returns of Tax collection at source (TCS) and Tax Deduction at source (TDS); Online Tax Accounting System (OLTAS) is for uploading into central system the details of TDS/TCS and advance Tax into PAN; Income Tax Department started using Andhra to verify Income Tax Return (ITR).

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Indirect Tax Reforms

The first Indirect tax Reform occurred in India when Modified value Added Tax (MODVAT) was introduced for selected commodities in 1986 to replace Central Excise Duty later on it got extended to Central Value Added Tax (CENVAT) ;The Service Tax introduced in 1994-95 was initially applicable to some services at 7%.By and By it was applied to more and more services. Currently 14% Service Tax of 14% is paid on 100 services. The Goods and Services Tax (GST) is the biggest reform to have taken place so far. It came into effect on July 1st, 2017.

After GST got implemented retailers and wholesalers have to present their bills digitally where the GST platform will monitor them. Since entire supply chain will be monitored, Tax evasion will become quite difficult. After Demonetization many companies suffered drop in sales due to decrease in customer demand. And many of them consider GST as another setback.

However, the advantages of GST overshadows its initial hesitation. GST will eradicate Cascading tax system hence lower Tax burden, GST is also uniform Tax system across all states of the country, thus will smoothen flow of goods from one state to another. GST has also removed Octroi charges, which comes as great relief to wholesalers. GST will reduce indirect taxes, increase efficiency of the supply chain and better margins thus helping the retailers in a big way.

Literature Review

1. A study conducted by “R. Rupa” (February 2017) on the topic “GST in India: An overview”. And his findings where;

- More business entities including unorganized will come under GST thus widening tax base. This may lead to better tax revenue collections.
- The procedural cost will get reduced in uniform accounting system. Namely SGST, IGST have to be maintained for all types of taxes.
- There will be dual control on every business by central and state government .So compliance cost might go up.

2. A study conducted by “milandeepKour”, “Kajalchaudhary”, “Surjan Singh” and “BaljinderKaur” (November,2016) on the topic “A study on impact of GST after its implementation”. And his findings where;

- GST can be beneficial to Central government, State government and consumers in long run its implementation is backed by strong IT Infrastructure.
- GST will help in improvement the Gross Domestic Products of the country.
- GST is said to encourage impartial tax system.

3. A study conducted by “Monika Sehrawat” and “UpasnaDhanda” (December,2015) on the topic “GST in India: A key tax reform “and his findings where;

- Goods and Services Tax is a transitional tax structure which would integrate wide variety of taxes into one. It is perceived to be a reformative tax structure unifying the market and expected to bring substantial increase in country’s overall productivity through free movement of goods of services.
- One tax instead of so many different taxes will help in making tax compliance and tax monitoring easier.
- Increased investments in manufacturing sectors and reduced cost may result in increased volume of exports.

4. A study conducted by “Pankaj Kumar” and “SubhrangshuSekharSarkar” (2016) on the topic “Goods and service tax in India: problems and prospect “and his findings where;

- Low cost of compliance and administration will be seen because of GST.
- A substantively common tax base for Central and State governments.
- Sales will be taxed under destination principle.
- Goods and Services tax will help in lowering tax burden of retailers, dealers, industries, agricultural sector, etc.

5. A study conducted by “Poonam” (January 8, 2017) on the topic “Goods and Services Tax in India: An introductory study” and his findings where;

- GST is comprehensive indirect tax reform in India.
- The launch of Goods and Services Tax will transform Asia’s third largest economy into a single market for the first time.
- A single rate would help in maintaining simplicity and transparency by treating all goods and services as equal without giving any special treatment to some ‘special ‘goods and/or services.

6. A study conducted by “SakharamMujalde” and “AviVani” (January 8,2017) on the topic “Goods and Service Tax (GST) and its outcome in India “and his findings where;

- The Goods and Services tax is said to have wide ranging ramification for the complicated taxation system in India. It is likely to improve the country’s tax to GDP ratio and also inhibit inflation.
- The GST’s impact on growth will be negative in short run but positive in long run.
- Goods and services tax will greatly help in removing economic distortions caused by present complex tax structure and will help in development of national market.

7. A study conducted by “Ashishkumar” (2018) on the topic “impact of GST in Insurance sector” and his findings where;

- Tax for financial services increased to 18%, which increase in the price of life insurance products.
- Item for input tax credit is restricted for employees.
- Cost of doing business has increased on account of decentralized registration.

8. A study conducted by “vivek” (2018) on the topic “GST has cut effective tax rate across sector, except electricity” and his findings where;

- Transport sector had large drop in marginal tax at 23.2%.
- Agricultural sector had lowest drop in marginal tax at 0.09%.
- Increase 11.6% in the electricity sector.

9. A study conducted by “Ravi Sundar” (2017) on the topic “GST establishment” and his findings where;

- To subsume various indirect taxes levied at different level.
- Idea of reducing red – tape.
- Plugging leakage and paving the way for a transparent indirect tax regime.

10. A study conducted by “The Hindu” (2018) on the topic “GST effect the common man” and his findings where;

- GST on the price of goods and services will largely depend on the items.
- Products can be sold at cheaper rates if his government offers a subsidy on it.

11. A study conducted by “Grant Thronton” (2018) on the topic “Is GST going to benefit people below the poverty line” and his findings where;

- There will not be a direct impact on GST on them basically on their necessities like food.
 - Increase in the collection of the GST with a large tax base to the government to allocate more money for social and poverty alleviation programmers.
12. A study conducted by “Deloitte Haskins” (2017) on the topic “effect of GST on tax deductions of a salaried person” and his findings where;
- GST is an indirect tax collect from customers who buy goods and service.
 - If customers earn salary or not they have to pay tax for goods and service they buy.
13. A study conducted by “Sells LLP” (2018) on the topic “Items that could become costlier and that could become cheaper” and his findings where;
- Services are expected to become costlier under GST regime, were service tax rate of 15%.
 - Price of certain category of goods comes down depending on the effective rate of direct tax.
14. A study conducted by “The Hindu” (2017) on the topic “Help of GST in getting rid of tax evasion” and his findings where;
- Provides GST number to all manufacturers, traders, wholesalers and retailers by GSTN.
 - Government insensitive tax compliance by traders.
15. A study conducted by “Indran PIB” (2018) on the topic” state GST and central GST” and his findings where;
- Both levy GST across the value chain.
 - In inter-state transaction the center would levy and collect the integrated Goods and Services Tax.
 - IGST will be equal to CGST and SGST.

Statement Of The Problem

The basic objective of the study is to know more about the new born reform GST and its impact on the life's of the wholesalers and retailers in the country of India, as they are the ones who have been most affected by this particular reform. Under the earlier law the wholesalers and retailers escape the tax liability as there is no mechanism to trace it, but it will change under the GST. After the implementation of the GST they will have to present bills digitally where the GST platform will monitor them giving the customers will get a clear idea about the behind the scene of a product that they purchase.

Needs And Importance Of The Study

This study is aimed at creating an opportunity for the student to observe, learn, assimilate and analyze the impact of GST in Indian economy. This helps the students to get a clear idea of how GST affects the consumers and retailers through primary data collection and secondary data collection. This also helps gather information about direct and indirect tax reforms, impact of GST in our society, performance of GST in the economy, etc. the complex tax structure of India is one of the reasons for stagnant growth of wholesale, retail and manufacturing sector .The new GST system extensively acts as catalyst to drive growth in manufacturing and retail sector. It also has a great impact on the supply chain, logistics, production cost, time with the changes in indirect tax system. There is a need to study GST as is also said to be a critical reform in spurring growth in economy and will be going to impacting the trading sector the most.

Objectives Of The Study

1. To understand the concept of GST in India.

2. To analyses the impact of GST on retailers.

3. To study the impact of GST on wholesalers.

Research Methodology

Research Design: A research design is a conceptual structure within which the collection, measurement and analysis of data is done in an economical manner.

Sample Design: Sample design is a definite plan for the selection of sample from a population. Sample design suggests the sample strategy best suited to the study and also gives an idea about the size of the sample.

Sampling Size: 100 respondents are selected from within Kerala after considering time and cost.

Sampling Method: Simple Random Sampling method is used to collect the data from the respondents.

Data Collection: This study is based on primary data and secondary data. Primary data: It was mainly collected by circulating questionnaires to wholesalers and retailers. Secondary data: It was collected from websites, articles, magazines, newspapers, etc.

Research tool used: Questionnaire.

Data Analysis Tools

- Percentage Analysis

Presentation:

The collected data is primarily, presented in the form of tables, to provide a better understanding of data.

Analysis And Interpretation

Gender

Gender is the range of characteristics pertaining to, and differentiating between, masculinity and femininity. Depending on the context, these characteristics may include biological sex (i.e., the state of being male, female, or an intersex variation), sex-based social structures (i.e., gender roles), or gender identity. People who do not identify as men or women or with masculine or feminine gender pronouns are often grouped under the umbrella terms non-binary or gender queer.

TABLE NO:1

SL.NO	GENDER	NUMBER	PERCENTAGE
1	MALE	48	48%
2	FEMALE	52	52%
3	OTHERS	0	0%
TOTAL		100	100%

Source: Primary data

Interpretation

48% (48 respondents) of the respondents were females. Rest 52% (52 respondents) of the respondents are male.

Type Of Business

A voluntary association formed and organized to carry on a business. Types of companies include sole proprietorship, partnership, limited liability, corporation, and public limited company.

TABLE NO: 2

SL.NO	TYPE	NUMBER	PERCENTAGE
1	RETAILER	53	53%
2	WHOLESALE	47	47%
TOTAL		100	100%

Source: Primary data

Interpretation

53% (53 respondents) of the respondents are 'retailers. Rest 47% (47 respondents) of the respondents is 'wholesalers.

AVAILABLE LEGISLATION IN RELATION TO THE GST

TABLE NO: 3

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY SATISFIED	10	10%
2	SATISFIED	46	46%
3	NEUTRAL	30	30%
4	DISSATISFIED	10	10%
5	HIGHLY DISSATISFIED	4	4%
TOTAL		100	100%

Source: Primary data

Interpretation

30 % of the respondents were 'neutral' regarding the legislation in relation to GST
10 % respondents were 'dissatisfied' regarding the legislation in relation to GST
46% respondents were 'satisfied' regarding the legislation in relation to GST
10% highly respondents were 'highly satisfied' regarding the legislation in relation to GST
4% highly respondents were 'highly dissatisfied' regarding the legislation in relation to GST.

The Demand For Services Or Product Gone Up After Implementation Of GST

TABLE NO:4

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	YES	60	60%
2	NO	40	40%
TOTAL		100	100%

Source: Primary data

Interpretation

40% of the respondents said 'yes' there has been a rise in price of services/product has gone up after implementation of GST. 60% of the respondents said 'no' there hasn't been a rise in price of services/product up after implementation of GST.

Exemptions Provided Under Pre-GST Laws

TABLE NO: 5

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	12.2	12.2%
2	AGREE	42.9	42.9%
3	NEUTRAL	32.7	32.7%
4	DISAGREE	10	10%
5	HIGHLY DISAGREE	2.2	2.2%
TOTAL		100	100%

Source: Primary data

Interpretation

32.7% of the respondents said were 'neutral' regarding the above statement. 42.9% of the respondents 'agree' with the above statement. 12.2% of the respondents 'highly agree' with the above statement. 10% of the respondents 'disagreed' with the above statement. Remaining 2.2 of the respondents 'highly disagreed' with the above statement.

The Current Threshold Exemption Limit

TABLE NO: 6

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	6.1	6.1%
2	AGREE	43.8	43.8%
3	NEUTRAL	39.9	39.9%
4	DISAGREE	10.2	10.2%
TOTAL		100	100%

Source: Primary data

Interpretation

39.9% of the respondents were 'neutral' regarding the threshold limit set in GST.

43.8% of the respondents 'agree' with the threshold limit set in GST

10.2% of the respondents 'disagree' with the threshold limit set in GST

6.1% of the respondents 'highly agree' with the threshold limit set in GST

Software System Equipped To Handle The GST

TABLE NO: 7

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY EQUIPPED	20	20%
2	EQUIPPED	56	56%
3	NEUTRAL	18	18%
4	NOT EQUIPPED	4	4%
5	HIGHLY UNEQUIPPED	2	2%
TOTAL		100	100%

Source: Primary data

Interpretation

20% of the respondents said that their software system was 'highly equipped' to handle GST.

56% of the respondents said that their software system was 'equipped' to handle GST.

18% of the respondents said that their software system was 'neutral' in order to handle GST.

4% of the respondents said that their software system was 'not equipped' to handle GST.

2% of the respondents said that their software system was 'highly unequipped' to handle GST.

Uniformity Of Rates

TABLE NO: 8

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	23	23%
2	AGREE	38	38%
3	NEUTRAL	33	33%
4	DISAGREE	4	4%
5	HIGHLY DISAGREE	2	2%
TOTAL		100	100%

Source: Primary data

Interpretation

23% of the respondents 'highly agree' with the statement 'uniformity of rates especially in the neighboring states has benefited traders and service providers'. 38% of the respondents 'agree' with the statement 'uniformity of rates especially in the neighboring states has benefited traders and service providers'. 33% of the respondents were 'neutral' regarding the statement 'uniformity of rates especially in the neighboring states has benefited traders and service providers'. 4% of the respondents 'disagree' with the statement 'uniformity of rates especially in the neighboring states has benefited traders and service providers'. 2% of the respondents 'highly disagree' with the statement 'uniformity of rates especially in the neighboring states has benefited traders and service providers'.

Economic Unification Of India

TABLE NO: 9

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	18.2	18.2%
2	AGREE	18.4	18.4%
3	NEUTRAL	43.2	43.2%
4	DISAGREE	16.1	16.1%
5	HIGHLY DISAGREE	4.1	4.1%
TOTAL		100	100%

Source: Primary data

Interpretation

18.2% of the respondents 'highly agreed' with the statement 'GST will boost economic unification of India'. 18.4% of the respondents 'agreed' with the statement. 43.2% of the respondents are 'neutral' regarding the statement GST will boost economic unification of India'. 18.2% of the respondents 'highly agreed' with the statement 'GST will boost economic unification of India'. 16.1% of the respondents 'disagree' with the statement 'GST will boost economic unification of India'. And 4.1% of the respondents 'highly disagree' with the statement GST will boost economic unification of India

The Tax Burden For Consumers

TABLE NO: 10

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	12.2	12.2%
2	AGREE	49	49%
3	NEUTRAL	26.5	26.5%
4	DISAGREE	8.2	8.2%
5	HIGHLY DISAGREE	4.1	4.1%
TOTAL		100	100%

Source: Primary data

Interpretation

12.2% of the respondents 'highly agreed' with the statement 'GST will reduce the tax burden for consumers'. 49% of the respondents 'agreed' with the statement 'GST will reduce the tax burden for consumers'. 26.5% of the respondents 'neutral' regarding the statement 'GST will boost economic unification of India'. 8.2% of the respondents 'disagree' with the statement 'GST will reduce the tax burden for consumers'.

4.1% of the respondents 'highly disagree' with the statement 'GST will reduce the tax burden for consumers'.

Easy Tax Structure, Merging All Levies On Goods And Services In To One GST

TABLE NO: 11

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	16.3	16.3%
2	AGREE	39.3	39.3%
3	NEUTRAL	36.5	36.5%
4	DISAGREE	4.8	4.8%
5	HIGHLY DISAGREE	3.1	3.1%
TOTAL		100	100%

Source: Primary data

Interpretation

16.3% of the respondents 'highly agree' with the statement 'GST laws result in a simple, transparent and easy tax structure, merging all levies on goods and services in to one GST'. 39.3% of the respondents 'agree' with the statement 'GST laws result in a simple, transparent and easy tax structure, merging all levies on goods and services in to one GST'. 36.5% of the respondents are 'neutral' regarding the statement 'GST laws result in a simple, transparent and easy tax structure, merging all levies on goods and services in to one GST'. 4.8% of the respondents 'disagree' with the statement 'GST laws result in a simple, transparent and easy tax structure, merging all levies on goods and services in to one GST'. 3.1% of the respondent 'highly disagree' with the statement 'GST laws result in a simple, transparent and easy tax structure, merging all levies on goods and services in to one GST'.

GST May Broaden The Tax Base. It Will Increase Tax Collection Due To Wide Coverage Of Goods And Service

TABLE NO: 12

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	20.8	20.8%
2	AGREE	45.8	45.8%
3	NEUTRAL	27.4	27.4%
4	DISAGREE	4.8	4.8%
5	HIGHLY DISAGREE	1.2	1.2%
TOTAL		100	100%

Source: Primary data

Interpretation

20.8% of the respondents 'highly agree' with the statement "GST may broaden the tax base by increasing tax collection due to wide coverage of goods and service.". 45.8% of the respondents 'agree' with the statement "GST may broaden the tax base by increasing tax collection due to wide coverage of goods and service.". 27.4% of the respondents are 'neutral' regarding the statement "GST may broaden the tax base by increasing the tax collection due to wide coverage of goods and service.". 4.8% of the respondents 'disagree' with the statement "GST may broaden the tax base by increasing tax collection due to wide coverage of goods and service.". 1.2% of the respondents 'highly disagree' with the statement "GST may broaden the tax base by increasing tax collection due to wide coverage of goods and service".

Implementation Of GST Will Cause A Rise In Price Of Goods And Service

TABLE NO: 13

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	18.8	18.8%
2	AGREE	34.6	34.6%
3	NEUTRAL	25.6	25.6%
4	DISAGREE	16.5	16.5%
5	HIGHLY DISAGREE	4.5	4.5%
TOTAL		100	100%

Source: Primary data

Interpretation

18.8% of the respondents 'highly agree' with the statement 'implementation of GST will cause a rise in price of goods and services'. 34.6% of the respondents 'agree' with the statement 'implementation of GST will cause a rise in price of goods and services'. 25.6% of the respondents are 'neutral' regarding the statement 'implementation of GST will cause a rise in price of goods and services'. 16.5% of the respondents 'disagree' with the statement 'implementation of GST will cause a rise in price of goods and services'. 4.5% of the respondents 'highly disagree' with the statement 'implementation of GST will cause a rise in price of goods and services'.

Expenditure Affected The Most By GST

TABLE NO: 14

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	NECESSARY GOODS	48.9	48.9%
2	LUXURY GOODS	35.4	35.4%
3	ENTERTAINMENT	10.5	10.5%
4	OTHERS	5.2	5.2%
TOTAL		100	100%

Source: Primary data

Interpretation

48.9% of the respondents said that expenditure on 'necessary goods' has been most affected by GST. 35.4% of the respondents said expenditure on 'luxury goods' has been most affected by GST. 10.5% of the respondents said expenditure on 'entertainment' has been most affected by GST. 5.2% of the respondents said expenditure on 'others' has been most affected by GST.

GST Has Resulted In Better Tax Compliance

TABLE NO: 15

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	7.2	7.2%
2	AGREE	41.8	41.8%
3	NEUTRAL	29.6	29.6%
4	DISAGREE	15.3	15.3%
5	HIGHLY DISAGREE	6.1	6.1%
TOTAL		100	100%

Source: Primary data

Interpretation

7.2% Of the respondents highly agree that 'GST has resulted in better tax compliance' .41.8% of the respondents 'agree' that 'GST has resulted in better tax compliance'. 29.6% of the respondents are 'neutral 'about 'GST resulting in better tax compliance'. 15.3% of the respondents 'disagree' that 'GST has resulted in better tax compliance'.6.1% of the respondents 'highly disagree' that 'GST has resulted in better tax compliance'.

GST Law Implementation In The Countries

TABLE NO: 16

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY AGREE	6.1	6.1%
2	AGREE	20.4	20.4%
3	NEUTRAL	46.9	46.9%
4	DISAGREE	22.4	22.4%
5	HIGHLY DISAGREE	4.1	4.1%
TOTAL		100	100%

Source: Primary data

Interpretation

6.1% Of the respondents 'highly agree' that 'GST act in India is better than GST law in the countries' .20.4% of the respondents 'agree' that 'GST act in India is better than GST law in other countries. 46.9% of the respondents are 'neutral 'about 'GST act in India is better than GST law in other countries. 22.4% of the respondents 'disagree' that 'GST act in India is better than GST law in other countries.4.1% of the respondents 'highly disagree' that 'GST act in India is better than GST law in other countries.

After The Implementation Of GST

TABLE NO: 17

SL.NO	PARTICULARS	NUMBER	PERCENTAGE
1	HIGHLY SATISFIED	5.1	5.1%
2	SATISFIED	35.7	35.7%
3	NEUTRAL	39.8	39.8%
4	DISSATISFIED	10.2	10.2%
5	HIGHLY DISSATISFIED	9.2	9.2%
TOTAL		100	100%

Source: Primary data

Interpretation

5.1% Of the respondents 'highly satisfied' with 'the implementation of GST'. 35.7% of the respondents are 'satisfied' with 'the implementation of GST'. 39.8% of the respondents are 'neutral' regarding 'the implementation of GST'. 10.2% of the respondents are 'dissatisfied' with 'the implementation of GST'. 9.2% of the respondents are 'highly dissatisfied' with 'the implementation of GST'.

Findings And Suggestions

Findings

1. 60% of the respondents feel that there hasn't been a rise in price of services/product up after implementation of GST.
2. 12.2% of the respondents 'highly agree' with the Indirect tax system prevailed in India and 2.2 of the respondents 'highly disagreed' with the statement.

3. 56% of the respondents said that their software system was 'equipped' to handle GST. 4% of the respondents said that their software system was 'not equipped' to handle GST. 2% of the respondents said that their software system was 'highly unequipped' to handle GST.
4. 40% of the respondents said 'yes' there has been a rise in price of services/product has gone up after implementation of GST.
5. 18.8% of the respondents 'highly agree' that the 'implementation of GST will cause a rise in price of goods and services'. 34.6% of the respondents 'agree' that the 'implementation of GST will cause a rise in price of goods and services'. 25.6% of the respondents are 'neutral' regarding the statement implementation of GST will cause a rise in price of goods and services.
6. 20.8% of the respondents 'highly agree' that "GST may broaden the tax base by increasing tax collection due to wide coverage of goods and service.". 45.8% of the respondents 'agree' that "GST may broaden the tax base by increasing tax collection due to wide coverage of goods and service.". 27.4% of the respondents are 'neutral' that "GST may broaden the tax base by increasing the tax collection due to wide coverage of goods and service."
7. 7.2% of the respondents highly agree that 'GST has resulted in better tax compliance'. 41.8% of the respondents 'agree' that 'GST has resulted in better tax compliance'. 29.6% of the respondents are 'neutral' about 'GST resulting in better tax compliance'.
8. 16.3% of the respondents 'highly agree' that 'GST laws result in a simple, transparent and easy tax structure, merging all levies on goods and services in to one GST'. 39.3% of the respondents 'agree' that 'GST laws result in a simple, transparent and easy tax structure, merging all levies on goods and services in to one GST'. 36.5% of the respondents are 'neutral' that 'GST laws result in a simple, transparent and easy tax structure, merging all levies on goods and services in to one GST'.
9. 12.2% of the respondents 'highly agreed' that 'GST will reduce the tax burden for consumers'. 49% of the respondents 'agreed' that 'GST will reduce the tax burden for consumers'. 26.5% of the respondents 'neutral' that 'GST will boost economic unification of India'
10. 5.1% of the respondents 'highly satisfied' with 'the implementation of GST'. 35.7% of the respondents are 'satisfied' with 'the implementation of GST'. 39.8% of the respondents are 'neutral' regarding 'the implementation of GST'.

Suggestions

1. Government should organize training and awareness programs regarding GST.
2. The current four basic rate slabs of 5%, 12%, 18% and 28% can be continued as most people were comfortable with it
3. Since most of the respondents agreed that 'indirect system that prevailed in India before implementation of GST was complicated'. It can be said that GST did uncomplicated the taxation system of India.
4. As majority of the respondents seemed to be satisfied with the available legislation on GST it need not be changed.
5. A majority of the respondents are of the opinion that GST has indeed Caused a rise in price of goods and services .this effect of GST has to be corrected.

6. Most of the respondents felt that expenditure on 'necessary goods' has been most affected by GST. Measures have to be taken to bring back expenditure on necessary goods to normal.
7. There is scope for improvement of GST act in India to be at par with GST law in other countries.
8. One of the most praiseworthy things about GST is that it has removed 'cascading tax effect'.

Conclusion

For a common man GST stands for 'Goods and Services Tax', and is proposed to be a comprehensive indirect tax levied on manufacturing, sale and consumption of goods as well as services at the national level. It will replace all other indirect taxes levied on goods and services by the Indian Central and State governments. Goods & Service Tax (GST) would be to eliminate the doubly taxation i.e. cascading effects of taxes on production and distribution cost of goods and services. The exclusion of cascading effects i.e. tax on tax till the level of final consumers will significantly improve the competitiveness of original goods and services in market which leads to beneficial impact to the GDP growth of the country. Introduction of a GST to replace the existing multiple tax structures of Center and State taxes is not only desirable but imperative. Integration of various taxes into a GST system would make it possible to give full credit for inputs taxes collected. GST, being a destination-based consumption tax based on VAT principle.

The existing taxes on most of the consumer goods are on the higher side. Most of the goods (for e.g. electronics, beauty products, and non-luxury automobiles) attract an excise duty of 12.5% and a state levy of VAT at 12.5% to 15%. Additionally, in the current scenario, there is numerous cascading effect i.e. tax on tax on the account of CST, VAT, Octroi, entry tax, local body tax, etc. till the product reaches the ultimate end-customer.

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A Study On The Change In Buying Behaviour Of Consumers With The Advent Of Shopping Malls With Special Reference To Ernakulam District

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Abstract

The retail sector in Indian has seen a drastic transformation and rapid growth since the last decade. . Organized retail sector is growing at rapid speed, more jobs are being created, town plans are getting modernized, and thus the consumer behavior too. While the transition is happening at global level in various forms, the shopping behavior of consumer is also likely to change with the growing choices and trends. The shopping patterns of the Indian consumer are becoming more effervescent as a result of the vigorous changes taking place in their lifestyle and also due to the impact of global marketing conditions in the retailing industry. A consumer is the one who pays something to consume goods and services produced. As such, consumers play a vital role in the economic system of a nation.. The choice and decisions of the consumers have great impact on the marketing condition as they influence the demand and supply of products. With the advent of shopping malls there is a great change in consumer's buying behaviour. Nowadays they prefer to purchase more from these shopping malls rather than from retail shops. As a result this study focuses to bring out the changes in the buying behaviour of the respondents with regard to the expectation of the products and availability of service that are offered in the mall and factors that are influencing the customer towards the purchase of products in the shopping malls. This study also aims conduct a comparative study on the buying pattern of the consumer from retail shops and from shopping malls The sample size of 100 has been selected for the study from Ernakulam district and Simple Random Sampling method is used in the study. The study mainly focuses on the buying behaviour of consumers in the shopping malls.

Keywords: Retail sector , consumers, consumer's buying behaviour ,shopping pattern, shopping malls, retail shops.

Introduction

A consumer is an individual who buys product or services for personal use and not for manufacture or resale. A consumer is someone who can make decision whether or not to purchase an item at the store and someone who can be influenced by marketing and advertisement. Any time someone goes to a store and purchase a toy, shirts, beverage or anything else they are making that decision as a consumer.

Consumer buying behaviour is the sum total of a consumer attitudes, preferences, intention and decision regarding the consumer behavior in the market place when purchasing a product or services .The study of consumer behaviour is concerned with all aspects of purchasing

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behaviour from pre-purchase activities through post-purchasing consumptions ,evaluation and disposal activities .It is also concerned with all persons involved, either directly or indirectly in purchasing decision and consumption activities including brand-influencer and opinion leaders.

Retailing industry has been present in India since ages, but it is only in recent past that it witnessed so much dynamism. In fact, retailing has witnessed drastic changes from poorly stacked store in the bylane of residential areas to an aesthetically decorated store with properly arranged goods, offering ambience and convenience. The organized retail growth in the country has been triggered increase in consumer spending, which in turn is fuelled by rise in the disposable income.

The most predominant factors like changing age profits,increasing consumerism, the availability of cheap credit changing attitude of the Indians and the early earnings of young people have played a major role in the increase of consumer spending in emerging economies. The retailing business in India witnessed huge growth due to emergence of supermarkets as well as centrally air conditioned malls. The share of retail trader in the country's GDP was between 8-10% in 2007.It is currently around 14-15 % GDP.

Till 1990 there were just 3 shopping malls in the country ie; Ansal Plaza in New Delhi,Cross Road in Mumbai ,Spencer Plaza in Chennai. But now large formal supermarkets and centrally air conditioned malls have come up almost in every big city.Further these are 1500 supermarkets,11025 departmental stores and 300 shopping malls.All these facts clearly states that the size of retailing business is increasing rapidly with more than 5 lakhs retail outlets globally.

Inorder to cater to the increasing complexity in the market place the Indian retailers will need to know his consumer and design a unique value to this segment .Thus this study focus on the changes in consumer behaviour after the advent of shopping malls.

Literature Review

Shekar , (2016) studied the overall customer satisfaction, response of customers with regard to the availability and quality of products and services offered at shopping malls and the comfort level of the respondents towards shopping in the shopping malls.

Yaaminidevi (2013) in Madurai city, Tamilnadu with a sample of 100 respondents focused on Facility Management like ambience, infrastructure and traffic were analyzed particularly. She suggested that malls not only cater to the product needs of the customers, but also a source of entertainment, recreation.

Sharma (2012) research carried in Mumbai also assessed the overall customer satisfaction. The researcher analyzed the response of customers with regard to the availability and quality of products and services offered at shopping malls and the comfort level of the respondents towards shopping in the shopping malls .

Hemant Syal (2011) research paper titled "Retailing in India: Future Perspective" published in IJRFM Volume 1, Issue 8 (December 2011). The paper paints a verbal picture of the impending retail boom likely to happen sooner. The signs are all over the place. For few years foreign retailers will have the role of facilitator for to standardize the agribusiness and to unify customer's preference across the country. The competition will help to increase the quality of service of the existing local retailers and greater customer satisfaction in Indian society. Concept of selfemployment will vanish and sustainable small industries will be roped with the big chains. Paper gives a glimpse of the slow evolution of retail market over the years..

Surbhi Khosla (2009) in his paper entitled “Understanding Retail Sector in India: A Journey from Ancient to Modern Era” has highlighted the different formats of retailing in India and also narrated the recent trends in retailing in India. The author holds the view regarding the large formats retail outlets that the entertainment factor being very high have a more chance of being successful than the other formats and outlet

Manoj K Trivedi (2008) in his paper entitled “From Traditional Markets to Shopping Malls. A paradigm shift” holds the view regarding of the fast approaching retail boom scenario that it is likely to happen sooner than later. The author discussed the impact of the same on the Indian Traditional retail outlets with its likely positive and negative impact. The author concludes that where the organized sector poses a cutthroat competition for the kiranas the fact still remains that India being a country with diversified social classes there is a scope for both to survive. The emergence of a developed retail sector will pose a competition rather than a threat to the traditional stores which would help these stores change their outlook and ways of working.

Ms. Shelja Jose Kuruvilla (2007) in his article titled “Malls vs. Kiranas- Challenges and Strategic options” he has studied that the size of retail industry in India is about \$350 billion and is expected to grow at 13% p.a. Organized retailing is only 2-3% at present, but it is projected to grow at more than 30% p.a. and it is also estimated to reach an astounding INR 1000 billion by 2010. Rising income level, young population with high disposable income, availability of brands and merchandise, media proliferation, the impact of globalization, saturation in international markets, positive indicators of the economy and the changing mindset of the consumers are the major drivers quoted behind this retail boom, but what about the Kiranas. With the help of a consumer study, this paper attempts to understand patterns & reasons for switching shopping habits, an attempt is also made to suggest options available to develop and strengthen competencies to enable them to survive and flourish in the coming decades

Surbhi Khosla (2006) in her article briefly discussed about the retail sector in India and its journey. The article mentions in the chronological order the evolution of different retail formats in India and also major retailers in different formats. The article also discussed the recent trends in the formats and future scope of the different formats of retailing.

Nikhilesh Dholakia & Piyush Kumar Sinha (2005) Customers tend to come to the stores with a choice set. This set varies according to the extent of planning that the customer undertakes before reaching the store. With more planning, this choice set narrows. While buying from the traditional format (serviced) stores, the customers carry lists. These lists, in many cases, mention the brand name of the product. Generally, the retailer simply fetches the sought brands and collects them on the counter, ready for tallying and payment. In the very affluent families, these patterns exhibit variations. Rather than the husband, the cart pusher may be the maid or the driver (chauffer). Of course, in such cases, almost all the picking and paying is done by "madam," the housewife-employer. While not yet much evident in Ahmedabad, in bigger metropolitan areas such as Delhi or Mumbai, there are some observed cases of maids coming to shop on their own, using lists provided by the employer. To command appropriate respect from the store help, the maids "dress up" in such situations. There has not been significant effort by research scholars and marketers to study the consumer behavior pattern in Malls and to differentiate the same with behavior pattern in traditional Mom-&-Pop shops. If the research has been conducted it is not being made available to the other researchers.

Kay M. Palan (2000) in his paper outlined gender identity, of consumer behavior studies in the marketing literature that have examined gender identity. Based on the literature review, the paper evaluates whether gender identity research is still warranted, and proposes specific research questions to guide future research. The author is of the view that it is very essential to understand the complex and changeable nature of personality traits associated with gender categories.

Pashigian and Gould (1998) stated that consumers are attracted to malls because of the presence of well-known anchors - department stores with recognized names. Anchors generate mall traffic that indirectly increases the sales of lesser-known mall stores. Lesser-known stores can free ride off of the reputations of better-known stores. Mall developers internalize these externalities by offering rent subsidies to anchors and by charging rent premiums to other mall tenants. The results of this article suggested that mall developers are behaving rationally because they know that anchors attract customers to the mall and increase the sales of other mall stores.

J.A.F. Nicholls (1997) in his article has mention about the situational dimensions affecting purchasing behavior of Hispanic customers in a mall at some distance from their neighborhoods. The Hispanic shopper (which would also include a large segment of immigrants) makes the (shopping) trip worthwhile by traveling with companions, consummating a purchase while at the mall, and buying food or beverage during the visit. The Hispanic shopper also spends more time at the mall and visits more stores while there.

Jackson (1996) in his study observed that malls have become the place where senior citizens walk in comfort and security, where parents lead their young to Santa Clauses, where singles court, where teenagers socialize and where everybody consumes. Indeed a new term, "Mall Rats" has been coined to describe the legions of young people who spend their free time cruising indoor corridors. This proliferation of uses and of customers has led to the frequent observation that regional malls are the new downtowns, the centers of informal social interactions, the successors to the traditional marketplace.

Burns and Warren (1995) opined that since the store mix and product offerings of many regional shopping malls are very similar, often the primary discriminator between many of these centers is merely location. Making the choice to shop at a regional shopping mall other than the one nearest to one's place of residence, therefore, does not appear to be a logical choice in many instances. Such behaviour, however, appears to be relatively common. It would appear; therefore, that regional shopping mall choice may not always be based solely on the offerings and location of the available shopping alternatives

Roy (1994) in his study considered several characteristics of shoppers - such as functional shopping motivation, deal proneness, recreational shopping motivation, age, income and family size, to be a significant influence on mall shopping frequency.

Feinberg, Sheffler, Meoli and Rummel (1989) considered the social stimulation provided by malls, finding that the mall served as an outlet for social behavior. Further examination of this issue was made by **Lotz, Eastlick and Shim (2000)**, who studied the similarities and differences between mall entertainment seekers and mall shoppers. Their results supported hypotheses that there are different motivations for individuals who visit a mall for entertainment activities versus those who visit for shopping purposes.

Objectives

1. To understand the change in buying behaviour of consumers with the advent of shopping malls

2. To understand about the factors influencing the buying behaviour of the consumers

Research Methodology

Sources of data: the data for the study has been collected from both primary & secondary source. The primary data has been collected by way of well-structured questionnaires and the secondary data has been collected with reference to various online websites.

Population: The sample for the study has been collected from consumers who visit shopping malls in cochin corporation. With the advent of shopping malls, there was a change in consumer buying behavior.

Sample size: in order to get a complete picture of topic, data has been collected from both who visit shopping malls as well as from consumers visit traditional shops for purchasing the product. To facilitate the same, a sample of 100 respondents are taken.

Tool for analysis: Analysis of the data, which has been collected, is an important aspect of any study. This can be done using various statistical tools. In this study, the tool used for analyzing the collected data is percentage analysis.

Presentation: The collected data is, primarily, represented in the form of tables, to provide a better understanding of data. After tabulation, a pictorial representation of the tabulated data is made with the help of graphs, pie diagrams and bar charts etc. This provides ease in analysis of data.

Limitations

- Due to the time constraint, it was not possible to conduct a detailed study.
- Some data collected may be biased & some respondents were reluctant to answer
- Only respondents from Cochin Corporation were focused in the study. So it may not be able to give a perfectly accurate picture of consumer buying behavior.

tables

Table showing the monthly income of the respondents

MONTHLY INCOME	RESPONDENTS	PERCENTAGE
Below 10000	15	15%
10000-20000	17	17%
20000-30000	20	20%
30000 Above	48	48%
TOTAL	100	100%

Interpretation

From the above it is inferred that 48% of the respondents have the monthly income more than 30000, 20% having the monthly income between 20000-30000, 17% of respondents is having monthly income between 10000-20000 and the rest 15% of respondents with the income less than 10000

Table showing the places preferred by the respondents for shopping

PLACE OF SHOPPING	NO.OF RESPONSE	PERCENTAGE
Super Markets	57	34.3%
Shopping Malls	82	49.3%
Traditional shops	26	15.7%
Street Vendors	1	0.7%

Interpretation

From the above it is inferred that about 49.3% of the respondents prefer shopping malls for shopping, 34.3% prefer super market and 15.7% prefer traditional shops .Only a meagre amount of respondents that is 0.7% prefer the street vendors for shopping.

Table showing the distribution of respondents based on the purpose for the visit

PURPOSE OF VISIT	NO. OF RESPONSE	PERCENTAGE
Hangout destination	15	15%
Purchase of goods	45	45%
Window shopping	16	16%
Entertainment	23	23%
All the above	1	1%
TOTAL	100	100%

Interpretation

From the above table it is clear that about 45% of the respondents visit the shopping malls for the purpose of purchasing goods, 23% for entertainment and 16% for window dressing. Also, 15% considers shopping malls as hangout destination and only 1% visit the shopping malls for all the above purposes.

Table showing the distribution of respondents based on amount spent during a month in retail shops before the emergence of shopping malls`

AMOUNT SPENT	NO. OF RESPONSE	PERCENTAGE
Below 500	21	21%
500-1500	39	39%
1500-2500	33	33%
2500 above	7	7%
TOTAL	100	100%

Interpretation

It was found from the above table that majority of the 39% of the respondents used to purchase from retail shops for 500rs-1500rs, 21% spend less than 500rs, 33% spend 1500rs -2500rs and minority of 7% spend 2500rs and above

Table showing the distribution of respondents based on the amount spend during a month at shopping malls.

AMOUNT	NO. OF RESPONSE	PERCENTAGE
Below 500	6	6%
500-1500	26	26%
1500-2500	38	38%
2500 Above	30	30%
TOTAL	100	100%

Interpretation

It was found from the above table that after the advent of shopping malls, respondents began to purchase from the malls .Majority of 38% spend around 1500-2500 for the purchase ,26% spend 500-1500rs ,30% spend 2500rs and above and the minority 6% spend less than 500rs

Table showing the opinion of consumers while comparing the prices of retail shops with that of shopping malls

RESPONSE	NO. OF RESPONSE	PERCENTAGE
Yes	49	49%
No	8	8%
May be	43	43%
TOTAL	100	100%

Interpretation

It is found from the above table that after the advent of shopping malls, there has been a change in the pricing of the products, majority of 49% respondents responded that the price of the product in the shopping malls are comparatively higher than that of retail shops, 43% had a mixed opinion and they responded that prices might have increased and 8% stick on to the opinion that price have not increase

Table showing the distribution of respondents based on the mode of payment preferred by respondents while shopping.

MODE OF PAYMENT	NO. OF RESPONSE	PERCENTAGE
CASH	64	44
CREDIT CARD	22	15
DEBIT CARD	58	40
GOOGLE PLAY	1	0.6
ONLINE WALLETS & UPI	1	0.4

Interpretation

From the above table it is clear that about 44% of the respondents use cash as their mode of payment, 40% prefer debit card, 15% use credit card and only a minority of respondents that is 0.6% and 0.4% prefer Google pay and online wallet

Table showing the preference of respondents to purchase the mentioned products.

PRODUCTS	PREFERENCE			TOTAL
	RETAIL SHOPS	SHOPPING MALLS	OTHERS	
CLOTHING & APPARELS	38	61	1	100
FOOD & BEVERAGE	59	32	9	100
DURABLES	56	34	10	100
MONTHLY PROVISION	53	42	5	100

Interpretation

From the above it is inferred that people mostly prefer to buy clothing or apparels from shopping malls. However food and beverages, durables and monthly provisions are mostly purchased from retail shops.

Table showing the distribution of respondents based on the following factors influencing consumer purchase decision.

RESPONSE	FACTORS				
	Price	Quality	Location	Brand name of company	Sales promotional activities
STRONGLY AGREE	46	56	24	28	15
AGREE	40	39	42	40	30
NEUTRAL	12	5	28	26	44
DISAGREE	2	-	3	4	8
STRONGLY DISAGREE	-	-	3	2	3

Interpretation

From the above table it is inferred that the factor which more influences the purchase decision of the respondents is the quality factor while compared with the other factors like price, location, brand name of the company and sales promotional activities.

Table showing the distribution of respondents based on the factors that attract them towards malls.

FACTORS	NO.OF RESPONDENTS	PERCENTAGE
Availability of global brands	57	21.5%
Ambience	42	15.9%
Parking facility	50	19 %
One roof management	64	24.24%
Entertainment	50	19%
Opening hours	1	0.36%

Interpretation

It can be inferred from the above that 64% of respondents feels that one roof arrangement is the main factor that attract the consumers towards the shopping malls whereas 54% is of the opinion that availability of global brands is the factor attracting the consumers towards the shopping malls. Also 50% of respondents feel that parking facilities and entertainment attracts consumers towards the mall. But only 1% is of the opinion that that opening hours shopping malls attract the consumers

Table showing the problems faced by respondents while shopping in malls.

PROBLEMS	NO.OF RESPONDENTS	PERCENTAGE
Difficulty in finding a product	43	43%
Expensive	49	49%
Problem of choice	25	25%
Inability to bargain	44	44%
Lack of personal touch	24	24%
No problem	4	4%

Interpretation

It's concluded from the above table that majority of 49% respondents found shopping malls expensive, 44% found they were not able to bargain,43% respondents found difficulty in finding the products, 25% found it difficult to choose among the products,24% found the lack of personal touch and minority of 4% found no problems with the shopping malls

Table showing the opinions of respondents regarding the experience offered in shopping malls with that of retail shops.

RESPONSE	NO. OF RESPONDENTS	PERCENTAGE
Almost similar	32	32%
Much better	61	61%
Can't say	6	6%
Worse	1	1%
TOTAL	100	100%

Interpretation

It is found from the above table that majority of 61% of the respondents have had much better experience in shopping malls with that of retail shops, 32% have had almost similar experience, and finally 1% have had a worse experience

Table showing the satisfaction level of respondents in shopping malls.

RESPONSE	NO. OF RESPONDENTS	PERCENTAGE
Satisfied	73	73%
Neither satisfied nor dissatisfied	26	26%
Dissatisfied	1	1%
TOTAL	100	100%

Interpretation

It is found from the above table that 73% of the respondents are satisfied with the shopping malls ,26% stands with opinion that they neither satisfied nor dissatisfied and minority of 1% are completely dissatisfied with the shopping malls.

Findings

- ✚ Out of 100 respondents from different age groups, It appears that in these malls the major crowds who visit them belong to the age group of 18-28, which means malls are more prioritized by the youngsters and the middle age group. As assumed the people in the old age are visiting malls less frequently .This shows that people basically, young generation

and middle aged prefer shopping malls but the older generation, still follow the traditional way of shopping.

- ✚ Out of the total respondents 46% of them were employed persons.
- ✚ Out of the total respondents majority of them have a salary scale of between Rs 30000 & above. Thus, most of them are middle & high income group.
- ✚ The study shows that 82% of the respondents prefer shopping from shopping malls & only a few respondents preferred shopping from street vendors.
- ✚ With reference to the purpose of visit of the respondents towards shopping malls, it was found that majority of 45% visited shopping malls to purchase goods & the rest considered shopping malls as a place for entertainment, window shopping and hangout destination.
- ✚ The study shows that around 54% of the respondents visit shopping malls 1-2 times during a month.
- ✚ From this study it was found that, after the advent of shopping malls there was an increase in the spending attitude of the respondents.
- ✚ Out of the total respondents 49% of them has a habit of comparing the prices offered in retail stores with that of shopping malls.
- ✚ It was found that majority of them prefer cash as their mode of payment while shopping.
- ✚ Majority of the respondents preferred purchasing of clothing & apparels from shopping malls.
- ✚ With reference to the factors influencing the consumers purchase decision while shopping, 46% of the respondents were in the opinion that PRICE plays a major role in their purchase decision ,56% of the respondents were in the opinion that QUALITY of the product influences their purchase decision , 24% of the respondents agrees that the LOCATION of the shop influences their purchase decision , 28% of the respondents are in the opinion that BRAND NAME OF THE COMPANY plays role in their purchase decision & 15% of the respondents strongly agrees that SALES PROMOTIONAL ACTIVITES influences their purchase decision.
- ✚ Majority of the respondents are in the opinion that one roof arrangements makes them attracted more towards shopping malls.
- ✚ 70% of the respondents are attracted towards discounts or coupons offered in shopping malls while shopping.
- ✚ Out of the total respondents, majority of the respondents are in the opinion that the shopping malls are more expensive.
- ✚ Majority of the respondents were in the mixed opinion that the advertisement influences their visit to stores.
- ✚ 61% of the respondents were in the opinion that the shopping malls offer much better experience compared with that of retail stores.
- ✚ Most of the respondents are satisfied with the shopping experience provided in the shopping malls.

Suggestions

- ✚ Most of the consumers are of the opinion that their expenses have increased by purchasing from malls, hence these malls should provide commodities at reasonable price so that it can be affordable by every income group of consumers.

- ✚ The major aspect that have been found from this study is that malls are preferred for their courtesy and service, offers, product quality etc.so the malls should concentrate more on improving these aspects.
- ✚ Shopping experience should be improved by providing a place like physical online booking area and introducing more payment options.
- ✚ Decrease lack of personal touch by certain measures.
- ✚ Shopping malls are usually crowded but to reduce crowd it is advisable to have an entry fee. But the entry fee should be deducted if they make any purchase.
- ✚ At the time it is necessary to have a locker for baggage. The present system for bag storage is not fully secured, therefore, a locker system for bag storage can be introduced.
- ✚ More retailers will be induced to open their shops in malls, if the rent is reduced.
- ✚ It is always a problem for the consumers who park their vehicles and they often forget their slot number and basement. Thus, if there is any provision to print the slot number in the parking card provided them their confusion can be avoided.
- ✚ Provide more varieties of foreign brands and introduce more Indian brands and organic, eco-friendly products to increase the brand variety of outlets in malls
- ✚ It is of utmost importance that the mall management to understand the needs/desires of the targeted consumer and deliver the products accordingly so that they can increase sales in malls.
- ✚ Transform the malls that would offer energetic and vibrant stores with attractive product merchandises, entertainment and facilities, necessary to lure the target customers.
- ✚ Develop new strategies in order to attract more and more youth crowd by employing new technologies, vibrant colour schemes and futuristic and also attracting older crowd by offering complete family entertainment along with a great shopping experience.
- ✚ Introduce several promotional campaigns like value week, annual sales festival, and discount at bulk amount purchasing for increase sales and make distinction from other competing stores.
- ✚ To improve in food quality and freshness by using quality controls, better hygiene and correct storage conditions like cooling and refrigerating.

Conclusion

This study predominantly proves that the consumers in cochin corporation are quite happy with overall shopping mall experience and absolutely comfortable as they consider it as a one- roof arrangement for wide range of products and brands. The value they get for money they spend in malls is considerably good compared with that of traditional shops. This study proves that shopping malls are the best location for socialization, especially for younger generation to hangout, spend quality time with family, and dine out other than shopping. This study also proved the strengthened spending capacities of middle and upper middle class families. It is also observed from this study that the bonding for local shops and groceries continues to exist, especially in towns with regard to quality of product being offered. If the purpose is only the purchase of products, consumers need not travel to malls all the distance, rather would choose a better grocery or nearby small shops for the same. Thus from this research, we can conclude that shopping culture has witnessed a revolution. Consumers have shifted their preference to new retail formats that is shopping malls. The consumers are changing their spending habits, consumption pattern and leisure time activities. The shopping activity has turned into an experience in itself. There is an increased demand for quality retail space from a varied segment of large format retailers and brands,

which include food and apparel chains, consumer durables and entertainment facilities, all under one roof. Their spending habits has increased, which motivates people to accept the changing lifestyles.

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Impact Of Microfinance On Women Empowerment- A Study Of Kudumbashree In Ernakulam District

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Abstract

Kudumbashree, is one of the form of microfinance that help its members to change their life as well as their families in terms of socio-economic and political aspect . It is providing sufficient space for women empowerment and better mode of improvement for the group quality , bank linkage scheme and income generating activities. Kudumbashree is providing opportunities to its member to become a self-dependent and empowered women. Kudumbashree is one of the initiative taken by the Kerala Government that is helping women in facing public gathering and through this programme they are capable of contributing to their family income. So Kudumbashree is a factor helping in women empowerment.Hence the attempts have also been made to find out the benefit obtained after implementing of Kudumbashree as microfinance for the purpose of women empowerment.

Keywords- Kudumbashree, Microfinance , Microcredit, Women empowerment

1.1 Introduction

Women empowerment means giving women the power and control of their lives and allowing them to do what they want in situations where they were not allowed once upon a time. It creates an environment in which women are allowed to work according to their will for themselves as well as for the society. Women Empowerment results in the development of social, economic, political and legal strength of the women, to ensure equal-right to women, and to make them confident enough to claim their rights. Kudumbashree is one of such initiatives taken by the government of Kerala to empower women and bring them at par with men in the society.

Now-a-days there is a great enlightenment among women. If they are given with an opportunity, they will deliver the results. Empowerment of women is utter important and necessary in strenthening their personality. The need for awareness programme to motivate them to be an active member of the society and encourage them to faults of male counterparts are great provocation now-a-days. Kudumbashree with thousands of women do bring change in socio-economic and political life of not only their but also in the life of their families, neighbours, community and to the society.

Review of Literature

Meenakshi Malhotra (2004), in her study entitled, "Empowerment of Women" (in 3 volumes), is relating to thevarious issues that leads to women empowerment with the reference to rural women. First volume deals with issues relating to gender differentiation in labour market andentrepreneurship. Second Volume relies on microfinance as programme

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for empowerment of women. It overlook microcredit as a schemes for rural development of women and movement of microfinance in India. Third volume brief those programmes introduced for empowerment of women and bring them into the atmosphere of development network.

Sangeetha Purushothaman (2003), in her thesis titled as, "The Empowerment of Women in India: Grassroots Women's Networks and the State", gives us an analytical framework of guesswork women's movement in India . It helps in utilising a synthesis of social movement's theory, development theory and theories of the state. Based on a case study of an informal network of non-governmental organisations and women's collectives – the Swayam ShikshanPrayog – the author analyses the implications of the form and nature of organisations for changing power relations and for fostering women's autonomy vis-a-vis men and other social groups.

K.G.Karmakar (2003), in his book of "Rural Credit and Self-Help Groups: Micro Finance Needs and Concepts in India", detailed in First part, the problems,situations and aspect of the rural credit playing an important role in rural development; traces the evolution and growth of the rural credit delivery system; analyses the problems relating with credit recycling and overdue; and discusses the recommendations of various committees. Second part, discusses about the microfinance requirement of various area including tribals, the rural farmers and women and microfinance entrepreneurs. Third part , gives an analysis on the concepts and functions and need of SGHs with reference to the BAAC (Bank for Agriculture and Agricultural Co-operatives) System in Thailand and the Grameen Bank in Bangladesh.

Thomas Fisher and M.S. Sriram (2002) in their book titled as, "Beyond Micro Credit, Putting Development Back into Microfinance" focused on Indian's system of microfinance in depth to know how can development be reinvested into microfinance. It tells the way by which microfinance can be constructed, make in practice to contribute to a wide range of developmental goals, as well as providing social and economic security, promoting livelihoods, building democratic people's organisations, empowering women, and changing wider systems within the society. The analysis covers the great diversity of micro finance practice in India, and its many innovative products and organisational features.

Indira Misra (2003), in the book titled "Micro Credit for Macro Impact on Poverty" explain the important microfinance steps of the Government, Banks and NBFCs and experiences in micro credit programmes of some of India's neighbouring countries. The book also analyses the SGHs, the major role of NGOs and the workingof NGOs in MicroCredit. The book further explains about the global commitment to microcredit and comes up with the conclusion that the microcredit is the new and important aspect for poor women, it is a better alternative for their economic development because it is only through microfinance helping to achieve dignity and attain empowerment of women.

In the book entitled as,"Empowering Women - An Alternative Strategy from Rural India", **Sakuntala Narasimhan (2001)**, mainly focus on rural SC and ST women, who are triply disadvantaged as women, as being the members of the rural section of the populations because of their low caste status. This book shows the comparison between the role of State initiatives with the purpose, motivation and conscientisation strategy provided by Action for Welfare and Awakening in Rural Environment (AWARE), which is a non-government development organisation working for the rural development by organising various awareness programme.

Objective Of Study

The main objectives of the present study are:

1. To examine the role of Kudumbashree Project in women empowerment through micro financing.
2. To make an appraisal of the performance of the Neighbourhood Groups (NHGs) and to identify their problems and constraints.
3. To analyse the impact of the scheme in urban and semi urban areas.
4. To give suggestions for the improvement of the performance of Kudumbashree Project.

Research methodology

Primary data and secondary data has being used to make this study happen. The kudumbashree unit under SHGs and its members in Ernakulam comprised were included in primary data kudumbashree units which were started since 9 years and women members having an average of 1 year of experience were included in the group selected for study. Primary data were collected through method of questionnaire by preparing a pre-planned schedule for interview designed in such a manner to collect information required for study. A proper and sufficient literature review was done for collecting secondary data. Journals, periodicals, working papers and various websites have helped in giving valuable data for study. Interactions and discussions with kudumbashree members and officials were also helpful for the study.

Interpretation And Data Analysis

TABLE 1 Distribution of age of Kudumbashree Members in Ernakulam District

Age	Number	Percentage
Below 20	0	0
20-40	10	20
40-60	33	66
60 and above	7	14

Source: Primary Data

Analysis and Interpretation

Table 1 shows that the maximum number of kudumbashree members fall in the age group of 40-60(66%) .There are no person coming in the range of members below 20 years.The number of members between 20-40 and 60 above together are 17 (34%).

Table 2 - Distribution of Qualification of members of Kudumbashree in Ernakulam

Qualification	Number of members	Percentage
Primary	1	2
SSLC	19	38
Plus Two	9	18
UG or Above	21	42
TOTAL	50	100

Source: Primary Data

Analysis and Interpretation

Table 2 shows that highest percentage of the members (42%) are graduated. Some members have education qualification of SSLC and Plus Two that's ranging to a percentage of 38% and 18 % respectively. Therefore it analyses that most of the members of kudumbashree have education qualification above SSLC, so this ease them to manage a kudumbashree unit.

Table 3- Classification of Sources of Income of Kudumbashree Members

Sources of Income	Number of members	Percentage
Agriculture	5	10
Daily Wage	7	14
Rent	10	20
Others	28	56
TOTAL	50	100

Source: Primary Data

Analysis and Interpretation

Table 3 shows that sources of income of more than half the number of Kudumbashree Members comes from other sources like salaries, personal business etc ie 28(56%). Very few among them are dependent on Agriculture ie 10% of population as Ernakulam is an Urban area. Daily wages and rent consist 34% of the population.

Table 4 -Showing Classification of types of products or services produced by Kudumbashree units in Ernakulam District

Products sold	Number of members	Percentages
Hygienic & Cleaning Products	23	46
Cosmetics	6	12
Catering	4	8
Cloth Business	1	2
Food Products	13	26
Bank Loan	2	4
No product or services	1	2
TOTAL	50	100

Source: Primary Data

Analysis and Interpretation

Table 4 shows that out of the 50 respondents most of them are involved in producing hygienic and cleaning products(23).food items like pickles,masala etc are being produced and the member involved are ranging to 26% and other members are related to various services like bank loan,clothing business etc.So we analysed that most of the kudumbashree units are dealing with hygienic and cleaning products.

Table 5 - Distribution of source of funds for Kudumbashree units in Ernakulam District

Source of funds	Number	Percentage
Own fund	19	38
Bank Loan	22	44
Government Subsidies	9	18
TOTAL	50	100

Source: Primary Data

Analysis and Interpretation

Table 5 shows that the bank loan (44%) are the most preferred source of fund. Only 38% (19 members) use own fund and 18% (9 members) use government subsidies. So mostly the Kudumbashree units go for bank loans as their source of fund.

Table 6 - Showing frequency of Increase in the savings of members after joining Kudumbashree

Status in family improved	Number	Percentage
YES	33	66
NO	6	12
MAYBE	11	22
TOTAL	50	100

Source: Primary Data

Analysis and Interpretation

Table 6 shows the frequency of increase in the savings of the kudumbashree members after joining the unit. Its shows that 66% of the respondents are able to increase their savings after joining kudumbashree.But still 12% of the members couldn't increase their savings after joining kudumbashree.

Table 7 - Highlighting the general opinion about Kudumbashree units by its members on its social benefit activities

Questions	Agree somewhat	Agree Strongly	Neither Agree Nor Disagree	Disagree somewhat	Disagree strongly
Did Kudumbashree unit help in improving your standard of living?	25	22	1	NIL	NIL
Do you feel independent after joining Kudumbashree?	20	23	5	NIL	NIL
Are you able to utilise the incentives and subsidies provided by the government?	9	23	16	1	1
Has it helped you in raising your financial stability?	22	8	19	1	NIL
Do you think its beneficial for the women in the society?	6	42	1	1	NIL
Did you overcome the fear to face the public gathering or address the gathering after joining Kudumbashree?	10	38	2	NIL	NIL

Source: Primary Data

Analysis and Interpretation

Table 7 shows Majority of the Kudumbashree members feel that it has helped in increasing their standard of living. Women have started feeling independent after joining Kudumbashree. It has helped them to remove their fear to face the public. It has helped in raising their financial stability and members are able to utilise the incentives and subsidies provided by the government. All over Kudumbashree has proved to be a successful programme for women in our society.

Findings

- Maximum age of member in kudumbashree units is ranging between 40-60.
- Education qualifications is not a barrier for running kudumbashree units.

- Most of the kudumbashree units are using their own funds for production rather than taking loan from banks.
- There is improvement in standard of living and helped in overcoming the fear to face the public gathering after joining kudumbashree.
- Most of the units conduct awareness programmes for improving their confidence level, skill and efficiency.

Suggestions

- Kudumbashree programmes should be popularised to other states also.
- More women Empowerment programmes and training programmes can be introduced.
- Kudumbashree should give equal importance to both urban and rural sectors.

Conclusion

Women Empowerment is one of the crucial tool for the growth in the economy. The experiments testify that the promotion of micro financing has helped in the progress of economy to a great extent. Micro Financing through Kudumbashree has created a sense of independence and confidence among the women in rural as well as urban areas. It has not only lead to the financial growth but has also increased their social and political participation at different levels which is necessary for their development.

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User Behaviour Towards Kochi Metro: A Study

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Abstract

Kochi with its wealth of historical association and its unique setting reflects the cultural diversity of Kerala. Kochi Metro Rail project has planned by Government of Kerala. Kochi Metro System is an urban Mass Rapid Transit System (MRTS). Kochi Metro project is the first project in the country which connects rail, road and water transport facilities. It is the world's first rapid transit system whose entire management operations handled by women. This metro becomes the first metro agency in the country to adopt an open - data approach to improve access to its services in the Kochi city. This research focuses on the consumer behavior towards Kochi Metro. Consumer behavior is that the study of people, teams or organizations and every one the activities related to the acquisition, use and disposal of products and services, together with consumers' emotional, and behavioral responses that follow these activities. This study is been conducted to know about the usage of Kochi Metro. And also to study the various factors influencing the user behavior towards Kochi Metro.

Words: Usage, Consumer behavior, Factors of consumer behavior, Kochi Metro

Introduction

Kochi Metro Rail project was planned by Government of Kerala. Special Purpose Vehicle called Kochi Metro Rail Ltd. (KMRL) was formed for the implementation, operation and maintenance of the Metro Project. Around 25 km length metro line with 22 stations with Maintenance Depot at Muttom will be developed between Aluva to Petta. The Kochi Metro System is an urban Mass Rapid Transit System (MRTS). Construction for its 25.12 km Phase 1A from Aluva to Petta with 22 stations started in June 2013. In 2014, a 1.92 km east ward extension to Tripunithura from Petta was approved to be included in Phase1. Construction on it will begin once road widening along with the route is completed. Phase 1B of project includes a new spur line from Jawaharlal Nehru Stadium to Info Park II in Kakkanad. The Phase III clinical trial from Aluva to Angamaly is unfinished for approval. The project was approved by the State Government in May 2015. The subway Rail System has verified to be the foremost economical in terms of energy consumption, space occupancy and numbers transported. The major advantage of all these systems is their ability to move large number of people quickly. Obviously, the actual number of passengers moved will vary according to the frequency of service and number of coaches in each train. When the Docklands Light Railway was built, it used units with a single articulation and ran at a 7 to 10 minutes frequency. It has been extended several times and now serves over

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double the number of stations. It has also improved the frequency. Heavy traffic congestion has necessitated the development of Metro Rail System in Kochi. Buses measure presently the main public transit in Kochi. KMRL has put in Plastic Bottle Recycling Machines at few stations. The machines are designed to dispose and recover product effectively for utilization. The highlight of the machine is that customers victimisation by means of discount coupons which is redeemable at chosen industrial outlets.

The study of consumer behaviour is concerned with all aspects of buying behaviour – from pre-purchase activities through to post-purchase consumption, evaluation and disposal activities. It is additionally involved with all persons concerned, either directly or indirectly, in buying decisions and consumption activities together with brand-influencers and opinion leaders. Factors influencing consumer behaviour are:-

- Psychological Factors
- Social Factors
- Cultural Factors
- Personal Factors
- Economic Factors

The new Metro System in Kochi will reduce traffic congestion, while providing safe and rapid transportation to commuters. It will also reduce noise and pollution levels. The project will create employment opportunities of the local people.

1.1 Literature Review

- 1) **Ms. Disha Thanai and Mr. Nishant Chugh, Delhi School of Professional Studies and Research** in the study on their topic “**Customer satisfaction towards Delhi Metro Rail Corporation**” found that the maximum number of customer of DMRC were of age group 10-20 years. 49% of customers were highly satisfied with cleanliness in Delhi Metro. 77% of customers were highly satisfied with cleanliness at station & platform premises. 50% of customers were highly satisfied with safety in Delhi Metro. 45% of customers were highly satisfied with feeder bus service of Delhi Metro.
- 2) **Prof. Shrikant Waghulkar and Prof. Nitesh Behare, Balaji Institute of International Business (BIIB), Pune** in the study on their topic “**A study on customer churn analysis for Mumbai Metro**” found that maximum customer churn was in the month of November and main reasons for the Customer churn was due to fare is higher, huge amount of time is wasted at security check, the Metro halt time is very less as compared to number of customers who enters /leave the metro at their destination and the number of coaches are less (only and hence it is becoming congested for travelling.
- 3) **Dr. Tia Mathews and Prof. Rosalind Gonzaga, Dept. of Commerce, St. Albert's College, Ernakulum** in the study on their topic “**A study on the Kochi Metro Rail – its impact and effectiveness on the public**” found that the urban people are supporting the metro system in the locality because it forms part of the standard of living in the city, people use the different transport system according to their satisfaction level in travelling. The most preferred mode is public transport system. It is proved that the Kochi Metro would generate employment. Kochi metro will improve the economy of the Kerala state.
- 4) **Ashikha Raof & Ar. Fathim Rashna Kallingal M.Plan(Urban Planning) Pursuing Department of Architecture National Institute of Technology, Calicut (April 2016)** in the study on their topic “**The environmental impacts of Kochi Metro**” found that

Construction of a urban mass transit system is a necessity of Kochi to address its traffic and transportation issues. The Kochi metro project, like any other city development projects, has created irreversible damage to the environment. The ecology of the area has been affected by the construction of Metro.

- 5) **Bismi P J, Maria Kurian M.Tech Student, Dept. of CSE., Assistant Professor, Dept. of CSE., ICET Muvattupuzha, Kerala, India (December 2016)** in the study on their topic **“METRO: An Ideal Solution for Traffic”** found that the metro systems have been planned to reduce congestion on the roads. The system planned in Kochi show cost overrunning and under utilization of capacity. Viability of metro comes rely on correct denying of traffic corridors, technology tailored, and accessibility of land, volume of traffic carried, capability utilization and acceptance of the mode by commuters. The uncertainty of metro rail system, which has plagued the importance of such systems in India, seems to be resolving.
- 6) **Andrea Varghese M.com, St Josephs College, Irinjalakuda (October 2017)** in the study on their topic **“Passengers satisfaction towards Kochi Metro Rail Limited”** found that 32% of passengers were highly satisfied with cleanliness in Kochi Metro 50% of passengers were highly satisfied with safety in Kochi Metro. 55% of passengers were highly satisfied who feel safe in train coaches in Kochi Metro. 37% of passengers were highly satisfied who feel safe in parking area at Kochi Metro, 37% of passengers were only satisfied and remaining 26% of passengers were dissatisfied. 77% of passengers were happy with cleanliness at station & platform premises.
- 7) **Shankar Kumar. S, Dr. B. Jeyaprabha Research Scholar and Professor, School Of Management, Veltech Dr. RR & Dr. SR R&D Institute Of Science And Technology (2018)** in the study on their topic **“An Empirical Study on Commuters Satisfaction Towards Chennai Metro Rail Limited”** found that 32% of the commuters age group of 16-25 years, 58% of the commuters are male when compared to female category is 42%, the majority of the commuters belongs to post graduation, 36% of the commuters belongs to income group of 20K to 30K where as 30% of the commuters belongs to income group of 10K to 20K and majority were satisfied with platform, coach and parking area safety.

1.2 Objectives Of The Study

- ❖ To study the usage of Kochi Metro Rail Ltd. (KMRL).
- ❖ To study the various factors influencing the user behavior towards Kochi Metro Rail Ltd. (KMRL).

1.3 Research Methodology

Both primary and secondary data is used for the study. Primary data is collected from the respondents who use the metro as their conveyance in and around Kochi. It was through questionnaire and other aided tools. The research design is descriptive research. The sampling method chosen is convenient sampling. Even though the targeted respondents are 150, the sample size obtained is 207. The data is collected from Aluva, Cochin University, Edappally and Maharaja's College metro stations. The secondary data is obtained from research papers, websites, magazines, project reports and so on. The consumers' perception on the role of KMRL in the economic development of Kochi could not be found out.

1.4 Hypothesis

- H_0 :- There is no significant relation between the age and usage of the Kochi metro.

- H₀:- There is no significant relation between the educational qualification and usage of the metro.
- H₁:- There is significant relation between the monthly income and usage of the metro.
- H₀:- There is no significant relation between the age and level of consumer satisfaction of the metro.
- H₀:- There is no significant relation between the monthly income and level of consumer satisfaction of the metro.
- H₁:- There is significant relation between the educational qualification and level of consumer satisfaction of the metro.

2. Findings And Analysis

2.1 Analysis

Table 1: Chi-Square Tests between Age and Usage of metro

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.372 ^a	12	.583
Likelihood Ratio	12.790	12	.385
Linear-by-Linear Association	.151	1	.697
N of Valid Cases	207		

Source: Primary data

Results: The above test result shows that the obtained chi-square value of (10.372a) is not significant at 95% confidence interval. It means the obtained significance value is (.583), which is more than the cut off value of (0.05). In a nutshell, it can be concluded that there is no significant association between Age and Usage of metro.

Table 2: Chi-Square Tests between Monthly Income and Usage of metro

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.345 ^a	20	.014
Likelihood Ratio	33.303	20	.031
Linear-by-Linear Association	6.375	1	.012
N of Valid Cases	207		

Source : Primary data

Results: The above test result shows that the obtained chi-square value of (36.345a) is significant at 95% confidence interval. It means the obtained significance value is (.014), which is less than the cut off value of (0.05). In a nutshell, it can be concluded that there is significant association between Monthly Income and Usage of metro.

Table 3: Chi-Square Tests : Age and Level of consumer satisfaction

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.899 ^a	6	.821
Likelihood Ratio	3.980	6	.679
Linear-by-Linear Association	.008	1	.927
N of Valid Cases	207		

Source: Primary data

Results: The above test result shows that the obtained chi-square value of (2.899a) is not significant at 95% confidence interval. It means the obtained significance value is (.821), which is more than the cut off value of (0.05). In a nutshell, it can be concluded that there is no significant association between Age and Level of customer satisfaction.

Table 4: Chi-Square Tests: Monthly Income of the respondents and level of consumer satisfaction

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.248 ^a	8	.140
Likelihood Ratio	12.621	8	.126
Linear-by-Linear Association	1.040	1	.308
N of Valid Cases	207		

Source: Primary data

Results: The above test result shows that the obtained chi-square value of (12.248a) is not significant at 95% confidence interval. It means the obtained significance value is (.140), which is more than the cut off value of (0.05). In a nutshell, it can be concluded that there is no significant association between Monthly Income and Level of consumer satisfaction.

Table 5: Users' opinion regarding the solar power initiative at metro stations

Solar power	Frequency	Percentage
Strongly Agree	124	59.9
Agree	76	36.7
Neutral	7	3.4
Disagree	0	0
Strongly Disagree	0	0
Total	207	100

Source: Primary data

Results: From the above table it shows that, users' opinion regarding the solar power initiative at metro stations is recorded. 59.9% of respondents strongly agreed with it, 36.7% agreed with it, 3.4% had a neutral opinion, and no one disagreed or strongly disagreed with it.

Table 6: Users' opinion regarding the economy of ticket fares

Economy	Frequency	Percentage
Economical	161	77.8
Not economical	46	22.2
Total	207	100

Source: Primary data

Results: From the above table it shows that, out of samples taken, 77.8 percent of respondents find the ticket fares of the Kochi Metro economical and 22.2 percent find it uneconomical.

2.2 Findings

- Users from the age group of 20- 40 years were availing the Kochi Metro service the most.
- Introduction of the Kochi Metro provided a lot of employment opportunities to various persons in the city.
- The Kochi Metro is found to be a luxury to the common man.
- Extension of the closing time of the Metro to 12 midnight received a positive feedback from the public.
- The factors that have a significant association with the Kochi Metro are monthly income, educational qualification and locality of the users.

3. Suggestions

- The usage of reusable tokens or plastic coins instead of paper tickets may prove to be more efficient.
- The maintenance of the Kochi Metro rail should be done periodically as the capital invested is very high and the money involved is that of tax payers of the country. The cleanliness should be confirmed by the higher authority.
- The cheap auto service provided by KMRL can be made more effective by increasing the number of autos and its frequency at every metro station.
- The facilitation of online booking of tickets will make it more convenient for the users.
- The extension of the ticket validity to more than 90 minutes should be implemented.

4. Conclusion

The Kochi Metro project is one of the biggest urban projects undertaken in the state of Kerala. The project was implemented in densely populated areas along the highly congested routes. At present, the Metro trains are operating from Maharajas College to Aluva with 16 stations.

From the research, it is concluded that the youth residing in urban areas mostly use the Kochi Metro. Most of the respondents use the Metro only on special occasions. Many of the users agree that the Metro is a safe and good mode of transport to avoid traffic jams in the city. The Metro stations are well-maintained by the Kudumbasree units, and the customer care services rendered are beneficial and facilities provided to the differently-abled are sufficient. The safety measures and technical aspects of the Metro trains and stations are of good standard. On the whole, most of the users were satisfied while travelling by the Kochi Metro. It is seen that the project will definitely increase the standard of living as well as create job opportunities for people in Kochi. It is concluded that the metro in Kochi has brought a positive impact on residents as well as business and employed people.

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Influence Of Social Media In The Marketing Strategies Of Educational Institutions: A Study

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Abstract

In this new age, there has been a tremendous growth in the ways and means of communicating with the world. Internet is considered to be the most important aspect in such a development. Creativity on the other hand has helped the internet to develop different methods and means in making the social media the most successful innovation in the world of internet. This project focuses on how educational institutions can use social media as an effective student recruitment tool. Social media as a tool for marketing educational institutions not only is beneficial for the institutions but it also provides an open image for the students to decide according to their future prospects. These institutions use different aspects of marketing such as gathering and sharing information, showcasing student and faculty work, broadcasting special events, notification, feedback, discussions. As social media is very much influential among the youth it can hit the targeted audience with minimum requirement of time and money. Institutions can also utilize social media as tool for two way communications as it provides for interaction with the audience. The main objective of this project is to reveal and understand reasons behind the demand in the usage of social media as a tool for marketing and advertising the educational institutions. The data used in this study is secondary data.

Keywords

Social media, marketing, education institutions, online, future, communication, notifications.

Introduction

Social media being a computer based technology is mainly focused on the sharing of ideas and thoughts. Anyone can share things to anyone from anywhere to anywhere eliminating the geographical and cultural boundaries. Social media even though originally was meant to be a tool for sharing ideas and thoughts but now has become an important tool in communications and can be a part of advertising and marketing of different products and services. Naturally, social media offers the means to stay ahead with your digital strategy and your target audiences. Everything being business today educational institutions too are involved in marketing and advertising their services and institution to the public. As there is a high level competition among the institutions they have to approach to different varieties of advertising and marketing strategies. Social media being considered an influencer among the youth mainly is now used by the institutions as a tool for communication and marketing. Marketing through such Medias help mainly in cost effectiveness and they also get the

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advantage of reaching out to a large audience. The institutions showcase their achievements and performances of the students and faculty by updating them and sharing through such Medias. Moreover many of the institutions provide a glimpse to their programs and facilities provided in the campus. The audience may also have an opportunity to interact with the students and the faculty of the institutions. This not only helps the audience but also gives an exposure to the present enrolled students to outside world and to share their own experience about the institution.

Review Of Literature

EfthymiosConstantinides , Marc C. ZinckStagno (2012) – Through their study on the topic “Higher Education Marketing: A Study on the Impact of Social Media on Study Selection and University Choice” they have analyzed the role and importance of the social media on the choice of future students for a study and university in comparison with the traditional university marketing channels in the Netherlands. Next to this the study also identifies and describes three market segments among future students based on their use of the social media.

Josiah Zachary NyangauNiamboueBado(2012)- In his study on the topic “Social media and marketing of higher education: A review of the literature” found out that social media use by institutions of higher education is on the rise, yet it is unclear whether content on university social media pages influences prospects’ choice-making processes.

Aravind.T.S (2016) - In his study on the topic “A Analytical Study on the Effectiveness of Social Media Marketing as a Prospect Student Recruitment tool for Higher Educational Institutions in Kerala – A strategic perspective” has analyzed how higher education institutions can use Social Media Marketing as an effective student recruitment tool and also majority of UG and PG aspirants are regularly participating in social media.

Sreeja Rajesh, Jithin Michael(2015)- Did a study on the topic “Effectiveness of Social Media in Education” and found out that how the services provided by the Social media are helpful for students in Education they also tried to explain the effectiveness of Social Media in young people. Moreover students can make use of the interaction services, blogging services, group services in their studies and also use Social Media effectively for search for colleges and career opportunities.

SharunaSegaren(2019) – in his study on the topic “The important role of social media in higher education” arrived at the conclusion that social media plays an increasingly important role in higher education. It’s a rapidly evolving field, so there’s plenty of potential to integrate social media platforms and tools in student learning.

OjaswitaChaturvedi(2014)- in his study on the topic”Effectively using social media for education institutes” concluded that social media marketing cannot be limited to adults or teenagers going to school and university. Right from a very young age, the young buds are getting exposed to advanced technology. She finally ended her views with the quotes by– David Warlick-“We need technology in every classroom and in every student and teacher’s hands, because it is the pen and paper of today’s time and the lens through which we experience much of our world”

ElhamMukhaini, Wafa S. Al-Qayoudhi , Ali Al-Badi (2014) - Did a study on the topic “The Adoption of Social Networking in Education: A Study of the Use of Social Networks by Higher Education Students in Oman” and have analysed student's perspective - the impact on students of using social networking tools and what effect it has on the traditional style of learning and teaching. This study also highlighted the benefits of using social networks as

tools for developing a new style of learning, and the negative impacts that can affect the process of learning, in order to provide a justification for using social networks in higher education.

Ivana Jadrić¹ , Sandra Kovačević² (2018) – In their study on the topic “The usage of social media in marketing communication of croatian institutions of higher education “ have found out that private institutions of higher education are on the overall more active in the usage of social media. In this research, the intensity of certain social media usage in general in Croatia was also compared with the level of their usage in institutions of higher education

Megan Mahaney (2012)- in his study on the topic “The Effectiveness of Social Media Marketing in Higher Education: State University of New York, the College at Brockport” analysed that social media has become the main form of communication among the younger generations. He focused on the intended use and the actual results of use of social media, as a case study of The College at Brockport.

GonxheBeqiri, (2014) In the study on the topic “The Impact of Social Media on Higher Education in Kosovo: The Student’s Perspective” has found that there is an increase of social media usage within the students of higher education in Kosovo. Social Media has an impact and is considered as an effective tool by students about study related activities and positive influence when it comes to communication and interactivity among them.

Need And Importance

In the last few decades social media have seen a huge development. People have started using it in business and marketing. There are various reasons that make digital marketing the best means of reaching out to the majority of the student population today. Some of these are: Prospective students are already searching online for educational and training courses, students spend more time on the internet rather in front of other media including television, display advertisements on the internet are highly effective and outperform traditional advertising, parents and guardians have started to judge a school or college based on its website and its online presence, most students have also begun to judge a school or college through its online presence, the internet is today the most favored channel for applying and making admission queries, expatriates and outstation students rely heavily on the web for college admissions and finally parents and students now consider web as the most convenient means for carrying out admission processes. Our study focuses on the influence of the internet and social media on the advertising and marketing of the educational institutions which have become a common business strategy for such institutions.

Objectives

This study intends to identify the following aspects

- To understand the concept of social media marketing
- To understand how the educational institutions carry out their marketing through social media
- To analyze the need and importance of marketing of educational institutions through social media
- To understand the ways in which the marketing can be done

Research Methodology

The study is exploratory and analytical in nature, which is based on secondary data. The data for the study were collected from various published source like books, journals, research articles and websites. The main aspects of the study have been discusses in detail with

experts, researchers, and other eminent personalities in this field in order to get an insight into the subject.

Analysis And Interpretation

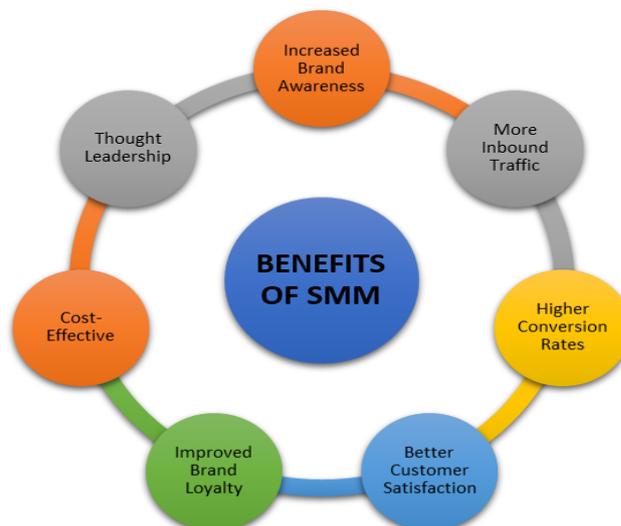
Concept of social media marketing

Social media marketing is a form of marketing in which a company's product and services is marketed through the medium of social media websites or networks. It provides companies with a way to reach new customers, engage with existing customers and promote its desired culture, mission or tone. Also known as "digital marketing" and "e-marketing," social media marketing has purpose-built data analytics tools that allow marketers to track how successful their efforts are. The goal of SMM is to produce content that users will share with their social network to help a company increase brand exposure and broaden customer reach. One of the key components of SMM is Social Media Optimization (SMO). Like Search Engine Optimization (SEO), SMO is a strategy for drawing new and unique visitors to a website. SMO can be done in two ways:

- Adding social media links to content, such as RSS feeds and sharing buttons
- Promoting activity through social media by updating statuses or tweets, or blog posts.

SMM helps a company to get direct feedback from customers (and potential customers) while making the company seem more personable. The interactive parts of social media give customers the opportunity to ask questions or voice complaints and feel they are being heard. This aspect of SMM is called social customer relationship management (social CRM). SMM became more common with the increased popularity of websites such as Twitter, Facebook, Myspace, LinkedIn, and YouTube. In response, the Federal Trade Commission (FTC) has updated its rules to include SMM. If a company or its advertising agency provides a blogger or other online commenter with free products or other incentives to generate positive buzz for a product, the online comments will be treated legally as endorsements. Both the blogger and the company will be held responsible for ensuring that the incentives are clearly and conspicuously disclosed, and that the blogger's posts contain no misleading or unsubstantiated statements and otherwise complies with the FTC's rules concerning unfair or deceptive advertising.

Benefits Of SMM



1. Increased Brand Awareness

Social media is one of the most cost-efficient digital marketing methods used to syndicate content and increase a business' visibility. Implementing a social media strategy will greatly increase the brand recognition of a business

2. More Inbound Traffic

Without marketing the business on social media, the inbound traffic will be limited to usual customers. The people familiar with the brand are likely searching for the same keywords that are already rank for. Without utilizing social media as part of a business's marketing strategy, there will be more difficulty in reaching to anyone outside of the loyal customer circle. Every social media profile that is added to the marketing mix is a gateway to the company's website, and every piece of content that is posted is another opportunity to acquire a new customer. Social media is a melting pot of different types of people with varying backgrounds and behaviors. With different people come different needs and different ways of thinking. Syndicating a company's content on as many platforms as possible allows these individuals to organically reach the business.

3. Higher Conversion Rates

With increased visibility, the business gains more opportunities for conversion. Every blog post, image, video, or comment may lead viewers to the company's website and increase traffic. Social media marketing allows a business to give a positive impression through a humanization factor. When brands are interactive by sharing content, commenting, and posting statuses on social media, it personifies a brand.

4. Better Customer Satisfaction

Social media is a networking and communication platform. Creating a voice for a company through these platforms is important in humanizing that company. Customers appreciate knowing that when they post comments on the company's pages, they will receive a personalized response rather than an automated message. Being able to acknowledge each comment shows that the company is attentive of its visitors' needs and aim to provide the best experience.

5. Improved Brand Loyalty

One of the main goals of almost all businesses is developing a loyal customer base. Considering that customer satisfaction and brand loyalty typically go hand in hand, it is important to regularly engage with consumers and begin developing a bond with them. Social media is not just limited to introducing the brand's products and promotional campaigns. Customers see these platforms as a service channel where they can communicate directly with the business. The millennial generation is known for being the most brand loyal customers of all. Born between the early 1980's and the early 2000's, millennials are the largest generation in US history -- and will soon completely consume the market. Studies show that this segment of customers is 62% more loyal to brands that directly engage with them on social media. Since these technology natives require communication with their brands, businesses must implement social media marketing to get the attention of their most influential consumers.

6. Cost-Effective

Social media marketing is possibly the most cost-efficient part of an advertising strategy. Signing up and creating a profile is free for almost all social networking platforms, and any paid promotions the company decide to invest in are a relatively low cost compared to other marketing tactics. Being cost-effective is such an advantage because the company can see a greater return on investment and retain a bigger budget for other marketing and business expenses.

7. Thought Leadership

Posting insightful and well-written content on the social media is a great way to become an expert and leader in one's field. There is no one way to become a thought leader - it requires work that can be supported by online networking tools.

The following are a description on the 6 types of social media marketing:



1. Facebook - With more than 2 billion monthly users, Facebook hosts over a quarter of the world's population, providing advertisers with an unparalleled opportunity to reach virtually anyone and everyone.
2. Instagram - Instagram now boasts more than 500 million monthly active users and commands one of the highest audience engagement rates in social media
3. Twitter - Twitter has revolutionized breaking news and provided unparalleled access for users to connect with both niche and mainstream influencers. With 328 million monthly active users, it remains one of the most popular social media platforms.
4. Pinterest - Pinterest is unique. It's visual, like Instagram, but unlike Instagram, it is highly targeted toward women with an 81% female user base. With 175 million monthly users, it's also an incredibly active platform.
5. LinkedIn - LinkedIn is another unique social platform that revolves primarily around the B2B market. LinkedIn has an estimated 227 million monthly active users, evenly split between male and female users. 61% of users fall into the 30-64 age range bracket.
6. Snapchat - Snapchat is one of the newer platforms to emerge on the scene as a competitive force with 301 million monthly active users. While it remains to be seen if the company will succumb to Instagram's social video push, as of now, it's a viable advertising platform with a highly active user base.

The importance of the internet as commercial platform is by now universally recognized and increasingly businesses adopt online marketing channels at the cost of traditional ones. It can be analyzed from the study that the online browsing behavior is more popular in youngsters than other age group and this factor is an advantage for the educational institutions for conducting their marketing activities. Moreover studies shows that social media marketing can be used as a tool for reaching out to a large number of audiences as the social media is a place where people share ideas and thoughts world widely. The cost effectiveness and less time consumption add to the advantage of using social media as a medium for marketing.

Educational institutions do require only fewer amounts of investments to be made to such kind of advertisings in the form of both money and time. Marketing through social media can be said as an investment with high rate of return at low risk. Another main aspect which

can be analyzed from the study is that people prefer social media as a best way to market is due to their two way communication feature. Social Medias allow the audience to have a direct communication with the person on the other end. Moreover they have different platforms through which they can convey their messages. The higher penetration rate of Internet provides numerous opportunities for Educational Institutions (EI) to better present their academic offer and to improve communication with their target groups. The social media instruments shall be use in an effective way so that the EI's can make a rapport between their current and prospective students and show a more open and flexible image.

Reasons why institutes must include social media marketing in their strategy

Admission

- Facebook can be used for online registration of students
- It will save the cost of maintaining a separate webpage for registration activities
- Online information sharing
- Student background verification
- Potential student social media presence

Internal communication

- Notice and information to a broader mass can be reached through Facebook
- Internal messaging/ WhatsApp can be used to convey information to both individual and groups within very short period of time
- Twitter can also be used to convey information to a particular group

Promotion/Branding

- Facebook can give updates about any events/competition
- Facebook can be used to promote any event to a larger audience
- Online advertisement can be used for this purpose
- Effective use of Twitter can help to increase the visibility of any event by creating a trend

Industry Interface

- LinkedIn can be used to maintain the institution and student profile
- Blog and Twitter can be used to improve awareness about the institute

Academics

- A webinar can be used for online classes
- SlideShare can be used to upload case studies or report
- A blog can be used to share any analyze new thoughts
- Facebook can be used to provide notice and happenings in the out world
- Twitter and Google+ can be used for online debate

Student Life

- Facebook can be used to provide details of student life
- Blog and Twitter can be used to share students thought and carry out discussions
- YouTube can be used for video uploading and sharing
- LinkedIn manages student professional profile
- Facebook/blogs/LinkedIn/Twitter can be used to maintain alumni network

Conclusion

Acting social media users by education institution can make a live marketing among the target group with less effort and can attract corporate for placement as well. Unlike traditional marketing, social media marketing is more effective as it provides a pool of opportunities. Moreover it could reach the required audience quickly and as everything is done online so it helps to lower the costs of promotional marketing.

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A Study On Organic Farming In Five Districts Of Kerala- Trivandrum, Ernakulam, Thrissur, Malappuram, Palakkad With Special Reference To Farmers

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Dr. AMBILY A S**

Abstract

In ancient time agriculture was carried out without the use of artificial fertilizers and pesticides but due to the increased demand for food products due to high populations leads to the use of artificial fertilizers and pesticides in order to increase the yield or productivity. But the high usage of chemicals leads to both environmental and health degradation. In order to counteract against this adverse effect of conventional farming, organic farming and organic products are being adopted by majority of the population. So, our study emphasized on understanding the need for organic farming, problems faced by organic farmers, contradictions between conventional farming and organic farming, status of organic farming in Kerala with reference to five different districts and its contribution to sustainable development. As a result of our study we came to know that among five districts, Palakkad district is the major producer of organic food products. Major problem faced by these organic farmers are high input cost incurred in production, so government should provide more subsidies and loans for the promotion of organic farming. From our study we realized that 100 percent of customers (respondents) we enquired are satisfied with the beneficial uses of organic food products. Every respondent are in the opinion that organic farming will leads to sustainable development.

Keywords: Organic Farming, Sustainable Development, Constraints, Beneficial Uses.

Introduction

Farming was the oldest form of economic activity in the country. Farming means act of growing crops and keeping animals for food and raw materials. Farming plays a vital role in our economy as it provides livelihood and employment to rural population. Without farming and agriculture no one can survive because only this sector can provide food and raw materials to the growing population. In ancient period agriculture was done without any chemicals but in order to meet the demand of growing population many of the producers started using artificial fertilizers for high yield and due to the adverse effects of this conventional farming, organic farming is now restored. Organic farming means production of crops and livestock without the use of artificial fertilizers, pesticides, genetically modified organisms, antibiotics and growth hormone. Organic farming is that form of farming which respects the land, environment, humans and animals to provide a quality, unprocessed or healthy products to consumers. Thus organic farming leads to over all sustainable development.

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Literature Review

1. Future in the past: A study on the status of organic farming in Kerala by **V BALACHANDRAN (2004)**:- He studied the status of organic farming in Kerala by analyzing various case studies drawn from different parts of Kerala which truly act as a base for his study.
2. Organic Farming in India: Relevance, Problems & Constraints by **S NARAYANAN – NABARD (2005)**:- This paper shows the need and relevance of organic farming which came due to the ill effects of chemical adopted in the country and also shows constraints faced in the progress of organic farming and the inabilities of government to take policies to decide upon the promotion of organic farming.
3. Kaipad Rice farming in North Kerala –an indigenous saline resistant organic farming system by **K T CHANDRANMOHAN & KV MOHANAN (2012)**:- This study was an investigation in to very unique organic rice farming. In South Kerala it is known as Pokkali and in North Kerala as Kaipad.
4. Organic farming: An eco-friendly way to sustainable agriculture by **DAYA N MANDAL (2007)**:-This paper shows that organic farming conserve bio diversity and protect environment by reducing the use of chemicals, artificial fertilizers and pesticides.
5. Organic farming and small scale farmers: Main challenges and opportunities by **Z JOUZH AZADI (2017)**:- This paper shows that as comparing with conventional farming yield of organic farming is less so it is a challenge for the farmers to meet the demand of the increasing population but organic farming helps in protecting environment, restoring soil fertility and reducing high input cost.

Significance Of The Study

Organic farming helps in maintaining the ecological balance. In comparing with conventional farming, it is cheaper and can be easily grown locally. Organic outputs are very healthy and posses more nutritional values than the conventional outputs. Organic farming technique is more labour intensive so it indirectly provides employment opportunities to rural population of the country where labour is available in abundant and it also helps in restoring the soil fertility.

Statement Of The Problem

Nowadays conventional farming affects both the humans as well as the environment. The fertilizers and pesticides used in conventional farming causes different diseases like respiratory problems, cancers and genetical problems etc and the major one among them is the harmful impact caused by insecticides 'endosulfan' sprayed on the cashew plantation at muliyar over 20 years . It also adversely affected the environment by causing land degradation, soil infertility, water scarcity due to over irrigation and various diseases to animals like respiratory issues, cancers and genetical problems etc. Thus it affect over all sustainable development. So the study focuses on how organic farming helps in overcoming these problems and to achieve overall sustainable development.

Objective

- To study the status of organic farming with respect to five different districts of Kerala namely Palakkad, Malappuram, Thrissur, Trivandrum and Ernakulum.
- To understand the need of organic farming and constraints faced by organic farmers.
- To study the contribution of organic farming towards sustainable rural development.

Research Methodology

The study is purely descriptive in nature. Data for this study was collected by means of survey in five districts in Kerala namely Trivandrum, Ernakulam, Thrissur, Malappuram, Palakkad. The sample size was 50 farmers. Questionnaire was mainly used to study the current status of organic farming, problem face by organic farmers and its contribution to sustainable development.

Sources of Data: The data for the study has been collected from both primary and secondary sources. The primary data has been collected by means of well structured questionnaires and secondary data has been collected from various online websites, journals, books and magazines

Population: The sample population for the study has been taken from five districts in Kerala namely Trivandrum, Ernakulam, Thrissur, Malappuram, Palakkad.

Sample size: 50 Farmers are taken for the study from five districts in total.

Tool for analysis: The tool used for analyzing the data collected is percentage analysis.

Presentation: The data collected is presented in the form of table and graph.

Analysis & Interpretation

TABLE 1 : RESPONDENTS FROM FIVE DISTRICTS

Districts	No of respondents	Percentage
Palakkad	16	32
Malappuram	14	28
Thrissur	9	18
Trivandrum	6	12
Ernakulum	5	10
Total	50	100

Source: primary data

Interpretation: Table 1 represent that 32 percent of the respondents are from Palakkad, 28 percent are from Malappuram, 18 percent are from Thrissur, 12 percent are from Trivandrum and the remaining 10 percent are from Ernakulum. This indicates that Palakkad district produce more organic food products than rest of the four districts.

TABLE 2: KIND OF SUPPORT RECEIVED BY FARMERS

Kind of support	No of respondents	Percentage
Subsidy	26	52
Government loans	24	48
Total	50	100

Source: primary data

Interpretation: Table 2 indicates that 52 percent of the respondents are getting support by way of subsidy and the remaining 48 percent of the respondents are getting support by way of government loans. Thus it indicates that nowadays government is taking more initiative to bring up organic farming as it has many benefits to humans as well as to environment.

TABLE 3: PROBLEMS FACED BY FARMERS

Kind of problem	No of respondents	Percentage
High input cost	17	34
Low yields	14	28
Inadequate infrastructure	10	20
Shortage of biomass	9	18
Total	50	100

Source: primary data

Interpretation: Table 3 indicates that 34 percent of the respondents are facing the problem of high input cost so the government should provide more subsidies and loans, 28 percent of the respondents are facing the problem of low yields so the government should provide highly productive seeds for more yield, 20 percent of the respondents are facing the problem of inadequate infrastructure so the government should spend more on providing adequate infrastructure facilities and the remaining 18 percent of the respondents are facing the problem of shortage of biomass so the government should provide more organic fertilizers to overcome this problem.

TABLE 4: BENEFITS OF ORGANIC FARMING

Benefits	No of respondents	Percentage
Reduced exposure to pesticides	23	46
Combating erosion	14	28
Reduced global warming	13	26
Total	50	100

Source: primary data

Interpretation: Table 4 indicates that 46 percent of the respondents are aware that by organic farming there will be reduced exposure to pesticides, 28 percent of the respondents said that organic farming helps in preventing soil erosion and the remaining 26 percent of the respondents said that organic farming helps in reducing global warming. Thus it indicates that due to non usage of fertilizers it is beneficial to soil, environment and human health.

TABLE 5: ORGANIC FARMING AND SUSTAINABLE DEVELOPMENT

Satisfied	No of respondents	Percentage
Yes	50	100
No	Nil	Nil
Total	50	100

Source: primary data

Interpretation: Table 5 indicates that all the respondents are aware that by organic farming there will be sustainable development so that it will contribute to the overall development of the economy and agricultural sector by increasing health conditions, soil fertility, reduced exposure to pesticides, reduced global warming.

TABLE 6: ORGANIC FARMING AND THE FUTURE OF AGRICULTURE SECTOR

Satisfied	No of respondents	Percentage
Yes	50	100
No	Nil	Nil
Total	50	100

Source: primary data

Interpretation: Table 6 indicates that all the respondents think that organic farming is the future of agricultural sector thus creating a positive impact in the world of agriculture as nowadays customers as well as farmers are aware about the bad affects of conventional farming and themselves are ready to shift to organic farming.

TABLE 7: ORGANIC FARMING AND THE ENVIRONMENT

Satisfied	No of respondents	Percentage
Yes	50	100
No	Nil	Nil
Total	50	100

Source: primary data

Interpretation: Table 7 indicates that all the respondents are aware of the fact that organic farming will contribute to a better environment by maintaining soil fertility, reducing exposure to pesticides and providing good quality of products.

TABLE 8: PROGRESS OF SOIL FERTILITY

Progress	No of respondents	Percentage
Increased	28	56
Highly increased	18	36
No change	4	8
Total	50	100

Source: primary data

Interpretation: Table 8 indicates that 56 percent of the respondents have noticed an increase in the soil fertility in the past year, 36 percent of the respondents have seen high increase in the soil fertility as no chemical fertilizers and pesticides are used and the remaining 8 percent states that there is no change in the soil fertility as they have recently shifted from conventional farming method to organic farming.

TABLE 9: INTENSITY OF LAND DEGRADATION

Intensity of land degradation	No of respondents	Percentage
Decreased	31	62
Highly decreased	19	38
Total	50	100

Source: primary data

Interpretation: Table 9 indicates that 62 percent of the respondents have seen a decrease in case of land degradation and the remaining 38 percent have seen a very high decrease in the land degradation during the past year as synthetic inputs such as synthetic fertilizers, pesticides, herbicides are not used and also organic farmers rely on crop rotation, crop residues, animal manures and mechanical cultivation to maintain soil productivity, supply plant nutrients and to control weeds, insects and other pests.

TABLE 10: PROGRESS IN IRRIGATION FACILITY

Progress in irrigation	No of respondents	Percentage
Increased	25	50
Highly increased	14	28
No change	8	16
Decreased	3	6
Total	50	100

Source: primary data

Interpretation: Table 10 indicates that 50 percent of the respondents have noticed an increase in the irrigation facilities, 28 percent have seen a very high increase as organic farming needs only less amount of irrigation comparing with conventional farming, 16 percent have not seen any changes as some of the farmers have started recently so it will take some time to notice such a change, 6 percent have seen a decrease as many of the farmers are cultivating non organic products along with organic products for more profitability so in such a case there is a decrease in irrigation facility since the water is diverted between conventional as well as organic farming.

Findings

1. The study represents that 32 percent of the respondents are from Palakkad, 28 percent are from Malappuram, 18 percent are from Thrissur, 12 percent are from Trivandrum and the remaining 10 percent of the respondents are from Ernakulum. The above percentages indicates that Palakkad district produce more organic food products than rest of the four districts.
2. The study indicates that 52 percent of the respondents are getting support by way of subsidy and the remaining 48 percent of the respondents are getting support by way of government loans. Thus it indicates that nowadays government is taking more initiative to bring up organic farming as it has many benefits to humans as well as to environment.
3. The study shows that 34 percent of the respondents are facing the problem of high input cost so the government should provide more subsidies and loans, 28 percent of the

respondents are facing the problem of low yields so government should provide highly productive seeds for more yield, 20 percent of the respondents are facing the problem of inadequate infrastructure so the government should spend more on providing adequate infrastructure facilities to organic farmers and the remaining 18 percent of the respondents are facing the problem of shortage of biomass so the government should provide more organic fertilizers to overcome this problem.

4. The study indicates that 46 percent of the respondents are aware that by organic farming there will be reduced exposure to pesticides, 28 percent of the respondents said that organic farming helps in preventing soil erosion and the remaining 26 percent of the respondents said that organic farming helps in reducing global warming. Thus it indicates that due to non usage of fertilizers it is beneficial to soil, environment and human health.
5. The study indicates that all the respondents are aware that by organic farming there will be sustainable development so that it will contribute to the overall development of the economy and agricultural sector by increasing health conditions, soil fertility, reduced exposure to pesticides, reduced global warming.
6. The study indicates that all the respondents think that organic farming is the future of agricultural sector thus creating a positive impact in the world of agriculture as nowadays customers as well as farmers are aware about the bad affects of conventional farming and themselves are ready to shift to organic farming.
7. The study indicates that all the respondents are aware of the fact that organic farming will contribute to a better environment by maintaining soil fertility, reducing exposure to pesticides and providing good quality of products.
8. The study indicates that 56 percent of the respondents have noticed an increase in the soil fertility in the past year, 36 percent of the respondents have seen high increase in the soil fertility as no chemical fertilizers and pesticides are used and the remaining 8 percent states that there is no change in the soil fertility as they have recently shifted from conventional farming method to organic farming.
9. The research indicates that 62 percent of the respondents have seen a decrease in case of land degradation and the remaining 38 percent have seen a very high decrease in the land degradation during the past year as synthetic inputs such as synthetic fertilizers, pesticides, herbicides are not used and also organic farmers rely on crop rotation, crop residues, animal manures, and mechanical cultivation to maintain soil productivity, supply plant nutrients and to control weeds, insects and other pests.
10. The study shows that 50 percent of the respondents have noticed an increase in the irrigation facilities, 28 percent of the respondents have seen a very high increase in the irrigation facilities as organic farming needs only less amount of irrigation facility comparing with conventional farming, 16 percent of the respondents have not seen any changes as some of the farmers have started recently so it will take some time to notice such a change and the remaining 6 percent of the respondents have seen a decrease in irrigational facilities as many of the farmers are cultivating non organic products along with organic products for more profitability so in such a case there is a decrease in irrigation facility since the water is diverted between conventional as well as organic farming.

Suggestions

- Government should provide more amounts of loans and subsidies for the enhancement of organic farming as the amount of current loans and subsidies are not sufficient.

- Government should conduct awareness classes to make the farmers aware about the beneficial uses of organic farming to humans, animals and environment.
- Government should take more rigorous actions, schemes, policies to promote organic farming for sustainable development.

Conclusion

Organic farming has changed the phase of Indian agriculture sector. Its prime aim is to reduce the hazards caused by use of artificial fertilizers and to achieve sustainable development. From this project, the researcher got more awareness about the status of organic farming in Kerala and its contribution towards sustainable rural development. It also shows the challenges faced by organic farmers while cultivating organic food products. From the study researcher analyzed that majority of the respondents are satisfied with the current status of organic farming. Maintaining soil fertility, improving underground water system, reduced global warming and exposure to pesticides and providing quality products are the major benefits of organic farming which leads to overall sustainable development. The researcher concentrated on five different districts in Kerala namely Palakkad, Malappuram, Thrissur, Ernakulam and Trivandrum for the study and it focused on understanding the need for organic farming and constraints faced by organic farmers. As an outcome of the study, it can be concluded that organic farming place a major role in the sustainable development of rural sector, agricultural sector and the entire economy as a whole.

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Knowledge Management: A Study

K MAYA RAMESH & KARTHIKA MOHANAN*
JAYASHANKAR J**

Abstract

Knowledge Management is a process that deals with the development, storage, retrieval, and dissemination of information and expertise within an organization to support and improve its business performance. Organizations are realizing that knowledge is a crucial resource for them and it should be managed judiciously. They need to harness knowledge not only to stay competitive, but also to become innovative. Knowledge management can be categorized into knowledge creation, knowledge validation, knowledge presentation, knowledge distribution and knowledge application activities. To capitalize knowledge, an organization must be swift in balancing its knowledge management activities. Such a balancing activity requires changes in organizational culture, technologies, and techniques. It is rather, an interaction between technology, techniques, and people that allow an organization to manage its knowledge effectively. By creating a nurturing and “learning-by-doing” environment, an organization can sustain its competitive advantages. Through effective knowledge management an organization can bring its entire organizational learning and knowledge to bear on any problem, anywhere in the world, at any time.

Keywords: Knowledge Management, innovative, categorize, interaction, technology, learning-by-doing, effective management, organizational learning

Introduction

Knowledge management is essentially about getting the right knowledge to the right person at the right time. It implies a strong tie to corporate strategy, understanding of where and in what forms knowledge exists, creating processes that span organizational functions, and ensuring that initiatives are accepted and supported by organizational members. Knowledge management may also include new knowledge creation, or it may solely focus on knowledge sharing, storage, and refinement. However, the overall objective is to create value and leverage and refine the firm's knowledge assets to meet organizational goals. The classic one-line definition of Knowledge Management was offered up by Tom Davenport early on (Davenport, 1994): “Knowledge Management is the process of capturing, distributing, and effectively using knowledge.

Review of Literature

(Scarborough H., Swan J. & Preston J., 1999) The KM is a process through which knowledge creation, acquisition & sharing takes place. It is used to enhance learning and performance of an organization.

(Nonaka, I. & Takeuchi, H., 1995) Knowledge management is essential to enhance creativity and entrepreneurship building, helps in change management, and staff empowerment.

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(Nonaka, I. & Takeuchi, H., 1995) With decreased product life cycles, environmental complexity and increased volatility, the need to manage knowledge is intensifying, particularly across the value chain.

(Polanyi, M., 1969; Nonaka I., 1994). The literature on knowledge management delineates two prominent types of knowledge namely tacit and explicit.

(Drucker, P.F., 1994) Growing interest in knowledge management systems helps the organizations to transform the knowledge into a planned corporate asset that needs to be generated, maintained, retained, updated, disseminated and applied to the future problems of the organization.

(Piera Centobelli, 2017). The author conducted a systematic literature review on Knowledge Management (KM) in the context of startups in order to analyze the state of the art, identify research gaps and define a future research agenda. The main findings highlight that, even though there is an increasing number of papers on the topic of KM in startups, several issues are still neglected.

(Remy Magnier- Watanabe and Caroline Benton 2017) This paper point out the role of tacit and explicit knowledge in translating management innovation into firm performance in Japanese companies. While past research has been inconsistent on the role of management innovation on firm performance, this research considers how management innovation in organizations can promote tacit and/or explicit knowledge creation, and whether this leads to higher firm performance.

(Vasanthapriyan, S, 2017) Knowledge Management in software industries aims to create an environment for continuous knowledge sharing and creation to remain competitive. The knowledge synthesis theory is used in this study to synthesize a variety of knowledge, unseen problems, obstructions, and the corresponding underlying reasons in implementing the Knowledge Management practices.

(Roberto Cerchione, 2016). This paper examined systematic review of the literature on Knowledge Management (KM) in small and medium enterprises (SMEs) and SME networks. The main objective is to highlight the state-of-the-art of KM from the management point of view in order to identify relevant research gaps.

(Henri Inkinen, 2016). The author found that Knowledge Management (KM) has emerged as one of the most discussed new management methods. Among the most debated areas in KM has been the association between knowledge and firm performance, but a lack of understanding and consensus still remains as a major issue. This paper aims to address the research gap by reviewing the empirical literature and determining how KM-based managerial and organizational practices are related with firm performance.

Need & Importance of the Study

In the past decade, research in the Knowledge Management has produced a significant body of knowledge in terms of both practice and theory (Stewart, 2002). However, Knowledge Management practice is related to the private sector. The relative newness of the area as a management philosophy has resulted in most research and practical application studies being based in large private sector organizations. That is, how Knowledge Management contributes to the public sector is, to a large extent, less commonly addressed. It seems that Knowledge Management practice in the public sector falls behind their private counterparts. However, the organizations need better access to the best internal and external information and knowledge for effective decision making and the ability to innovate and adopt (Martin, 2000). It can be argued that public sector organizations increasingly face pressures from the

private sector. Public sector organizations, partly because of their public ownership and limited competition, may not pursue Knowledge Management as strongly and effectively as private sector organizations. Therefore, to understand the best practice and performance indicators of Knowledge Management practices are analysed and also how their impact drives for job performance.

Objectives of the Study

To understand the concept of Knowledge Management.

To know about the Knowledge Management Process and System. To look upon the implementations of Knowledge Management.

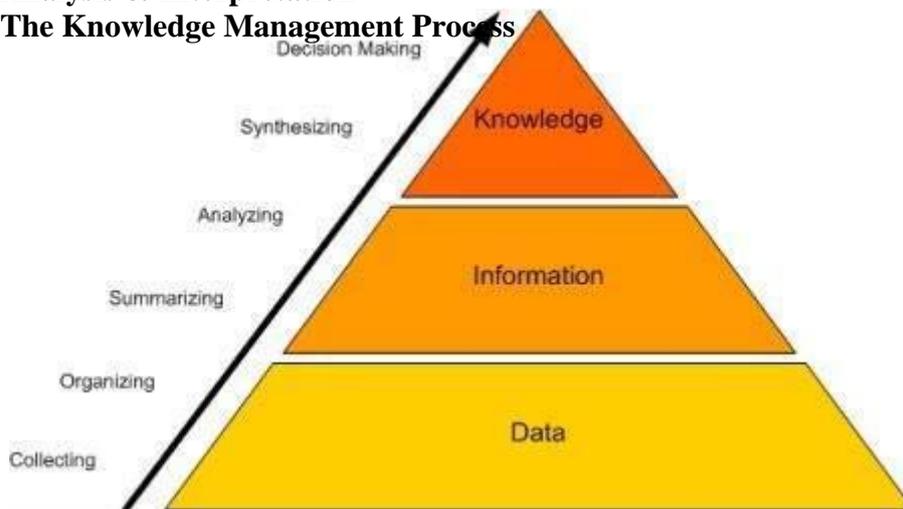
To analyze the benefits of Knowledge Management and the challenges faced.

Research Methodology

The study is exploratory and analytical in nature, which is based on secondary data. The data for the study were collected from various published source like books, journals, research articles and websites.

Analysis & Interpretation

The Knowledge Management Process



The process of knowledge management is universal for any enterprise. Sometimes, the resources used, such as tools and techniques, can be unique to the organizational environment.

The Knowledge Management process has six basic steps assisted by different tools and techniques. When these steps are followed sequentially, the data transforms into knowledge.

Knowledge Management System (KMS)

A Knowledge Management System (KMS) is a system for applying and using Knowledge Management principles. These include data-driven objectives around business productivity, a competitive business model, business intelligence analysis and more.

A Knowledge Management System is made up of different software modules served by a central user interface. Some of these features can allow for data mining on customer input and histories, along with the provision or sharing of electronic documents. Knowledge Management Systems can help with staff training and orientation, support better sales, or help business leaders to make critical decisions.

Knowledge Management System Cycle



Knowledge management cycle is a process of transforming information into knowledge within an organization. It explains how knowledge is captured, processed, and distributed in an organization.

Any organization which takes up knowledge management will undergo this process called KM cycle. The KM cycle shows us systematically how information is transformed into knowledge via creation and application process. When an organization undergoes KM cycle then the following

steps happen:

1. Capturing
2. Coding
3. Publishing
4. Sharing
5. Accessing
6. Application

8 Steps To Implementation

- Inability to recognize or articulate knowledge; turning tacit knowledge into explicit knowledge.
- Geographical distance and/or language barriers in an international company.
- Limitations of information and communication technologies.
- Loosely defined areas of expertise.
- Internal conflicts (e.g. professional territoriality).
- Lack of incentives or performance management goals.
- Poor training or mentoring programs.
- Cultural barriers (e.g. “this is how we’ve always done it” mentality).

Benefits of Knowledge Management

11. Speed up access to information and knowledge

Knowledge Management makes it easier to find the information or the people who hold the information you need. It increases efficiency and productivity and allows you to work better, reducing the tendency to “reinvent the wheel.”

Improve decision-making processes

Employees can improve the quality and speed of decision-making by accessing the knowledge of the entire organization when they need it. When making decisions, enterprise collaboration tools facilitate the access to opinions and experiences of different people, which may contribute additional perspectives to the choices made.

Promote innovation and cultural change

Enable and encourage the sharing of ideas, collaboration and access to the latest information. Knowledge management enables individuals to stimulate innovation and the cultural changes needed to evolve the organization and meet changing business needs.

□ **Increase customer satisfaction**

The sharing of knowledge and cross-collaboration help to increase the value offered to customers. The organization is able to give faster answers or shorten the time it takes to improve a product or service.

□ **Communicating important information widely and quickly**

Almost everyone today is an information worker, either completely or partially. We all need information to do our jobs effectively, but we also suffer from information overload from an increasing variety of sources. How can we get information that is targeted, useful, and timely without drowning in a sea of email, having to visit hundreds of web sites, or reading through tons of printed material? Knowledge management helps address this problem through personalized portals, targeted subscriptions, RSS feeds, tagging, and enterprise search engines.

□ **Enabling the organization to leverage its size**

As an organization grows, the increasing size is only a benefit if it can use the knowledge of all of its employees. Through the use of tools such as communities, expertise locators, and repositories, the full power of a large enterprise can be exploited.

□ **Making the organization's best problem-solving experiences reusable**

Consistently applying proven practices, also known as best practices or good practices, can significantly improve the results of any firm. For example, if a manufacturing plant in one part of the world has figured out how to prevent the need for product rework, and all other plants around the world adopt this practice, savings will flow directly to the bottom line. By establishing a process for defining, communicating, and replicating proven practices, an enterprise takes advantage of what it learns about solving problems.

Knowledge Management Challenges

□ **Security:** Providing the right level of security for knowledge management is key. Sensitive information should be shielded from most users, while allowing easy access to those with the proper credentials.

□ **Getting people motivated :** Overcoming organizational culture challenges and developing a culture that embraces learning, sharing, changing, improving can't be done with technology.

There is no use in launching a tool if there is no drive to share the knowledge.

□ **Keeping up with technology :** Determining how knowledge should be dispensed and transferring it quickly and effectively is a huge challenge. Constantly changing structures mean learning how to be smart, quick, agile and responsive – all things a KM tool must be able to accomplish.

□ **Measuring knowledge :** Knowledge is not something that can be easily quantified, and is far more complex because it is derived out of human relationships and experience. The focus should be on shared purpose rather than results or efforts.

□ **Overcoming shared leadership :** KM tools allow others to emerge as voices of power within an organization. Workers are given a “voice”, which can sometimes cause internal conflict.

□ **Keeping data accurate :** Valuable data generated by a group within an organization may need to be validated before being harvested and distributed. Keeping information current by eliminating wrong or old ideas is a constant battle.

□ **Interpreting data effectively :** Information derived by one group may need to be mapped or standardized in order to be meaningful to someone else in the organization.

- **Making sure information is relevant :** Data must support and truly answer questions being asked by the user, and requires the appropriate meta-data to be able to find and reference. Data relevancy means avoiding overloading users with unnecessary data.
- **Determining where in the organization KM should reside :** Does KM fall under HR, IT, communications? This decision will determine what drives your knowledge sharing initiative and who will be responsible for maintaining the community.
- **Rewarding active users :** Recognizing the users who actively participate and contribute to a knowledge database will not only encourage them to continue contributing, but will also encourage other users to join.

Overcoming Knowledge Management Challenges

Knowledge, learning and sharing come from people and their relationships with one another, not necessarily from the tools, databases and technological aids used. However, with the proper technology in place you can facilitate better communication and overcome these challenges to have an up-to-date, secure and organized knowledge base.

Conclusion

Knowledge management is an essential practice for enterprise organizations. Organizational knowledge adds long-term benefits to the organization in terms of finances, culture and people.

Therefore, all mature organizations should take necessary steps for knowledge management in order to enhance the business operations and organization's overall capability.

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Make In India Scheme By Government Of India: A Study

Aiswarya k s & Jancy Benny*

Jayashankar.J.**

Abstract

*MAKE IN INDIA is a swadeshi movement which covers 25 sectors of economy, launched by Government of India on 25th September 2014. It is set up to promote companies to manufacture their products in India and increasing investments in manufacturing. As a strategy it is the road map to respond to global (global + local) challenges through preparations for a World class manufacturing status & knowledge infrastructure that should create further knowledge for stepping on to global competitiveness. By this India emerged as a top destination globally in 2015 for foreign direct investment surpassing the United States and China with US\$60.1 billion FDI. The program includes major new programmes designed to facilitate investment speedy innovation, protect intellectual property, and build best-in-class manufacturing infrastructure. Make in India goals at 25 economy driving sectors including Biotechnology for GDP growth of the country. Prime Minister Narendra Modi launched the **Make in India** initiative on September 25, 2014, with the primary goal of making **India** a global manufacturing hub, by encouraging both multinational as well as domestic companies to manufacture their products within the country.*

Keywords : *swadeshi movement, global competitiveness, manufacturing hub*

Introduction

Make in India initiative was launched by Prime Minister in September 2014 as subdivision of a wider set of nation-building initiatives. Process to transform India into a global design and manufacturing hub, Make in India was a timely response to a crucial situation: by 2013, much-hyped emerging markets bubble has burst, and India's growth rate fallen to its lowest level in a period. Global investors argued that whether the world's largest democracy was offering an unfavourable situation or an opportunity. India's 1.2 billion citizens queried whether India was too big to succeed or too big to fail. India was on the peak of severe economic depression. It was set up against the backdrop of this crisis, and quickly became a rallying cry for India's innumerable stakeholders and partners. It is more than an inspiring slogan. It illustrates about the comprehensive and unprecedented overhaul of out-dated processes and policies. It also seeks to facilitate job creation, foster changes, enhance skill development and save intellectual property. The logo of 'Make in India' – a lion made of gear wheels – itself enlightens the important role of manufacturing in government's vision and national development. The initiative is built on four pillars which are as follows:

- 1. New Processes:** The government initiates several reforms to create possibilities for getting Foreign Direct Investment (FDI) and foster business partnerships. Some initiatives have already undertaken to improve the business environment from outdated

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policies and rules. This reform also aligned with parameters of World Bank's 'Ease of Doing Business' index to foster India's ranking on it.

2. **New Infrastructure:** Infrastructure is the integral part of the growth of any industry. The government intends to develop industrial corridors and build smart cities with state-of-the-art technology and speedy communication. Changes and research activities were supported by a fast-paced registration system and improved infrastructure for Intellectual Property Rights (IPR) registrations. Along with the growth of infrastructure, training for the skilled workforce for the sectors is being addressed.
3. **New Sectors:** 'Make in India' had identified 25 sectors to encourage with the detailed information being shared through a web-portal. The Government was allowed 100% FDI in Railway and removed restrictions in Construction. It had also increased the cap of FDI to 100% in Defense and Pharmaceutical.
4. **New Mindset:** Government in India was always seen as a controller and not a facilitator. This programme intends to innovate this by bringing a paradigm shift in the way Government communicate with various industries. It will focus on acting as a partner in the economic development alongside the corporate sector of the country.

Literature Review

- Christine Lagarde (2015) pointed that for India being a 'bright spot' on a cloudy global horizon, it urged government to seize its 36494 Selvam, Make in India a manufacturing hub: The real opportunities and challenges: A literature review opportunity told students at Lady Shri Ram College that she would personally invest her money in India. She positively predicted that India's GDP would be double in size by 2019 from what it was in 2009 is of a piece with similar gung-ho declarations of faith by visiting high profile dignitaries, corporate honchos and economists in the past. With its young demography, huge market size and managerial prowess India has for years been thought of as ready for takeoff.
- George Skaria (2015) remarked that when the central government announced the Make in India programme, it has caught the imagination of an industry longing for a panacea to a tentative industrial revival. According to Mckinsey analysis it was found that rising demand and Multinational Corporations' (MNC's) desire to diversify global production bases to India could help the country's manufacturing sector grow six-fold to \$1 trillion by 2025, while creating up to 90 million domestic jobs.
- Saraswat (2015) stated that Indian industries and companies have demonstrated their ability to master efficiency and local responsiveness but it also has to figure out the third key which is innovation to make in India dream come true. It called for bigger break through to cope with challenges in energy, environmental sustainability, quality of life, health care and to expand out digital landscape
- Sidhartha and Surojit Gupta (2015) stressed that the government's 'Make in India' initiative could get top billing in the 2015-16 Union Budget through tax breaks and other measures for several sectors. Make in India is the centre-piece of the government administration's bid to revive the manufacturing activity and create millions of jobs. With the Chinese economy showing, India senses an opportunity in the industrial sector.
- Swaminathan (2015) examined that the traditional manufacturing was not dying. It would grow in volume and employment for a long time. The newcomers occupied only a small part of the economic space today. In traditional industries, "make" and "manufacture" may remain synonymous. But preparation has to be made for future

where, increasingly, 'manufacture' will be just a small part of 'make'. He also stated that the central government came to power by promising rapid economic growth that delivered millions of jobs. To achieve this, the government had devised to 'Make in India' policy. Launched with a blaze of publicity, it aimed to make India a manufacturing giant and attract investors. It aims to raise the share of manufacturing in GDP from the current 13- 14% to 25%.

- Parimal Kr. Sem et al. (2015) analysed that the reinvigorated the inflows of FDI several measures were undertaken. One of such is the 'Make in India' initiative. It is a major national programme that aimed at facilitating investment by fostering innovation and enhancing the skill of the workforce.
- Pankaj Doval (2014) identified that Japanese electronics giant Sony is all set to make in India, thought the products will be contract-manufactured at Taiwanese maker Foxconn's upcoming facilities in the country
- Sridhar and Swatim (2015) analysed that the past 12 months records on foreign investments inflow into India showed that that the make in India initiative is indeed working. The Government of India has received investment proposals of over Rs.1,10,000 crore (US\$16.56 billion) in the last 12 months from a host of companies across industries. India has become one of the most attractive destinations for investments in the manufacturing sector.
- Selvam and Velmurugan (2015) explained the importance and perception of budding young entrepreneurs towards make in India a manufacturing hub campaign will help the government for opening more investment avenues to foreign institutional investors
- Srijan Pal Singh (2015) raised the questions like: How to Make in India? What will be the roadmap for Make in India? And, how do we go beyond Make in India – to research, design, develop, produce and thus truly "Create in India? In our opinion, the answer rests on five pillars", namely human resources, capital and incubation, tech infusion, building the ecosystem and domestic consumer leverage
- Raghuram Rajan (2015) sounded a word of caution about the new governments 'Make in India' campaign that assumed an export-led growth path of China and instead it should be 'Make for India' that will produce for the internal market.
- Baljayant Jay Panda (2014) expressed that the launch of the ambitious 'Make in India' campaign to promote manufacturing in India could not have been more timely, coming as it does in the wake of the death of two iconic brands, Ambassador cars and HMT watches. The World Bank in its 2014 rankings on the ease of doing business puts India at 134th out of 189 countries

Statement Of The Problem

Make in India was launched for the betterment of Indian market. Due to Liberalisation, Globalization and privatization more products from various countries have dragged Indian economy. So to make Indian economy more profitable and to increase market, Make in India have been introduced. This project focuses on analyzing the changes made in Indian economy after the introduction of Make in India programme.

Need And Importance Of The Study

The aim of introducing this campaign in India is to make India a world level manufacturing powerhouse which will definitely help in resolving the biggest issue of Indian economy. It thereby creates a policy framework to ease foreign investment, ease of business activity and management of intellectual properties.. This helps industries to have firm manufacturing

bases in India. In turn, this helps create job opportunities in India. Industries tend to develop a support ecosystem around them thereby empowering small businesses. Exports from such industries help in contributing to our foreign exchange reserve. Most importantly, such initiatives help bring critical knowledge about manufacturing and production among the Indian population. Make in India campaign provides all the top investors a favorable opportunity to come to India and invest in businesses from electrical to electronics, from automobiles to agro value addition, from satellite to submarine, etc . Make in India campaign with various effective resources aims to draw the attention of worldwide top businessmen to invest in India for any related business.

Objectives Of The Study

- To study the concept of Make in India.
- To evaluate the progress of various sectors of the economy with the introduction of Make in India scheme.
- To understand the positive contributions of Make in India.
- To understand the drawbacks of Make in India scheme.
- To suggest various measures for reducing the drawbacks of Make in India scheme.

Research Methodology

Research Design: A research design is a conceptual structure within which the collection, measurement and analysis of data is done in an economical manner.

Data Collection: Data collected through secondary data. Secondary data is the data collected from published sources like previous reports of the company, articles and websites and these sources act as means of reliable secondary data effective for analysis.

Presentation:

The collected data is secondary, presented in the form of tables, to provide a better understanding of data.

Analysis And Discussions

For the Make in India campaign, the government of India pointed out certain priority sectors that shall be promoted adequately. These are the sectors where likelihood of FDI (foreign direct investment) is the highest and investment shall be encouraged by the government of India .On campaign launch, Prime Minister Mr.Modi said that the growth of these sectors shall ensure that the world would come to Asia, particularly in India where availability of both democratic conditions and manufacturing superiority made the best destinations, especially when it is combined with the effective governance launched by his administration.

Name of the Sector	About the sector	Incentives offered/Programs Launched	Progress so far (Based on latest reports)																							
<p>Automobile and Automobile Components</p>	<p>India is the largest manufacturer of two-wheelers, three-wheelers, and tractors in the world. India has a competitive cost advantage over its counterparts. We also have a pool of masterminds who are serving worldwide as a strong workforce</p>	<ol style="list-style-type: none"> 1. Faster Adoption and Manufacturing of Hybrid and Electric vehicles (FAME) and National Electric Mobility Mission Plan 2020 (NEMMP) has been launched to promote electric cars. 2. National Automotive Testing and R&D Infrastructure Project (NATRIP) centres are set up 3. 100% FDI under automatic route subject to all applicable regulations and law is available 	<p>The top players have inaugurated manufacturing units namely:</p> <ol style="list-style-type: none"> 1. ISUZU motors in Sri City Andhra Pradesh 2. Tata Motors & Fiat jointly have opened up in Ranjangaon, Pune 3. Suzuki Motors in Ahmedabad 4. Mercedes Benz In Chakan <table border="1"> <thead> <tr> <th>Rise in Automobile</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Production</td> <td>2.60%</td> </tr> <tr> <td colspan="2">Domestic sales:</td> </tr> <tr> <td>Passenger vehicles</td> <td>7.24%</td> </tr> <tr> <td>Commercial Vehicle</td> <td>11.51%</td> </tr> <tr> <td>Three-wheeler</td> <td>1.03%</td> </tr> <tr> <td>Two-wheeler</td> <td>3.01%</td> </tr> <tr> <td>Exports</td> <td>1.91%</td> </tr> <tr> <td colspan="2">Rise in Automobile Components</td> </tr> <tr> <td>Turnover</td> <td>8.80%</td> </tr> <tr> <td>Exports</td> <td>22%</td> </tr> </tbody> </table>		Rise in Automobile	Percentage	Production	2.60%	Domestic sales:		Passenger vehicles	7.24%	Commercial Vehicle	11.51%	Three-wheeler	1.03%	Two-wheeler	3.01%	Exports	1.91%	Rise in Automobile Components		Turnover	8.80%	Exports	22%
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<p>Aviation</p>	<p>The aviation sector is expected to take a boom when we land in 2020. India currently occupies 9th position in the world and is soon expected to reach the skies</p>	<ol style="list-style-type: none"> 1. Ude Desh ka Aam Nagrik (UDAN) was introduced for regional connectivity 2. Incentives in the form of tax concessions are provided 3. National civil aviation policy 2016 was announced for establishing an integrated ecosystem, to encourage tourism and increase employment 4. Airports are being developed under the public-private partnership mode to encourage private participation 5. GPS Aided Geo Augmented Navigation system (GAGAN) to support direct air routes, reduce fuel consumption and improve safety is initiated 	<ol style="list-style-type: none"> 1. The passengers carried by scheduled domestic airlines have increased by 29% 2. Common User Domestic Cargo Terminals have been operationalized in 13 cities so as to facilitate everything related to cargo services under one roof. 																							
<p>BioTechnology</p>	<p>The biotechnology industry is an industry where India has grown in leaps and bounds. The industry owes its success to the R&D activities and growing government initiatives</p>	<ol style="list-style-type: none"> 1. FDI Policy 100% FDI for Greenfield Pharma via the automatic route 100% FDI for Brownfield Pharma. Here, in case of FDI up to 74% automatic route is available and beyond 74% government route has to be taken 100% FDI for medical devices via the automatic route 2. Biotechnology Industry Research Assistance Council (BIRAC) was set up to assist the industry through funding, mentoring, handholding and infrastructure support 	<ol style="list-style-type: none"> 1. Current Good Manufacturing Practices (CGMP) a plant was inaugurated in 2016 for the manufacture of Phytopharmaceuticals 2. A virtual centre was launched across five Indian Institutes of Technology, in 2015, to develop and advance technologies in the area of biofuels 3. 30 Bio-incubators and Biotech Parks were supported/established from April 2014 to September 2016 4. First indigenously developed and 																							

			manufactured rotavirus vaccine 'Rotavac' was launched in 2015
Chemicals and Petrochemicals	The Chemicals industry serves as a backbone to many other industries which makes it a lucrative option. Factors like raw material availability and innovation provide an incentive to the companies to get rolling	<ol style="list-style-type: none"> 1. The Assam Gas Cracker project is one of the biggest projects which is expected to produce about 2.8 lakh MT polymers per annum and also expected to provide employment to 100000 people indirectly 2. A scheme is developed to set up need-based plastic parks with good infrastructure facilities with financial assistance up to 50% of the project cost 	<ol style="list-style-type: none"> 1. The FDI equity inflows in the sector increased by 107% 2. 0.44 Million MT Per Annum Polypropylene Plant is commissioned at Mangalore
Construction	The demand for real estate and infrastructure projects has been on an uphill over the years. The identification of smart cities has been a smart move which intends to utilize the resources in the best possible manner	<ol style="list-style-type: none"> 1. A city challenge competition was held under the 100 smart cities missions with an intention to achieve infrastructure development 2. Atal Mission for Rejuvenation and Urban Transformation (AMRUT) is a mission which concentrates on providing basic infrastructure facilities 3. Swachh Bharat mission established to promote healthy sanitation practices 4. Heritage City Development and Augmentation Yojana (HRIDAY) focuses on revitalizing the Indian Heritage sites 5. The Real Estate (Regulation & Development) Act, 2016 has been the shining star of this sector 	<ol style="list-style-type: none"> 1. 1.7 million houses have been constructed under Pradhan Mantri Awas Yojana (Gramin) houses 2. The construction sector is the industry which stands 2nd in line in terms of providing employment, after agriculture. A whopping 35 million people have been employed
Defence	India has opened its doors of the defence sector to privatisation which was a very essential step to leverage the domestic markets and meet the defence needs	<ol style="list-style-type: none"> 1. The opening up of the defence sector to the private sector is paving the way for strategic partnerships 2. 100% FDI <ol style="list-style-type: none"> i. Upto 49% automatic route ii. Above 49% government route 3. A 'Make in India' portal for Defence Production (www.makeinindiadefence.com) has been launched Which provides policy and procedural issues which are of importance for the defence manufacturing industry 	<ol style="list-style-type: none"> 1. Various products manufactured in India like HAL Tejas Light combat aircraft by sourcing 95% of the resources required locally 2. Defence equipment amounting to INR 2059.18 Crore have been exported to 28 countries in FY 2015-16
Electrical Machinery	In the electrical machinery sector, Indian manufacturers are at their peak of competitiveness with regards to product design, manufacturing & testing facilities. A big chunk of investments are made in research and development which will help India accelerate its manufacture	<ol style="list-style-type: none"> 1. Incentives for capacity addition in power generation will serve as a means to increase the demand for electrical machinery 2. 100% FDI is allowed in the automatic route subject to rules and regulations 	<ol style="list-style-type: none"> 1. This industry recorded a double-digit growth rate of 12.8% over 2017-18 2. India has turned around from a net importer of electricity to a net exporter of electricity
Electronic Systems	Electronic system is an area where the focus has been on import substitution. India being a labour rich country has a forte which needs to be taken advantage of.	<ol style="list-style-type: none"> 1. The Modified SIPS scheme has been developed in order to attract investment into this sector 2. Export incentives 2-3% are made available under the Merchandise export from India scheme 3. The export promotion capital goods scheme offers zero customs duty for import of capital goods used for pre-production, production and post production 	<ol style="list-style-type: none"> 1. Around 38 mobile manufacturing units have been set up which have created employment of about 38300 2. Under Digital Saksharta Abhiyan(DISHA)around 99.56 lakh candidates have been enrolled for training 3. In 2017 this industry witnesses a remarkable jump of 27% where in the total volume reached 1.57 Lakh Crore from 1.43 Lakh Crore in 2016
Food Processing	India is in a position to provide hygienic food processed and packed by utilisation of modern technology. Nivesh Bandhu is a platform which provides a one stop solution to investors in the area of food processing, aiding them in decision making and providing incentives	<ol style="list-style-type: none"> 1. Reserve Bank of India has classified loan to food & agro-based processing units and Cold Chain under agriculture activities for Priority Sector Lending (PSL) subject to the aggregate sanctioned limit of USD 15.38 million per borrower which will ensure a good flow of credit to the entrepreneurs 2. A special fund called Food Processing Fund amounting to USD 300 millions has been deposited with the NABARD in order to provide funds to 	<ol style="list-style-type: none"> 1. The growth rate of Gross Value Added has increased from 1.91% in 2013-14 to 5.78% in 2014-15 at constant prices 2. There has been a FDI equity inflow of USD 1.7 Billion from April 2014 to December 2016 3. 88 cold chain projects have been operationalised out of the 134 projects which had been sanctioned 4. The government had sanctioned 42 mega

		designated food parks and individual food processing units in the designated food parks 3. Reduction of excise duty and customs duty has been a fiscal incentive which helps boost up the industry	food parks of which 8 have been operationalised. Every mega food park is set to create employment opportunities for about 5000-6000 people and benefit 25000-30000 farmers
IT and BPM	IT + IT= IT Indian Talent + Information technology = India Tomorrow. The Information technology sector contributes a countable share to the exports. This industry is the largest private sector employer providing millions of job opportunities	1. Favourable government policies and initiatives serve as an incentive to invest in this sector 2. The Digital India campaign has pumped in a lot of investment with digital delivery standing as a focus point	1. Total FDI equity inflow in Computer software and hardware sector saw a major growth from 2.3 Billion to 5.9 Billion
Leather	The leather industry is striving to succeed with 55% of its workforce below 35 years of age. The demand for leather products is on the rise and the concept of utilising young labour with oozing energy is helping this sector flourish	1. The leather product sector is entirely de-licensed which serves as an icing on the cake 2. Grants are provided in the following manner i. 30%-on cost of plant & machinery to Micro and Small Units ii. 20%-To other units iii. 50%-for establishment of Mega Leather Clusters iv. 50% for upgradation/installation of Common Effluent Treatment plants	1. The FDI equity inflow amounted to USD 53.39 Million in this sector 2. India boasts of being the 2nd largest producer of footwear and also the 2nd largest exporter of leather garments 3. Under the Indian leather development programme, primary skill development training has been imparted to 117499 and 80% of these have been placed as on January 2017
Media & Entertainment	Despite all the criticism against television, India has the 2nd largest TV Market in the world. Growth in the number of multiplexes, increased liberalisation and tariff relaxation serve as incentives to start exploring into this industry	1. In order to give a lift to the exports, treaties have been signed with countries like Italy, Brazil, the UK and Germany 2. Basic Custom duty for digital still image video camera has been brought down to Zero 3. National Film Heritage Mission has been introduced to archive films through the National Film Archive of India	1. Growth in FDI in the information and broadcasting area from USD 1.9 Billion (2010-14) to USD 3.4 (2014-18)Billion which is a good 1.8 times within a span of 8 years 2. 283 billion to 263 Billion, a 20 billion leap is the growth recorded by the print industry 3. The 24*7 DD Kisan channel saw a huge response with a total viewership of 1.52 Crores within a very short span of 7 months
Mining	Mining is the crux of the Indian economy. Many industries depend on it to procure their raw materials.	1. The Mines and Minerals Development and Regulation Act 1957 (MMDR) had been amended with greater transparency as its motive 2. District Mineral Foundation set up for grievance redressal and also to improve the image of mining	1. In terms of Gross Value Added this sector has grown by 10.5% in 2016-17 and 12.5% in 2017-18 2. While the world market is shaky due to the chinese economy issues, India has experienced a surge in the production of minerals 3. By November 2016 17 mineral blocks across 7 states have been auctioned which has resulted in additional revenues amounting to INR 47551 Crores and total revenues of INR 59639 Crores
Oil and Gas	The mushrooming population and the flourishing economy of India has helped the Oil and Gas Industry in a mighty big way. Many opportunities exist for the development of underground coal, its gasification and conversion to liquids	1. Hydrocarbon Exploration & Licensing Policy (HELP) provides for a uniform licensing system, no awaiting a formal bid round and incentives on royalty rates for offshore blocks 2. An additional depreciation of 15% on installation of capital equipment acquired is permitted	1. In Gujarat India has invested in refineries specially for exports which has made India a net exporter of petroleum while we are a net importer of crude oil 2. Refining capacity of India has been expanded by 15 Million Metric Tonnes Per Annum due to the commissioning of Paradip Refinery In February 2016 3. Crude Oil Strategic storage of 5.33 MMT capacity was built at Visakhapatnam, Mangalore and Padur
Pharmaceuticals	Medical Tourism is moving uphill due to the expertise India possesses in this space. India's cost of production is considerably lower than USA and half of the cost in Europe	1. In order to make healthcare more reachable new Health and Wellness centres have been established 2. The National Pharmaceutical Pricing Policy 2012 mainly focuses on the regulation of the price of drugs	1. The pharmaceutical industry has seen an upturn from INR 158671 Crore in 2013-14 to INR 177734 Crore in 2014-15 to INR 204627 Crore in 2015-16 2. Indian Drugs and Pharmaceuticals Limited has enabled the mass manufacture of products

			<p>in the field of Oncology, Nephrology and Cardiology</p> <ol style="list-style-type: none"> 3. Pharma Jan Samadhan, a customer grievance redressal system launched in March 2015 4. Pharma Sahi Dham provides real-time information on prices of medicines
Ports and shipping	<p>India has 12 major ports and 64 minor ports handling the Import Export Cargo. In order to attract investment, the Government has allowed 100% FDI in the shipping sector</p>	<ol style="list-style-type: none"> 1. New Berthing Policy for Dry Bulk Cargo for all major ports was introduced to facilitate movement of higher cargo throughput from major ports 2. Funds amounting to USD 25 Million for major ports and USD 21 million for minor ports have been earmarked 	<ol style="list-style-type: none"> 1. A giant leap was seen in FDI from USD 0.5 Million (2010-14) to USD 2.5 Billion (2014-18) 2. Turnaround time at ports reduced by 25% (2012-13 vs 2015-16) 3. Under the Sagarmala project, a total of 173 projects with an investment of INR 4 Lakh Crore introduced during 2016-17
Railways	<p>India stands tall with a ranking of World No 3 in terms of the railway network spanning more than 66030 Kms. 100% FDI provides an opportunity for high speed railways and electrification. Automatic Ticket Vending Machines and computerized passenger reservation systems aim at passenger convenience</p>	<ol style="list-style-type: none"> 1. Public Private Partnership mode to enhance passenger amenities 2. Project Swarn targets on improving passenger experience and in order to facilitate this 14 Rajdhani and 15 Shatabdi trains are identified 3. Mission Raftaar has at its core the doubling of average speed of freight trains and also increasing the speed of all non suburban trains 	<ol style="list-style-type: none"> 1. A noteworthy achievement in the year 2017-18 is 51 trains have been speeded up by more than an hour 2. The Gatimaan Express is the fastest train in India which covers a distance of 188 Kms in 1 hour and 40 mins 3. In order to set up an electric locomotive factory at Madhepura India has joined hands with M/s Alstom Manufacturing India and for setting up a diesel locomotive factory with GE Global Sourcing India Pvt Ltd at Marhowra amounting to a total of INR 40000 Crores
Renewable Energy	<p>There has been an ever increasing demand for energy in the country and it is imperative to use renewable sources of energy. Reducing India's dependence on expensive imported fossil fuels is the goal in this sector</p>	<ol style="list-style-type: none"> 1. A bouquet of fiscal incentives have been provided which include: <ol style="list-style-type: none"> i. Enhanced Depreciation ii. Concessional Custom duty iii. Excise duty exemption iv. Income tax holidays for 10 years 2. In order to encourage usage of renewable energy sources clean environment cess has been doubled from INR 200 per tonne to INR 400 per tonne. 3. To promote clean energy co-operation a joint Indo-US PACE Setter fund has been established with a contribution of USD 4 Million 	<ol style="list-style-type: none"> 1. The world's largest solar power plant was commissioned in Tamil Nadu with a huge capacity of 648 MW 2. 140% increase in the solar power capacity (2014-16 vs 2012-14) 3. 34 Solar parks have been sanctioned to 21 states and INR 356.63 Crores has been provided to Solar Energy Corporation of India for the same
Roads and Highways	<p>The government is taking a major step in upgrading highways and expressways. Government is encouraging the development of this sector by providing subsidies, tax exemptions and duty free imports of high capacity and modern, road construction equipment</p>	<ol style="list-style-type: none"> 1. The government takes burden of cost on project feasibility study, shifting of utilities, environment clearance etc 2. Subsidy of upto 40% of the project cost is provided as an incentive 3. The Ministry of Road Transport and Highways (MoRTH) has provided funds to the state government to develop state roads 	<ol style="list-style-type: none"> 1. Achievement for the year 2017-18 are 8088 km of road length awarded, 7589 km of construction completed and 2156 km of highways tolled 2. The length of the national highways has seen substantial growth from 91287 km in 2014 to 115435 km in 2017 3. After the introduction of Electronic Toll Collection System the fee collected has increased from USD 27 million in Jan 2017 to USD 43 Million in Nov 2017
Space	<p>India has skyrocketed its way into the space sector literally and even metaphorically. Our country's cost effective programme has made it a launchpad for many countries and is hopeful of calling itself as the world's launchpad</p>	<ol style="list-style-type: none"> 1. GSLV III launched for satellites which are heavier in nature weighing about 4500 to 500 kg 2. ISRO has entered into co-operative arrangements with 33 countries and 3 multinational bodies 	<ol style="list-style-type: none"> 1. Antrix Corporation Limited has undertaken various initiatives for marketing of space products and services at a global level 2. India is the first nation in the world to reach Mars successfully in the 1st attempt. The spacecraft was called Mangalyaan
Textiles and Garments	<p>Textiles and Garments sector has made India a one-stop solution for textile and</p>	<ol style="list-style-type: none"> 1. The Merchandise Exports from India Scheme served as an incentive by providing duty rewards to 	<ol style="list-style-type: none"> 1. The total exports took a leap from 13% to 15% (2013-14 vs 2015-16)

	<p>garment needs. Being one of the largest producers in the world and second largest exporter of cotton in the world, this scheme has made India world famous. Women empowerment is seen in the right sense here as 70% of its workforce consists of women</p>	<p>the extent of 2-5% of FOB value 2. To reduce the burden on Indian investors, interest equalisation scheme was introduced 3. Special Textile Packages have been approved with a view to create jobs, encourage exports and also to draw in investments</p>	<p>2. There has been a substantial growth in FDI of 2.5 times (2010-14 vs 2014-18) 3. The existing textile park has seen the entry of new production units totalling to 200 in number in the recent past creating jobs for 11000 persons</p>
Thermal Power	<p>The thermal power industry has various incentives which ensure adequate return on investment to companies. Expansion in industrial activity and growing population are factors which will encourage companies</p>	<p>1. The revised tariff policy 2016 guarantees a good return on investment and ensures safety of the investments to the investors 2. The Ultra Mega Power Projects having a huge capacity of 4000 MW have been set up by the government of India in order to bear the fruits of economies of scale and fast capacity addition</p>	<p>1. India boasts of having the fifth largest installed capacity in the world 2. The electricity generation increased by 5.9% (2016-17 vs 2015-16) 3. April 2014 to October 2016 has witnessed an addition of 50471.41MW to the generation capacity. 4)98.8% of the villages have been electrified</p>
Tourism and hospitality	<p>The tourism and hospitality is the lifeblood of an economy. Tourism is the third largest foreign exchange earner next in line after gems and readymade garments in India. Private-public partnerships will be the focus for India to see this Industry makes its mark in the future</p>	<p>1. Swadesh Darshan scheme had been launched to serve mass and niche tourism 2. The National Mission for Pilgrimage Rejuvenation and Spiritual Augmentation Drive had the beautification of pilgrimage sites as its focus 3. The e-tourist visa facility has been extended to travellers of 150 countries</p>	<p>1. India crawled up 13 places from 65 to 52 as per the Travel and Tourism Competitiveness Index 2015 of the World Economic Forum 2. Foreign Exchange Earnings have increased from INR 1351 Billion (FY 2015-16) to INR 1556 Billion 3. This sector is among the top 10 sectors when it comes to the FDI inflow. The FDI inflow has increased by 72% (2015-16 vs 2014-15)</p>
Wellness	<p>The demand for AYUSH (Ayurveda, Yoga, Naturopathy, Unani, Siddha) has seen an upsurge over the years. The adverse effects of other drugs and its high cost has caused this turnaround and this is here to stay</p>	<p>1. 100% FDI is permitted in the AYUSH sector 2. Central Sector Scheme for promotion of International Cooperation has as its aim the creation of awareness about the strength and utility of AYUSH and its promotion at the international platform 3. The government of India has set up the AYUSH Sector Innovation Council</p>	<p>1. India stands as the second largest exporter of AYUSH and herbal products 2. This industry has a huge potential to create jobs to the level of 3 million jobs</p>

Advantage Of Make In India

“Make in India is a Lion’s Step.” So, pledged by the prime minister of India, Narendra Modi, during the inauguration of the prominent ,Make in India campaign .The advantages and disadvantages of Make in India campaign are as follows

1. Generating Job Opportunity: Make in India crusade is providing job opportunities for many citizens of India. It has targeted mainly the youth of the country. The investments in the targeted sectors such as telecommunications, pharmaceuticals, tourism etc. will encourage the young entrepreneurs to come forefront with their innovative ideas without worrying about the source of speculation.

2. Growth of GDP : Manufacturing of products in India, will help the economic growth of the country. This will not only boost the trade sector but also it will increase the GDP of Indian economy. Various sectors such as exportation, architecture, textiles, telecommunications etc. are likely to flourish drastically by strengthening the Indian economy.

3. Increase in Brand Value : Most of the urban population prefers international brands with high quality rather than putting their faith in Indian retailers. As a result, the small manufacturing companies suffer extreme loss in the market due to decreased market for their products. With the make in India campaign, such small manufacturers will be provided with

a real shot at business. Thus the companies investing in such small time retailers from all around the world, the brand value of Indian merchandise will increase dramatically.

4. **Business can be carried out at ease:** Make in India provides an invitation to the entire world to manufacture their products in India, the various restrictions opposed over the entrepreneurs will be lifted and aspiring businessmen from all over the globe could invest in India with no stress at all.

5. **Attracting the Young Generation :** The young generation of India plans to move out of the country in the hope of a better future and employment with high salary and benefits. Because of this India has always been deprived of innovative and new ideas from the part of its citizens. With the introduction of make in India campaign, the youth will be attracted to stay in the country and contribute their creativity and new ideas for the betterment of the country.

6. **Rural Areas are developing :** It is a well-known fact, that if a factory is set up it will not only improve a particular area, but also it provides for the locals with employment opportunities, thus the quality of life of people would automatically improve. Amenities like schools, hospitals and other public conveniences will be developed for the betterment of the public.

7. **Capital Inflow:** The Indian currency is being spent on the foreign countries with the introduction of make in India. The capital will not only remain in India, but also the foreign currency will be provided to the nation as well. Also, India will not spend on foreign countries, but the foreign countries will spend on India in the form of investments and wages.

8. **More Job Opportunities:-** The initiatives of Make in India will lead to the creation of many job opportunities. Around ten million people are expected to get jobs and opportunities. An increase in investment will bring employment opportunities in India for the skilled labor force and this will form a job market.

9. **Swachh Bharat Abhiyan:** The masterstroke of Modi government is the Swachh Bharat Abhiyan. This mission was being incorporated by Modi government in the memory of Mahatma Gandhi, aiming for a hygienic and a clean India. The vision was to sweep, mope, dust and wash the surrounding and remove unwanted unhygienic materials from the society to help improve thought and action in Daily Routine.

10. **Junking the Old System & Laws :** The title itself says that the applicability of a new system in the country. This actually comes in favor of the Modi government as well as the government lead by Shri Atal Bihari Vajpayee, who literally worked on removing junk laws from the system. Where as in other side Modi has Government removed various dead files and the era of advancement has arrived.

Disadvantages

1. **ANTI COMPETITIVE:-** This move can be said as anti-competitive as this move can remove competition from foreign brands .Also the market is effected due to the influence of this move.

2. **Disputes in WTO against India:** Since India is part of WTO and signatory of GATT, there would not be any trade distortion practices. But using MII goods only is a kind of trade distortion and will surely lead to dragging India to WTO disputes and India has to face various after effects.

3. **Agriculture Myth:** India is often termed as an agricultural economy whose main existence is due to the agriculture. However, the contribution of agriculture to the GDP is coming down from its above 50% levels at one point. Industry and services together rose

over 11% in their contribution to the GDP, but employment figures rose only by 6%. This implies that we continue to employ more and more people in agriculture while income growth is happening in the industry.

4. Pollution : One of the biggest problems which is prevailing and faced in India is pollution. According to statistics, India has a pollution index of 76.50. With the make in India movement, this level of the pollution is likely to arise in a couple of years. Gradually, making the condition in India worse. Hence, Make in India might be economically beneficial but it will have an inverse effect in the environment ecologically.

5. Interest in International Brands : The brand value of Indian merchandise will definitely increase. But the Indian upper class people, who can actually afford such merchandise, is addicted with foreign label. This will eventually become a big hurdle for the local entrepreneurs. It is because a great level of promotion is required to build the confidence level of people in the local brands.

6. Loss for Small Entrepreneurs : The make in India campaign, welcomes foreign countries to manufacture and market in India with open arms which will automatically ease up the various restrictions over trade with foreign countries. And thus inviting attention of the international commercial companies. However, these companies will not only seduce the Indian population but also would dominate the small local entrepreneurs and force them out of business.

Findings

1. Make In India focuses on creating a number of job opportunities, and skill enhancement, for providing a good status for the youth of the country.
2. The young generation has a lot of skills and new ideas, but due to lack of the proper channel they are not willing to stay in the country. Make in India initiative would encourage the employees to put their skills here and take the industrial sector into a new dimensions.
3. The most negative impact of Make in India would lie on agriculture sector, the more the industrial sectors are given preference, the more agriculture sectors would be neglected.
4. The more industries are being set up there is a danger of depletion of natural resources as the industries may take up the lands and other for establishment of manufacturing units and pollution levels may increase, small entrepreneurs may have a threat to their business.
5. The training for labor may be a huge cost of burden as manufacturing sectors demand highly skilled labor.
6. It would create a demand for skilled labours in specific sectors such as automobile, chemicals, IT, Pharmaceuticals, electrical, construction, textiles, media and entertainment, tourism, hospitality etc.
7. The Make in India program is growing strong day by day and is focused on transforming the country into a global business hub.
8. For the Make in India campaign, the government of India has identified 25 priority sectors that shall be promoted adequately. These are the sectors where likelihood of FDI (foreign direct investment) is the highest and investment shall be promoted by the government of India.
9. Due to manufacturing of products in India, economic growth is inevitable, which will not only boost the trade sector but also will increase the GDP of Indian economy as with the setting up of new factories and various investments being speculated in the Indian

commercial sectors the flow of income will be humongous. Various sectors such as exportation, architecture, textiles, telecommunications etc. are likely to flourish inevitably, strengthening the Indian economy which is already the seventh largest in the world.

10. It is a well-known fact, that a factory set up not only improves a particular area but also provides the locals with employment, thus the quality of life of people would automatically enhance. Amenities like schools, hospitals, and other public conveniences will be developed for the betterment of the public.

Suggestions

1. The government must create more and more initiatives in developing truly skilled employees.
2. In order to support all the investment that will go into developing the manufacturing sector, we need liberal taxation policies to facilitate technology imports. There are some legacy laws related to the imports of components and intellectual property rights that India must do away with at the earliest.
3. Focusing only on short term economic benefits should be reduced and long term economic policies should be encouraged.
4. Ease of doing business in India is not upto the mark. Private firms, especially larger firms are complaining about regulatory obstacles.
5. There is a shortage of skilled manpower in India. Though the situation has improved, still there is a gap in between the demand and supply of skilled manpower.

Conclusion

Manufacturing sector currently contributes just over 15% to the national GDP. The aim of Make in India campaign is to increase this to a 25% contribution as seen with other developing nations of Asia. In this process, the government expects to generate job opportunities, attract more foreign direct investment, and transform India into a manufacturing hub preferred around the world. The government of India is making a huge effort in order to reduce any type of burden on the investors. There is an arrangement of a team ready to answer all the queries from business entities through the web portal (makeinindia.com). There is also a back-end support team in order to respond specific queries within 72 hours of duration. Almost 25 key sectors (such as aviation, chemicals, IT, automobiles, textiles, ports, pharmaceuticals, leather, hospitality, tourism, wellness, railways, etc) have been identified by the government to work for the investors to become a world leader.

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Merger Of Sbi And Its Associates; A Study On Employees Perception With Special Reference To Ernakulam City

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Abstract

The merger of SBI and its associates is considered to be the largest merger in the history of Indian banking history.

SBI will benefit from better reach and network through mergers with its associated banks and will be among the largest banks in the world. But it risks ignoring local sensitivities as well. While the consolidation of State Bank Of

India has many advantages, it is not without pitfalls.

The issue of staff integration is likely to be complicated. Questions regarding the work load of the employees and their working condition are bound to arise. This paper aims to analyse the impact of merger of SBI and its associates with regards to the perception of its employees. The data is collect from 50 employees of SBI working in Ernakulam district. The tools used to analyse the data are percentage analysis and the data was collected through simple random sampling method.

Keywords: Merger, SBI, Employees Perception, Job satisfaction

Introduction

Merger has become a common term in any industry. A merger usually involves combining two or more companies or firms into an even more powerful and larger firm. The organisation thus formed may be considered as the product established with the features of those small inputs.

State Bank of India or SBI is considered as India's largest bank. It is a government corporation statutory body with its headquarters in Mumbai and is the largest public sector bank providing banking and financial services to its customers. SBI had many subsidiary banks formed earlier in various parts of the country. Gradually, these subsidiaries were merged with SBI. But the biggest merger in the history of Indian banking sector took place recently when SBI merged itself with its five associate banks which include State Bank of Bikaner & Jaipur, State bank of Mysore, State Bank of Hyderabad, State Bank of Travancore and State Bank of Patiala and with the Bharatiya Mahila Bank. The merger has been discussed and debated for a long period from the point of view of customers, employees, etc. SBI is regarded as one of the trustworthy and responsible bankers by the general public of India. The Indian banking industry has enhanced a lot from task-oriented approach to customer centric strategy. Nowadays, even the banking companies have started insisting on the satisfaction of its customers along with the functional excellence they bring out for the development of the country.

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Need Of The Study

On 1st April 2017, SBI and its five associate banks were merged and it was regarded as one of the major economic reforms that entirely changed the phase of India's banking sector. By doing so, SBI became one of the top 50 global banks. But on the other hand, the impact of this initiative on employees is still uncertain. Therefore our aim through this study is to analyse the impact of SBI merger with regards to the perception of its employees.

Statement Of The Problem

India is a growing economy. India's banking sector has expanded from metropolitan cities to its most remote areas for the last three decades.

In this scenario, the merging of SBI is proving to be a milestone in the growth of the country. But what does that mean to the people of India?

It is propagated that the success of a company depends on satisfaction of its employees.

This motivated us to conduct a study on the impact of SBI merger in view of the employee perception.

Importance Of The Study

SBI merged with its associate banks in order to have an increased balance sheet and economies of scale. SBI aims to enter the league of the world's largest banks through this merger. The market share of the SBI is estimated to rise from 17% to 22.5-23%. Earlier SBI had employee strength of about 2 lakhs, but it is estimated to cross 3 lakhs after combining with all these banks. This pooling of skills will simplify the workload and increase the efficiency of their work. With this merger, SBI has over 24,000 branches and more than 59,000 ATMs serving over 42 crore customers across the country. Thus the idea behind the merger is to increase efficiency and productivity of SBI by becoming the largest bank in the country.

Objectives Of The Study

The main objectives of the study are as follows:

- To understand the concept of mergers and acquisitions.
- To analyse the employees perception towards SBI and its associate merger.

Research Methodology

Research Design: A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to research purpose with economy in procedure.

Sampling Design: Sampling Design refers to the technique or procedure that researcher would adopt in selecting items from the sample.

Sampling Size: 50 respondents are selected from within the Ernakulum district after considering time and cost.

Sampling method: Simple Random Sampling method is used to collect the data from the respondents.

Data Collection: Data collected includes both Primary data and Secondary data. Primary data is the data collected for the first time by way of questionnaire. Secondary data is the data collected from published sources like previous reports of the company, articles and websites. And these sources act as means of reliable secondary data effective for analysis.

Data Analysis Tools

- Percentage Analysis
- SPSS

Presentation: The collected data is, primarily, presented in the form of tables, to provide a better understanding of data. After tabulation, a pictorial representation of the tabulated data is made with the help of Graphs, Pie Diagrams and Bar Charts etc. This provides ease in analysis of data.

Literature Review

1. The study of NehaDuggal (2015) on the topic “Mergers and Acquisition in India: A case study on Indian Banking Sector.”studied the mergers of 8 Private banks from 2001-2006 to understand the impact of merger on the financial performance and sustainability of the banks.It was concluded that mergers paves way towards a positive trend in the banks' ability to earn profits and building on assets for future growth.
2. Dr. Sunil Dutt (2016) examined the employee satisfaction in the banking sector with the help 100 employees working in this area of expertise through his study “Perception of Employees towards Job Satisfaction in Banking Industry: An Empirical Study”. It was found that majority (30%) of employees were dissatisfied with their line of work due to less salary, inadequate policies of banks, noncooperation of top management.
3. Dr.S.BulomineRegi (2017) on the topic “Customers’ Satisfaction about Banking Services – A Comparative Study of Private and Public Sector Banks” tried to analyse the factors influencing the satisfaction of the customers availing banking services of both public and private sector banks with the help of four banks and about 100 respondents selected for the study. It was concluded that customer satisfaction in private sector banks dominated than in the case of public sector banks due to factors like good customer-banker relationships and facilities provided in the banks like drinking water facility etc.
4. Roma Chavan (2017) in his study”A Study on the Role of Human Resource Management in Banking Sector” tried to analyse the role of HRD and management in public sector bank in India.Forthis purpose 120 respondents wereselected.It was concluded that there exist a need for highly competitive and innovative HR department practices in the banking sector in order to meet the emerging needs of customers.
5. JyotiRani(2017) on the topic “Mergers and Acquisitions of SBI: Indian Banks Study” studies the need and purpose of mergers with special reference to SBI bank.It was found that the merger helped the bank to increase efficiency by proper employment of resources and rationalization. But there also presented some problems regarding the proper finalization of accounts and common borrowers.
6. Nair SreejaSivankutty& B SudarshanChakravarthy(2017) conducted 17a study on the topic “Impact Of Goods And Service Tax (GST) On The Banking Sector”. It was noted that implementation of GST had a significant impact on the banking sector. Through this it was noted that even though it evades multiple tax systems customers have to roll out more to avail the banking services.
7. Dr.M.G.Varshney&SangeetaMalpani(2014) in their study titled “Paper on job satisfaction of SBI Employees: Job Satisfaction of Public Sector Bank Employees (A Case study of Udaipur and Rajsamand Districts S.B.I.)” aimed at finding out job satisfaction of bank employees through different dimension of satisfaction levels. For this purpose a survey of about 150 respondents were included in the study. It was found that for every employee the parameter for satisfaction is unique and no employee can be fully satisfied.
8. The study of ParveenKumari (2014) on the topic “Mergers and Acquisitions in Indian Banking Sector- a Strategic Approach” focused on the merger of four major banks. The

study resulted in the conclusion that the mergers paved way in the increase in no. of branches and ATMs as well as in deposit amount, and thus their overall net profit and worth.

9. Ms. Mani Arora & Mr. Anil Kumar (2012) in their study on the topic "A Study on Mergers and Acquisitions – Its impact on Management and Employees" focussed on understanding the major impact associated with pre and post merging situations on employees and the management focusing on 50 major companies. This study observes the motives behind merging companies and the important factors to be considered while merging. Some of the major suggestions identified by the authors are to involve the HR department in the process of merging, develop new strategic plans and goals, prepare the employees for a change etc.
10. D. Satyanarayana, Dr. G. V. SubbaRaju, Dr. S Krishna Murthi Naidu, in their study "A Case Study on Mega Merger of SBI with its 5 Subsidiaries" found that SBI, being the largest lender of India, when merged with its associate banks will have better prospects in terms of asset base, branches and ATMs across the country. But the merger once taken place will be subject to several challenges namely, overlapping of branches, managing issues, bad loan issues and employee motivation.
11. Dr. Smita Meena, Dr. Pushpender Kumar in their study, "Mergers and Acquisitions Prospects: Indian Bank Industry" Oct- Dec 2014 have mainly taken into consideration the 3 leading banks of India and it is evaluated that, major mergers and acquisitions that are undergoing in the banking industry has no much influence on its performance level but has led to higher cost efficiency indeed. Merger of a weak and a strong bank has surely protected the depositor's interest of the weak bank. But there is no significant efficiency gain in this context. They suggest that, the strong banks should merge with strong ones to take advantage of the competition with the foreign banks and to find a place in the global market.
12. Tapas Kumar Sethy in the study named "Impact of Merger on Financial Performance of Banks:- A Case Study of State Bank Group" assesses that mergers and acquisitions will definitely have a synergy effect and will result in much wider geographical networking in India along with the banking sector consolidation effect. The study found that the merger will have a favourable impact on the financial performance of SBI. Since the banks have been facing serious problems with regard to high NPA and lower profitability, mergers will help stabilize the bank's performance.
13. D. R. Pallavi, S. Sai Sachidhananda in their study, "Unlocking the Lock- A Mirror Image Effect on SBI Merger in Indian Banking System" (2016) have opined that merger to an extent will affect the SBI negatively as the bad loans will have to be suffered by the SBI group themselves. The SBI will have to satisfy its employees and will have to put a lot of effort on retaining the customers and shareholders with them. It is found that, shareholders of SBI associate banks had to swap their shares with that of SBI bearing a lesser value at that time. The challenges that are likely to arise are bad loans, NPA, employee morale issues, etc.
14. Sanjay Sharma, Sahil Sidana from their study "Impact of SBI Merger on Financial Condition of SBI" (2017) revealed that, on becoming the biggest bank in the financial system, there will be better diversification of assets and less chances of failure in the sector. The NPA of the merged entity will come down rendering more efficiency to the performance. Since a single management team will look after the entire network of SBI,

there will be more efficiency in the management base. Thus better internal check system can be maintained. The bank will grow in size and its popularity.

Analysis And Interpretation

Employees Perception With Regard To The Merger Of SBI And Its Associates

TABLE.1 NUMBER OF RESPONDENTS

Sl. No.	Gender	No. of Respondents	Percentage (%)
1	Female	21	42
2	Male	29	58
3	Other	-	-
	Total	50	100

Source: Primary Data

Interpretation

From the table 7.3.1, it can be seen that out of a total of 50 employee respondents 58% (29 nos.) are male and 42% (21 nos.) are female.

TABLE.2 TENURE OF SERVICE

Sl. No.	Tenure	Frequency	Percentage (%)
1	Less than 1 year	6	12
2	1-5 years	10	20
3	5-10 years	14	28
4	More than 10 years	20	40
	Total	50	100

Source: Primary Data

Interpretation

From table 7.3.2, it can be noted that the 40% of our respondent employees have an experience of more than 10 years, 28% have an experience of 5-10 years, 20% of respondents have an experience of 1-5 years and 12% of employees who responded have recently joined with an experience of less than one year.

TABLE 3. RESPONSE TO THE QUERY “Did you work in the state bank at the time of the merger and acquisition?”

Sl. No.	Response	Frequency	Percentage (%)
1	Yes	43	86
2	No	7	14
	Total	50	100

Source: Primary Data

Interpretation

From the table 7.3.3, it can be noted that out of 50 respondents 43 of them were in service during the period of merger and were part of the merger process while only 7 employees were not in service during the period of merger.

TABLE.4 AWARENESS PROGRAMME PROVIDED DURING THE PRE-MERGER PERIOD

Sl. No.	Response	Frequency	Percentage
1	Yes	40	80
2	No	10	20
	Total	50	100

Source: Primary Data

Interpretation

From the table 7.3.4, it can be concluded that out of the employees responded, 80% of them had been given proper awareness programmes regarding the merger and its implications before the merger initiation procedures but 20% were not provided with any such programmes.

TABLE.5 EMPLOYEE PERCEPTION REGARDING THE IMPLEMENTATION OF MERGER THEIR RESPECTIVE BRANCHES

Sl. No.	Response	Frequency	Percentage
1	Yes	26	52
2	No	14	28
3	Maybe	10	20
	Total	50	100

Source: Primary Data

Interpretation

According to the response received from the employees 52% is of opinion that merger process have been smoothly implemented in their respective branches , 28% is of the opinion that in their branches the process of merger has not been implemented correctly and 20% are not sure about their perception regarding the matter.

TABLE.6 WORK LOAD

Sl. No	Response	Increase In Work Load	Percentage (%)	Withdrawal Attitude Due To Workload	Percentage (%)
1	Yes	26	52	23	46
2	No	24	48	27	54
	Total	50	100	50	100

Source: Primary Data

Interpretation

The above table shows the perception of employees regarding workload and its impact on their work. 52% of employees feel that their workload has increased after the merger and the rest does not feel so. In case of withdrawal attitude of employees due to workload increase 46% employees support the statement and the rest opposes the idea.

TABLE.7 WORKING CONDITION AFTER MERGER

Sl. No.	Rating	Frequency	Percentage
1	Carefree	9	18
2	Manageable	19	38
3	Moderate	14	28
4	Unmanageable	3	6
5	Stressful	5	10
	Total	50	100

Source: Primary Data

Interpretation

From the ratings provided 18% employees have rated their working conditions as carefree, 38% as manageable , 28% as moderate, 6% as unmanageable and 10% as stressful.

TABLE.8 RESPONSE TO THE STATEMENT “Do you think the employees of the associate banks are treated as secondary citizens in the SBI?”

Sl. No.	Response	Frequency	Percentage (%)
1	Yes	15	30
2	No	22	44
3	Maybe	13	26
	Total	50	100

Source: Primary Data

Interpretation

For the statement “Do you think the employees of the associate banks are treated as secondary citizens in the SBI?” 44% opposed the statement, 30% supported and 26% where not sure about their stand in the matter.

TABLE.9 BENEFITS AFTER MERGER

Sl. No	Respon se	Salary Hike		Increment In Benefits	
		Frequency	Percentage	Frequency	Percentage
1	Yes	27	54	22	44
2	No	23	46	28	56
	Total	50	100	50	100

Source: Primary Data

Interpretation

Analyzing the above figures we can come to a conclusion that 54% employees were given salary hike and 44% employees were given other incremental benefits after merger. The rest were not provided with both salary hike and incremental benefits.

TABLE 10 SUPERIOR – SUBORDINATE REPORTING SYSTEM

Sl. No.	Rating	Frequency	Percentage
1	Positive Impact	16	32
2	No Impact	26	52
3	Negative Impact	8	16
	Total	50	100

Source: Primary Data

Interpretation

For our query “How did the merger affect the superior-subordinate reporting system existed in your branch before the merger?” 52% employees have rated that merger have no impact on the superior-subordinate relationship existing, while 32% rated that merger had a positive impact on the superior- subordinate relationship and rest rated that the merger had a negative impact on the same.

TABLE 11 RATING BY EMPLOYEES REGARDING THE POLICIES IMPLEMENTED BY THE TOP MANAGEMENT DURING THE POST MERGER PERIOD

Sl. No.	Rating	Frequency	Percentage
1	Very positive	11	22
2	Positive	23	46
3	Negative	14	28
4	Indifferent	2	4
	Total	50	100

Source: Primary Data

Interpretation

From the table 7.3.11, 46% of employees rated the policies implemented by the top management during the post-merger period as positive, 22% as very positive while 28% as negative and the rest have an indifferent attitude towards the policies due to reasons known to them.

TABLE 7.3.12 OPINION ABOUT THE STATEMENT; “SBI merger benefits only the rich people”

Sl. No.	Rating	Frequency	Percentage
1	Strongly agree	4	8
2	Agree	16	32
3	Neutral	12	24
4	Disagree	10	20
5	Strongly disagree	8	16
	Total	50	100

Source: Primary Data

Interpretation

Employee response regarding the statement “SBI merger benefits only the rich people” where the following; 8% strongly agreed the statement while 32% agreed, 24% had a neutral attitude towards the statement while 20% employees disagreed and 16% strongly disagreed the statement.

Findings & Suggestions

Findings

1. In the case of employee responses 52% where from males.
2. 40% of our respondent employees have an experience of more than 10 years.
3. Out of 50 respondents 43 of them where in service during the period of merger and where part of the merger process.
4. 80% of employees responded were given proper awareness programs regarding the merger and its implications before the merger initiation procedures.
5. 52% employees are of the opinion that merger process has been smoothly implemented in their respective branches.
6. 52% of employees feel that their workload has increased after the merger
7. 38% employees have rated their working conditions as manageable.
8. For the statement “Do you think the employees of the associate banks are treated as secondary citizens in the SBI?” 44% opposed.
9. 54% employees were given salary hike and 44% employees experienced increase in the benefits given to them after merger.
10. For our query “How did the merger affect the superior-subordinate reporting system existed in your branch before the merger?” 52% employees have rated that merger have no impact on the superior-subordinate relationship existing.
11. 46% of employees rated the policies implemented by the top management during the post-merger period as positive.
12. 32% agreed to the statement "SBI merger benefits only the rich people".
13. Merger of SBI would surely help the Indian banking industry grow globally strong.
14. Merger of SBI and its associates helped in reducing confusion in transacting with too many associate branches and increased the reliability and efficiency of SBI.

15. Recent merger of SBI has been accepted unanimously by employees, which formed the major factor in the successful implementation of the reform.

Suggestions

1. Extensive awareness program regarding the merger must be provided to all employees regardless of their position and work experience.
2. Management should see to it that the employees work is properly delegated in order to reduce the strain of over workload.
3. There exists a notion that "SBI merger benefits only the rich people". This notion should be countered by introducing new schemes or programs that benefits all sectors of the society.

Conclusion

The merger of SBI had a major impact on its employees.

The merger of SBI into one of India's largest banking service providers has had both positive and negative impacts on its employees.

The merger process was undoubtedly successfully implemented with minimal errors and grievances through the digitalization and proper implementation of policies by management. Although the impact of the merger cannot be predicted as of now as it is a long term process, experts and most of its employees believe that it will reflect a long term positive trend in the Indian economy.

It can therefore be rightly stated that SBI's merger with its associates is one of the major banking sector reforms that will raise the Indian banking industry to international level.

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Consumer Perception Towards Airlines With Reference To Ernakulam District: A Study

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Dr. Ambily A S**

Abstract

Introduction of very fast and effective means of travel and communication has turned world into a global village. They helped man in conquering time and space. Although the nations are miles apart the world has come much closer due to these scientific and technological revolutions. Earlier aeroplane was a luxury for the people but today the word "aeroplane" is getting change from luxury to requisite. The purpose of our study is to understand consumers general perception towards airlines and to know the factors that influence consumer to choose a particular airline. Both primary and secondary data were collected. Primary data was collected through distributing questionnaire. Secondary data was collected from internet, journals, news papers etc

Keywords: Global village, Airlines, Consumer perception.

Introduction

Transport is considered as an important infrastructure of a developed society. An efficient transport system should deliver the mobility need of people. In this step of 21st century wide variety of transportation facility are available to consumers. Aviation transport has become increasingly prominent as they help in rapid movement of masses around the world.

In present world mobility through air is no more a complex phenomena as the firms started contributing their best to make their customer satisfy. It is observed that for the past few years there is a growing demand for air transport, understanding this circumstances more firms has started their operation in this field. Today a wide variety of alternatives are available to consumer in this field but apart from these alternatives the decisions of consumers are characterized by the qualities or attributes of different options available. Airway companies today focus on catering best facility to their customers as the level of competition in aviation area is flourishing.

Consumer, "The king of market "is considered as the foundation of any business success. Today Business are customer focused and they know that, taking into account consumer importance at all levels of marketing process helps the company to establish greater customer satisfaction and thereby increasing the long term goal of repeated business. Identifying the needs of customers and exploring those opportunities in the right way helps both company and customers in long run.

Most people today prefer air transport as it is characterized with speed, convenience, and comfort. Growing demand among consumer promotes new entrance thus increasing competition. Healthy competition is necessary in any field as it helps the ultimate consumer

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to select best from varied alternatives. Level and degree of satisfaction vary greatly among consumers and success of firm depends upon the fact that to what extent they understand consumers and how far the customer feels that they are valued and treated fairly. The present study focuses on factors that influence consumer perception towards airlines.

Literature Review

Contributory to research

1. R.KhaderMohideen Associate Professor, HOD of Management Studies, and S.AbdulRajak Assistant Professor, Department of Business Administration, in their study," passengers perception towards airlines services in Tiruchirapalli(2015):found that there is increase in passengers who are travelling from one country to another through air. International airlines have been operated in India mainly because they attract people, in India preferably in business and leisure travelers. Domestic airlines remain idle for many decades. In this survey four airlines were taken as sample for checking the perception of consumers towards the quality, in which air India was in the higher services. Hence airlines provide better services to passengers to attract more passengers. Therefore passenger's preference and quality of airlines bring more business to airlines.
2. Malyadri and Satyanarayanain their study,"Service Quality Perceptions of Domestic airline consumers in India(2014):through this paper author highlights the consumer perception towards quality of service provided by different airline companies. Two main attributes to which author give importance are "quality expected or experienced" and "quality perceived" by the customer. Study also finds that Kingfisher airlines and Indigo airlines provide the best quality service. The study also found that the domestic service provided by Indian companies. It is said that companies are not able to meet the expectation of consumers regarding service quality. The promotional activities were found to be exaggerated which lead dissatisfaction among customers. The author suggests the companies to implement quality service to improve the satisfaction of customers.

Statement Of The Problem

In present society the need for sophisticated and widespread transportation facility is necessary. Today each consumer prefer different mode of transportation not only because of their ability of mobility but also due to their capability of providing quality services. Consumers prefer airline industry due to their increased speed and ability to cover long distance. For the past few years' air transportation have attained a significant growth due to the improvement in technology. A consumer always prefers services which provide maximum benefit with minimum cost. Thus airline companies are competing within the industry to ensure consumer satisfaction. The purpose of study is to understand the weakness of the services provided by the industry and to find out consumers general view about airline industry.

Need Of The Study

Today a wide variety of transport facilities are available. Among them airline industry is evolving merely from providing transportation facility to being a quality service providing business. This had a great impact in the society therefore our aim through the study is to understand the factors that should be given more importance for developing airline consumer satisfaction.

Objectives

- To analyses the customer's perception towards Airlines.

- To find out which aircraft is most preferred by consumers.

Research Methodology

Data collected includes both Primary data and Secondary data. Primary data is the data collected for the first time by way of questionnaire. Secondary data is the data collected from published sources like previous reports of the company, articles and websites. And these sources act as means of reliable secondary data effective for analysis.

Analysis And Interpretation

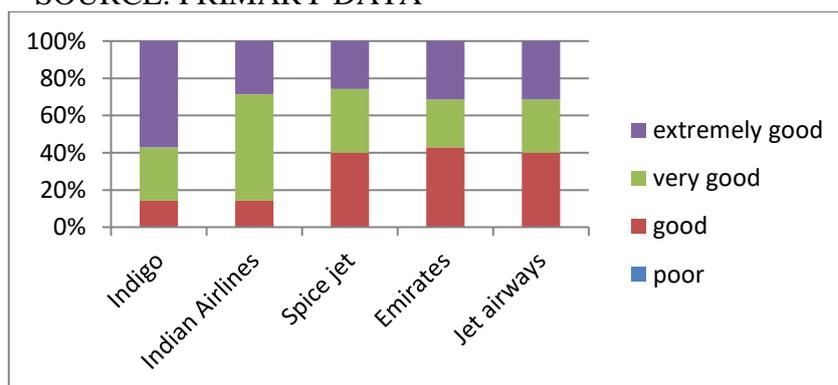
1. Ticketing/reservations

1.1 Accessibility of telephone numbers for Reservations

TABLE1.1.1

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	5	10	20
Indian airlines	0	5	20	10
Spice jet	0	14	12	9
Emirates	0	15	9	11
Jet Airways	0	14	10	11

SOURCE: PRIMARY DATA



Interpretation

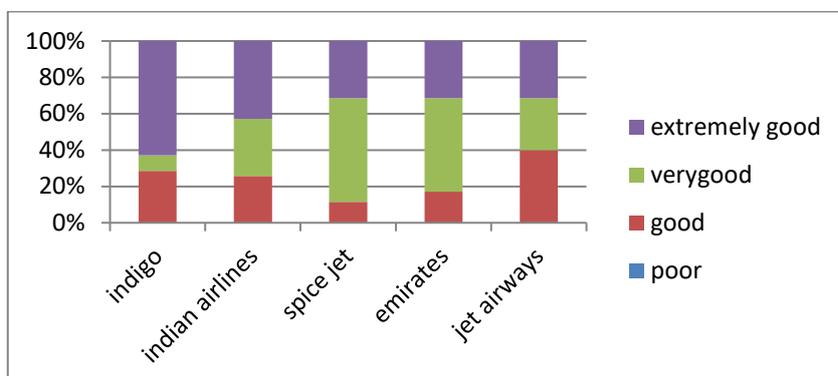
From the table it can be identified that for Indigo airlines maximum number of respondents (20) rate reservation system as extremely good. In Indian airlines more respondents (20) scaled reservation service as very good .For spice jet, Emirates and Jet airways greater number of respondents rated the reservation service as good.

1.2 Tele check in

TABLE1.1.2

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	10	3	22
Indian airlines	0	9	11	15
Spice jet	0	4	20	11
Emirates	0	6	18	11
Jet Airways	0	14	10	11

SOURCE: PRIMARY DATA



Interpretation

From the table it can be identified that for Indigo airlines maximum number of respondents (22) tale check in system as extremely good. In Indian airlines more respondents (11) scaled reservation service as very good .For spice jet, Emirates and Jet airways respondents(11) rated the tale check in service as good.

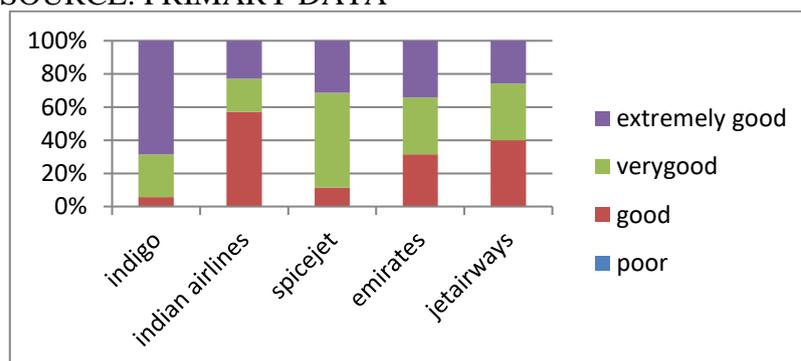
2. Airport services

2.1 Check in procedures

Table 2.1.1

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	2	9	24
Indian airlines	0	20	7	8
Spice jet	0	4	20	11
Emirates	0	11	12	12
Jet Airways	0	14	12	9

SOURCE: PRIMARY DATA



Interpretation

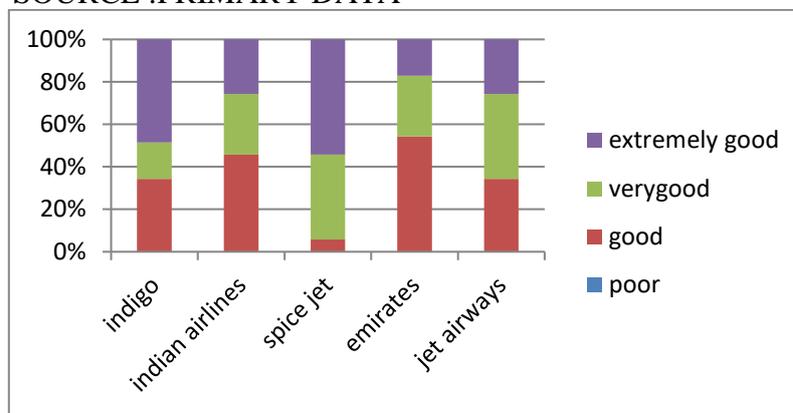
From the table it can be identified that for Indigo airlines maximum number of respondents (24) check in services system as extremely good. In Indian airlines only respondents (7) scaled check in service as very good .For spice jet, Emirates and Jet airways greater number of respondents rated the check in service as good.

2.2 Staff efficiency

TABLE 2.1.2

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	12	6	17
Indian airlines	0	16	10	9
Spice jet	0	2	14	19
Emirates	0	19	10	6
Jet Airways	0	12	14	9

SOURCE :PRIMARY DATA



Interpretation

From the table it can be identified that for Indigo airlines maximum number of respondents (17) rate staff efficiency as extremely good. In Indian airlines more respondents (10) scaled staff efficiency as very good .For spice jet, Emirates and Jet airways greater number of respondents rated the staff efficiency as good

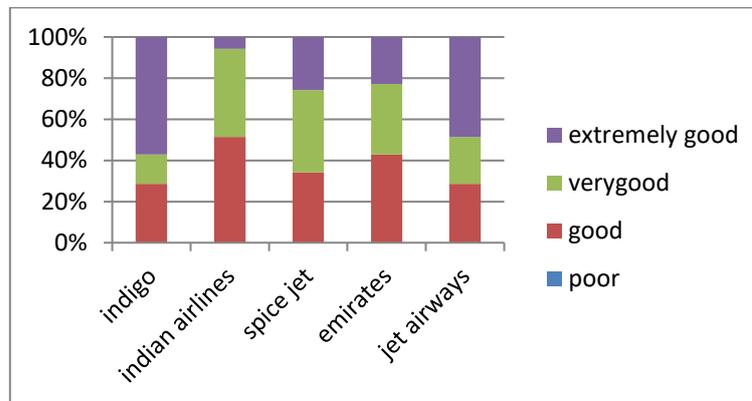
3 IN-FLIGHT

3.1 Help during the embarkation phase (guidance, hand luggage and stowage)

Table 3.1.1

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	10	5	20
Indian airlines	0	18	15	2
Spice jet	0	12	14	9
Emirates	0	15	12	8
Jet Airways	0	10	8	17

SOURCE: PRIMARY DATA



Interpretation

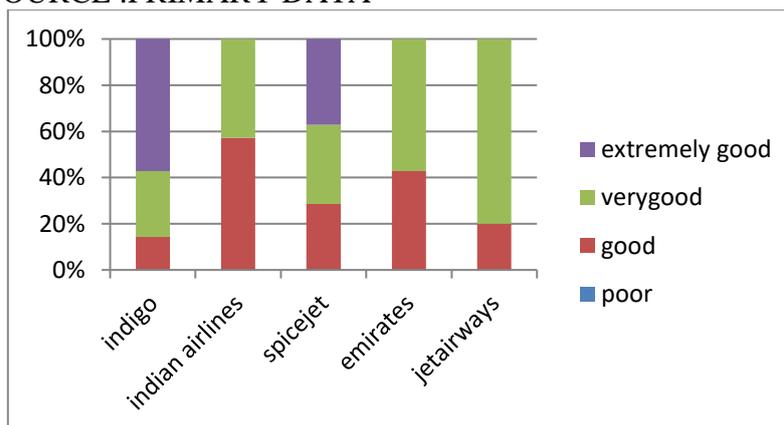
From the table it can be identified that for Indigo airlines maximum number of respondents (20) rate in flight service as extremely good. In Indian airlines more respondents (15) scaled in flight service as very good .For spice jet, Emirates and Jet airways greater number of respondents rated the in flight service as good.

3.2 Reading materials/newspaper

Table 3.1.2

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	5	10	20
Indian airlines	0	20	15	0
Spice jet	0	10	12	13
Emirates	0	15	20	0
Jet Airways	0	6	24	0

SOURCE :PRIMARY DATA



Interpretation

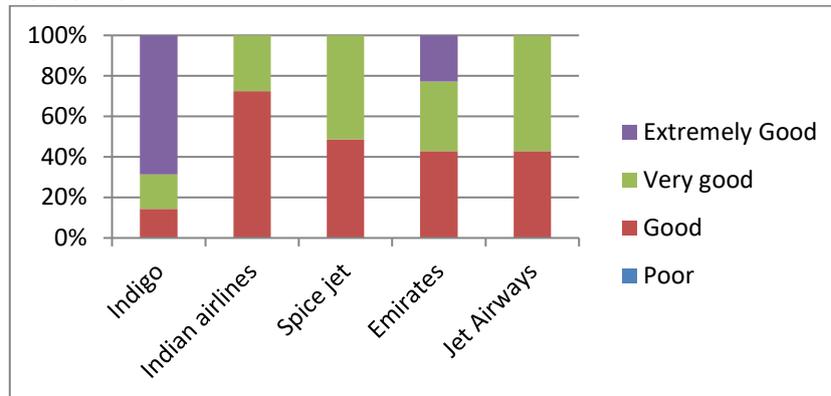
From the table it can be identified that for Indigo airlines maximum number of respondents (20) rate reading newspaper as extremely good. In Indian airlines more respondents (15) scaled reading newspaper as very good .For spice jet, Emirates and Jet airways greater number of respondents rated the reading newspaper as good.

4.CLEANLINESS OF THE CABIN

Table4.1

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	5	6	24
Indian airlines	0	21	8	0
Spice jet	0	18	19	0
Emirates	0	15	12	8
Jet Airways	0	15	20	0

SOURCE :PRIMARY DATA



Interpretation

From the table it can be identified that for Indigo airlines maximum number of respondents (24) rate cleanliness of cabin as extremely good. In Indian airlines more respondents (8) scaled cleanliness of cabin as very good. For spice jet, Emirates and Jet airways greater number of respondents rated for cleanliness of cabin as good.

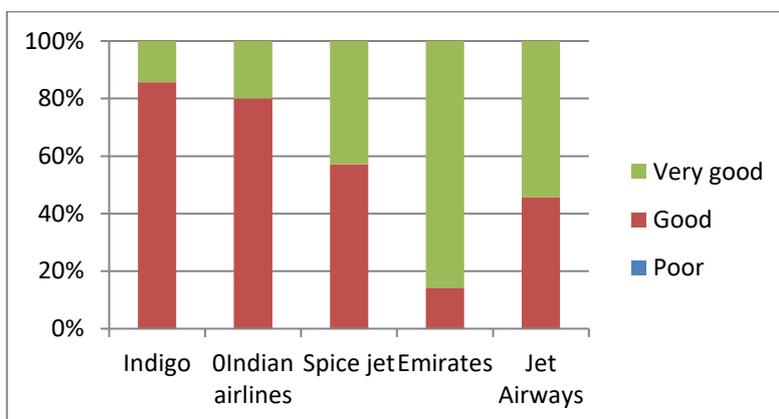
5.FOOD

5.1 Quality of meal

Table 5.1.1

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	30	5	0
Indian airlines	0	28	7	0
Spice jet	0	20	15	0
Emirates	0	5	30	0
Jet Airways	0	16	19	0

SOURCE:PRIMARY DATA



Interpretation

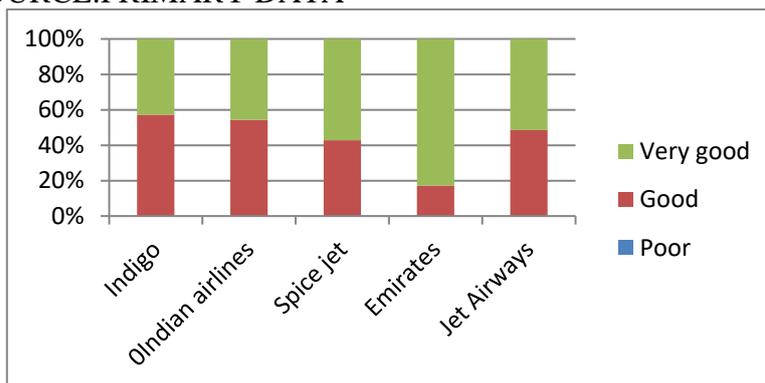
From the table it can be identified that for Indigo airlines maximum number of respondents (30) rate for quality of the meal as good. In Indian airlines more respondents (28) scaled quality of the meal as very good. For spice jet, Emirates and Jet airways greater number of respondents rated the quality of the meal as very goods

5.2Quantity of meal

Table 5.2.1

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	20	15	0
Indian airlines	0	19	16	0
Spice jet	0	15	20	0
Emirates	0	6	29	0
Jet Airways	0	17	18	0

SOURCE:PRIMARY DATA



Interpretation

From the table it can be identified that for Indigo airlines maximum number of respondents (20) rate quantity of the meal as good. In Indian airlines more respondents (19) scaled quantity of the meal as good. For spice jet, Emirates and Jet airways greater number of respondents rated the quantity of the meal as very good.

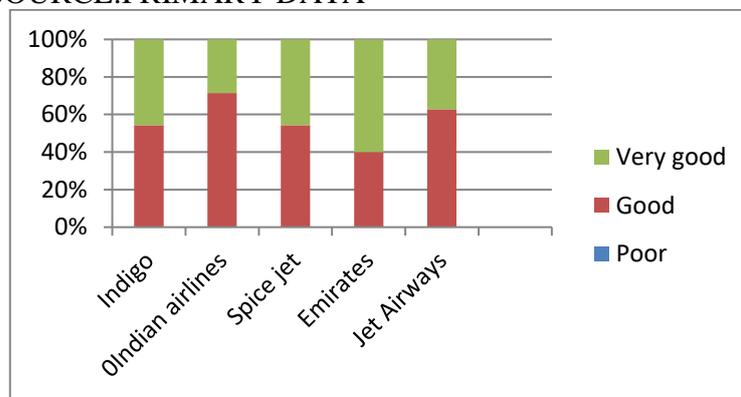
6.OTHER VARIABLES

6.1Holiday/discount offers

Table 6.1.2

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	19	16	0
Indian airlines	0	25	10	0
Spice jet	0	19	16	0
Emirates	0	14	21	0
Jet Airways	0	22	13	0

SOURCE:PRIMARY DATA



Interpretation

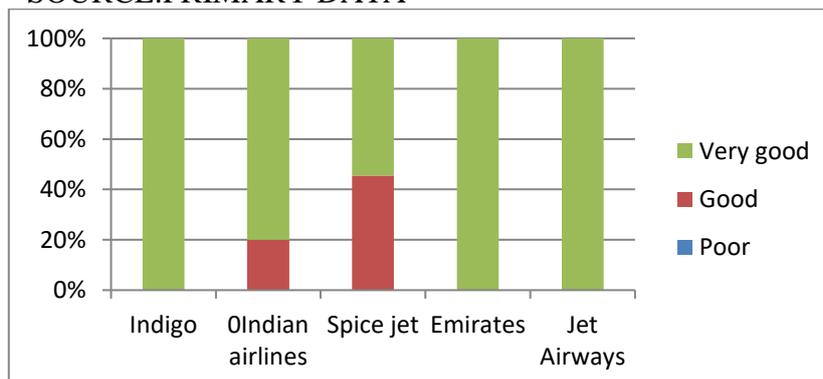
From the table it can be identified that for Indigo airlines maximum number of respondents (19) rate holiday/discount offers as good. In Indian airlines more respondents (25) scaled holiday/discount offers as good. For spice jet, Emirates and Jet airways greater number of respondents rated the holiday/discount offers as very good.

6.2 Connectivity of Flights

Table 6.1.2

Airlines	Poor	Good	Very good	Extremely Good
Indigo	0	0	10	25
Indian airlines	0	6	24	5
Spice jet	0	10	12	13
Emirates	0	0	7	28
Jet Airways	0	0	15	20

SOURCE:PRIMARY DATA



Interpretation

From the table it can be identified that for Indigo airlines maximum number of respondents (10) rate connectivity of flight service as very good. In Indian airlines more respondents (24) scaled connectivity of flight service as very good. For spice jet, Emirates and Jet airways greater number of respondents rated the reservation service as very good.

Findings, Suggestions And Conclusion

Findings

- Most preferred airlines among respondents is Indigo.
- It can be identified that reservation facilities provided by the Indigo airlines is rated to be extremely good
- Tele check in service provided by Indigo is most favored by the respondents.
- It has been found that check in procedures facilities provided by Indigo airlines is most rated by respondents.
- The study reveal that most efficient staff members were employed in spice jet as per the opinion of respondents.
- It is found that Indigo airlines provide sufficient reading materials to travelers.
- As per respondents hygiene cabin is available in Indigo airlines.
- It can be identified that best quality meal is provided by Emirates airlines.
- The best holiday offer are extended by Emirates.
- It can be found that an efficient connectivity of different flights is provided by Emirates.

Suggestions

Airlines are fast growing mode of transport. If it is perfectly utilized with assured safety and security it will thrive into a highly competitive and dynamic environment.

- From the table it is observed that Indian airlines can improve its management efficiency to acquire customer satisfaction.
- In order to make it more affordable for common people it is recommended that airlines could increase their holiday and discount offers.
- Both Jet airways and Indian airlines could improve the efficiency of their staff, they could improve their performance through improved training and good motivation.

Conclusion

There is wide change taking place in the airline industry in relation to growth and customer satisfaction. Airline transportation facilitates the best quality service. The present study concludes that Indigo airlines are most preferred by consumers.

Consumers mostly prefer airline industry because of their increased speed and their ability to cover long distance. The competency level between the airlines companies are increasing to ensure customer satisfaction. The companies must ensure that consumers get their service at right time so that they create a good word of mouth for the company.

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Investment In Tax- Saving Schemes: An Overview

Anagha Suresh*

Akshara Johnson**

Dr. Indu Manishkumar***

Abstract

Investment is an unavoidable thing in the life of an individuals or a firm. Investment helps people in bringing up a saving habit. Every one invests for getting return from it. The size of the return of each investment is according to its risk. Higher risk gets higher the return and vice-versa.

There are some investment schemes which have no tax burdens and most of the people prefer these type investments to remove tax burden. In India the tax saving investment schemes are regulated under Sec 80C of Income Tax Act. The taste of investment preference is different for different investors. Majority of the investors invested in life insurance scheme as they feel more comfortable and safe in this scheme and they invested for the objective of retirement plan, children's education, children's marriage, etc. Majority of the investors are from the age limit of 15-35. These are some of the findings from our study. There are also some problems faced by the investors. Many of them are not aware about these schemes due to which most of the people are losing their opportunity to invest in better schemes and get good returns. Most of the people are not ready to take risk. Even if they are not earning high return, they have no problem as they are not ready to take risk. Therefore, it is found out that people are not ready to take tax burden and take high risk to get high return and reduce their investment returns and so, in today's world most of the people prefer tax saving schemes.

Keywords: tax burden, risk, investment, investors

1. Introduction

Investing is the method of committing money or capital to an endeavor (a business, project, real estate etc.) with the expectation of obtaining an additional income or profit. An investor is any person or any other entity who commits capital with the expectation of earning financial returns. In finance, the return is the benefit from investment.

Taxation plays a very important role in the promotion of economy development of any country. Tax in simple words, is the part of our income which the Government collects from us and provides several facilities like, water and drainage system, school facility, medical facilities, construction of roads and dams and so on. It is a compulsory payment levied by the government authority on individuals or companies to meet the expenditure required for the welfare to the society.

It is important to plan one's finances properly. Plans should never be made on an emergency basis or for a temporary goal or towards an improperly planned objective. However, choosing the right tax-saving scheme rests also basically consists of four factors: how to

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avail tax benefits, the kind of tax-saving instrument, the tenure, and the taxability status. So, it is equally important to choose a tax-saving instrument which can help in achieving the specific goals which are namely tax benefits and higher returns.

2. Problem Statement

Investments are important in today's world because by just earning money it is not enough. To lead a comfortable life, we need to make our money work hard for us as well. We should invest that money smartly to get good returns out of it. But most of the investment schemes contain tax burden. At this situation investing in tax saving schemes offered by government and private organizations helps to minimize the tax burden.

3. Objectives Of The Study

1. To know the preference of the respondents from among the various investment avenues.
2. To find out the most suitable tax saving instruments used to save tax.
3. To know the factor that influencing investment behavior of the peoples.
4. To find the problems faced by the investors.
5. To provide suggestion to the people based on this study.

4. Research Methodology

The paper was targeted on individual investors who invested in various schemes. The data taken was from primary source, where the questionnaire was distributed through investors and friend and secondary source. Here, descriptive method was used for investigation to obtain the profile, preferences and problems faced by these investors towards investment in these schemes. The data was collected from various respondents through the method of sample survey where the sample size taken was 98 and the sampling method used was random sampling and the data was analyzed through percentage.

5. Literature Review

Savita and Lokesh Gautam (2013) in their study on the topic "Income Tax Planning: A Study of Tax Saving Instruments" found out that those who had more income had more savings and they invested in these investment sources among which, the most adopted and accepted tax saving instrument by the sample unit taken was Life Insurance policy which was further followed by Provident fund and Tax saving Fixed deposits as the least accepted. Dr.A.N.Paunikar (2014) in his study on the topic "Equity Linked Saving Schemes as Tax Saving Investment for Salaried Class" found out that ELSS helped by providing a good scope for capital accumulation and other tax benefits under Sec 80(c) of the Income Tax Act, 1961.

Vikas Kumar Soni (2013) in his study on the topic "A Study On Performance Of Tax Saving Schemes In Mutual Fund" found out the schemes selected for the study were highly correlated with the market index. It was analyzed through this that adequate returns could be earned by facing a minimum level of risk. Mrs.R.Vasanthi (2015) in her study on the topic "A Study on Tax Planning Pattern of Salaried Assessee" found out that various experienced employees are willing to pay tax, unlike the other employees who are not willing to pay tax but invest in tax saving schemes, due to their own personal factors. Prof. Sanket L.Charkha and Dr. Jagdeesh R. Lanjekar (2018) in their study on the topic "A Study Of Saving And Investment Pattern Of Salaried Class People With Special Reference To Pune City" found out that even though investors were aware of various investment opportunities were in Pune, where they could earn more returns, they preferred to invest their money in banks as deposits and real estate because of safety, which was concerned as one of the main and important factors while investing.

Monika Zatrochová (2008) in her study on the topic “Methods of investment planning and their application in the company” found out that small companies adopt the Payback Period (PP) method in several research programmes at a higher extent while large companies, who have large capital, good commercial name and use updated technology, use more sophisticated methods like IRR and NPV methods.. Various countries like Central Europe and South Europe also apply the PP method to the greatest extent.

Geethu Gopi, Priyanka and Preetha (2018) in their study on the topic “An Insight Into the Savings and Investment Pattern of Salaried Employees Working in Private Sector of Shipping Industries at Ernakulam” found out that there is no relationship between gender, marital status of employees and the expected rate of return they get from that investment but there is a relationship between the annual savings and the expected rate of return we get from the invested savings. Also, most of the employees consider risk as one of the main factors before making an investment. Dr. Muthumeenakshi M (2017) on her study on the topic “Perception of Investors towards the Investment Pattern on Different Investment Avenues - A Review” found out that as usually all investment schemes are declared risky by the investors the main features of an investment that investors look upon are security of principal amount, liquidity, income stability and easy transferability. The investment choices may differ from national savings certificates, provident fund, mutual fund schemes, insurance schemes, bank FDs, company shares, government securities to real estate.

Murlidhar Ananda Lokhande (2015) in his study on the topic “A Study of Investment Awareness And Pattern Of Savings and Investment Of Rural Investors” found out that the rural investors, even though there are various investment schemes have more trust on the products and services of government banks. After the first preference was given to products and services of government banks, the next was given to gold and jewelry which was followed by real estate and these decisions were taken or the preference based on safety and liquidity rather than returns.

6. Industry And Product Profile

The term industry covers all the businesses and factories that convert raw materials into goods or useful services which are similar in nature. Industry produces all the goods and services required by society and distribute them to the consumers. Product profile deals with the details of the products produced by the industry like what are the product, its use, how it formed, etc.

National Pension Scheme: National Pension Scheme is introduced based on pension system introduced by the Central Government with effect from January 01, 2004 (except for armed forces). Pension Fund Regulatory and Development Authority (PFRDA) which is the regulatory body for NPS have appointed NSDL as Central Recordkeeping Agency (CRA) for National Pension System. NPS is a defined contribution where the individuals can invest anywhere, they wish.

Five-year fixed deposit: Five-year fixed deposit is provided by both post offices and banks. Tax saver fixed deposit (FD) is a type of fixed deposit, in which by investing you can get tax deduction under Section 80C of the Indian Income Tax Act, 1961. According to Section 80C, any investor can claim a deduction of a maximum of Rs.1. 5 lakh by investing in tax saver fixed deposits where the lock-in period is 5 years, interest earned is taxable and the rate of interest ranges from 5.5%-7.75%.

Equity linked savings scheme (ELSS): Equity-linked savings scheme popularly known as ELSS are close-ended, lock-in period of 3 years diversified equity schemes offered by

mutual funds in India which offer tax benefits under the new Section 80C of Income Tax Act 1961. ELSS can be invested using both SIP (Systematic Investment Plan) and lump sums investment options. The origin of UTI made the evolution of Indian mutual fund industry in the year 1963.

Life Insurance: Insurance is a tool of protection from financial loss. It is a form of management used to hedge against the risk of uncertain loss. The largest life-insurance company in India is Life Insurance Corporation of India (LIC) since the privatization in 2001 which is a sole public sector company. Insurance is regarded as a slow-growing, safe sector for investors among the various industries when it is compared to other financial sectors.

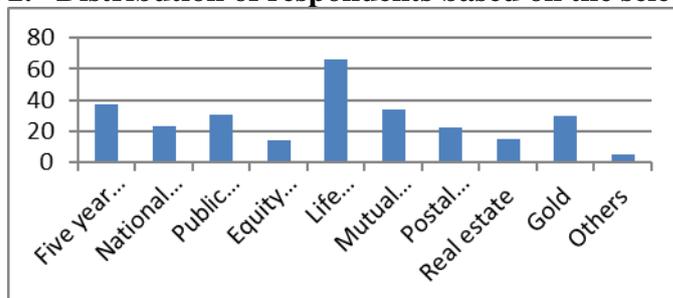
Public provident fund: The Public Provident Fund is a savings-cum-tax-saving instrument in India which was brought out by the National Savings Institute of the Ministry of Finance in 1968. Its aim is to mobilize small savings by offering an investment with reasonable returns combined with income tax benefits. The National Savings Institute works under the Ministry of Finance and Government of India. It is entrusted with the task of mobilization of savings through the National Savings Schemes of Government of India operated through Post Offices and designated Banks throughout the country.

7. Analysis And Interpretation

1. Demographics of the respondents

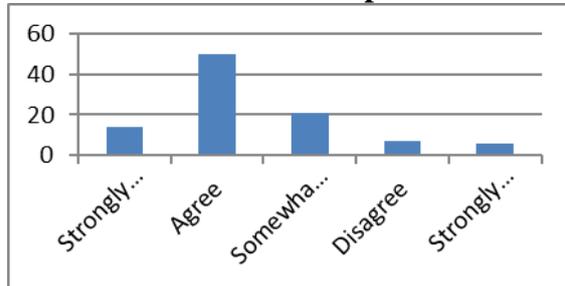
The category of people who took part in the questionnaires based on age where 59% of the respondents belonged to the age group of 15-35 which was followed by 35% in the age group of 35-55 and 5% in the age group of 55-65. The female respondents were more than male respondents. This question was used in order to target our main customers but we also wanted to have a wider knowledge about what other types of customers may think. The percentage of single respondents was more than the married respondents. It is found most of the respondents have educational background as graduates followed by post graduates, professionals and school level, which is the least. The number of respondents who are professionals and students are in equal proportion. The business respondents are only 3% of the total respondents. Most of the respondents have 4 members in their family while the families having 3 members and more than 4 members are almost in the same proportion. Most respondents have a maximum of 2 members earning in their family while the percentage of more than three members earning in the family are at its least. It is observed that most of the respondents have a monthly income of more than 50,000, while the respondents having a monthly income of 40,000 – 50,000 are only 14 respondents.

2. Distribution of respondents based on the selected investment option



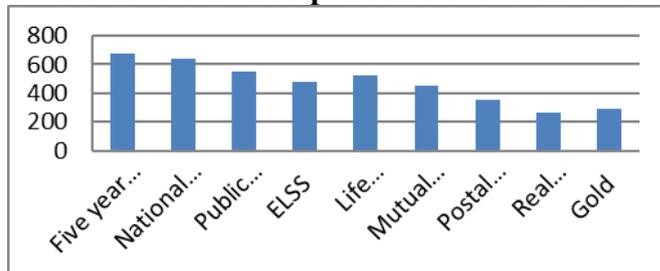
Most of the respondents selected life insurance scheme followed by 37 respondents for five-year FD plans, 34 respondents for mutual funds, 31 for PPF, 30 respondents for gold, 23 respondents for NPS, 22 for postal savings, 15 respondents for real estate, and 14 respondents for ELSS while 5 respondents selected others.

3. Distribution of respondents based on continuity with the same scheme



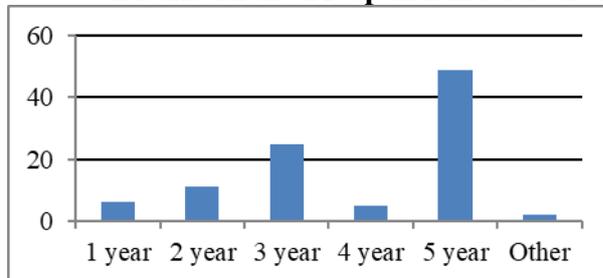
Half of the respondents agreed to continue the same scheme, 21 respondents somewhat agreed, 14 respondents strongly agreed, 7 respondents disagreed and 6 respondents strongly disagreed to continue the schemes.

4. Distribution of respondents based on the next investment options



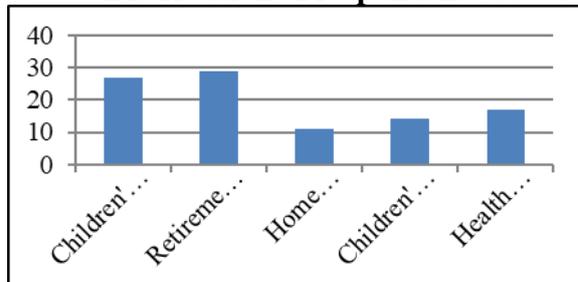
Most of the respondents ranked five year fixed deposits scheme as their next investment option.

5. Distribution of respondents based on the period of investment



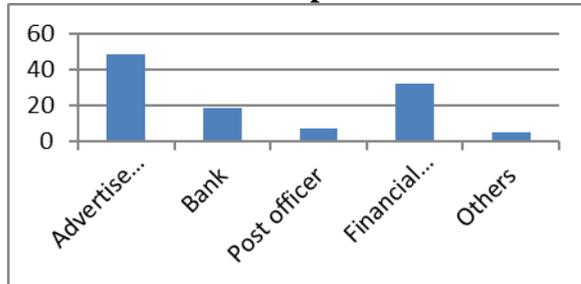
Half of the respondents planned to invest for a period of 5 years, 25 respondents for a period of 3 years, 11 respondents for a period of 2 years, 6 respondents for a period of 1 year, and 5 respondents for a period of 4 years while 2 respondents opted for others.

6. Distribution of respondents based on the objective of investment



The number of respondent for retirement plans and children's education were almost the same while 17 respondents opted for health care plans, 14 respondents opted for children's marriage and 11 respondents for home purchase.

7. Distribution of respondents based on source of awareness

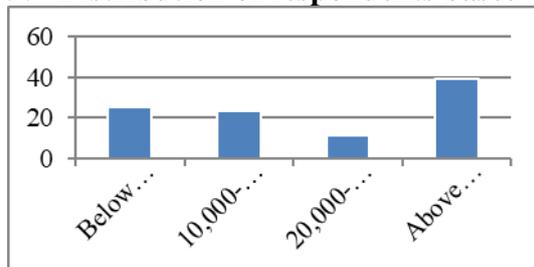


49 respondents came to know about the investment schemes through advertisements, 32 from financial advisors, 19 from banks, 7 from post officer while 5 respondents came to know from other sources.

8. Distribution of respondents based on experience in the market

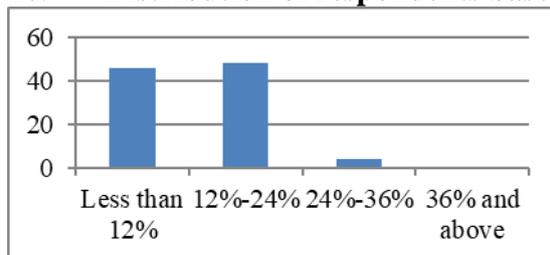
55 respondents have less than 3 years of experience, 25 respondents have an experience of about 5 years and more and 18 respondents have 3-5 years of experience in the market.

9. Distribution of respondents based on the amount invested



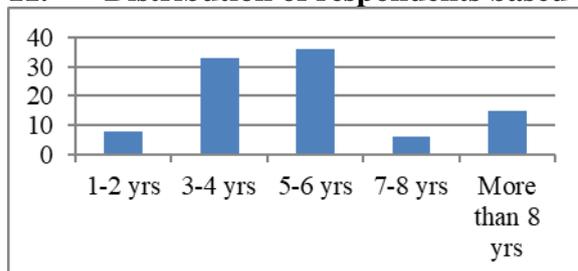
About 39 respondents invested above 30,000, 25 respondents invested below 10,000, 23 respondents invested from 10,000-20,000 and 11 respondents invested from 20,000-30,000.

10. Distribution of respondents based on the derived rate of return



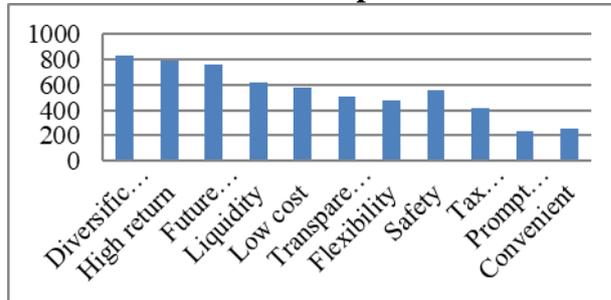
For 48 of respondents their derived rate of return is 12%-24%, for 46 of respondents it is less than 12% and for 4 of respondents it is 24%-36%.

11. Distribution of respondents based on the period of long term investment



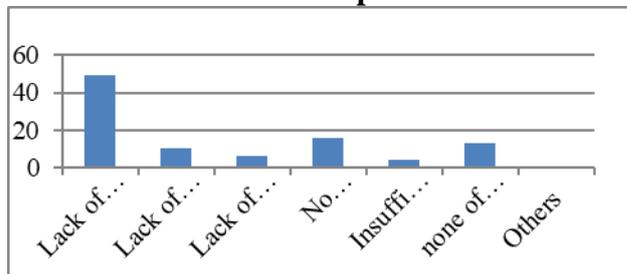
36 respondents plan to hold their investment for 5-6 years, 33 respondents for 3-4 years, 15 respondents for more than 8 years, 8 respondents for 1-2 years and 6 respondents for 7-8 years.

12. Distribution of respondents based on the reasons for investment



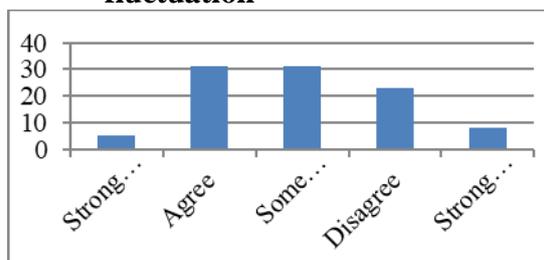
Most of the respondents ranked diversification of risk as their primary reason for investment.

13. Distribution of respondents based on the problems faced



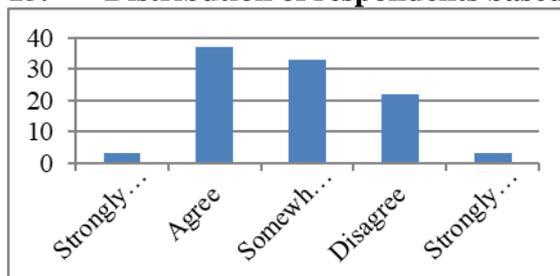
49 respondents face the problem of lack of awareness about different investment schemes, 16 respondents have the problem of having no clear idea about public issues, 13 respondents face none of the mentioned problems, 10 respondents face the problem of lack of information in advertisements, 6 respondents face the problem of lack of initiative by the industry and 4 respondents face the problem of insufficient agent and brokers.

14. Distribution of respondents based on preference of investments with little or no fluctuation



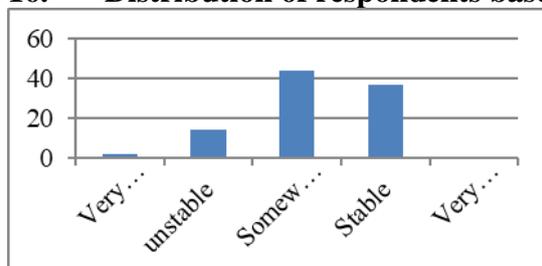
31.63% of respondents agree, 31.63% of respondents somewhat agree, 23.48% of respondents disagree and 5.1% of respondents strongly disagree to prefer investments with little or no fluctuation in value and are willing to accept the lower returns associated with these investments.

15. Distribution of respondents based on investment in safer assets when risk arises



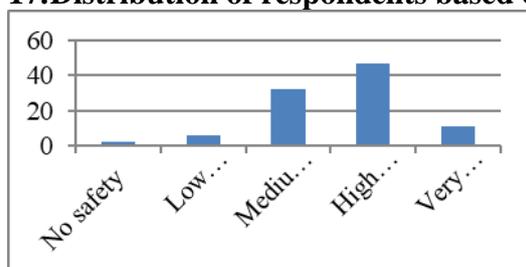
37 respondents agree, 33 respondents somewhat agree, 22 respondents disagree, 3 respondents strongly disagree and the remaining 3 respondents strongly agree to invest in safer assets when risk arises.

16. Distribution of respondents based on stability of their investment



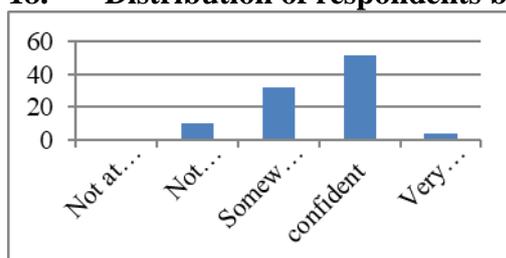
44 respondents have somewhat stable incomes, 37 respondents have stable income, 14 respondents have unstable income, 2 respondents have very unstable income and 1 respondent has very stable income.

17. Distribution of respondents based on the safety preferred



47 respondents prefer high safety, 32 respondents prefer medium safety, 11 respondents prefer very high safety, 6 respondents prefer low safety and 2 respondents prefer no safety at all.

18. Distribution of respondents based on confidence of the investors



51 respondents are confident, 32 respondents are somewhat confident, 10 respondents are not very confident, 4 respondents are very confident while 1 respondent is not at all confident.

Findings, Suggestions And Conclusion

This study helped us in reviewing their investment plans. The major respondents were female investors and people from the age group of 15-35. Students and professionals are the major investors in these tax saving schemes. The numbers of people who earn monthly salary above 50000 are more than the other investors. Majority of the people have chosen life insurance scheme for investment and they have agreed to continue their current investment schemes. 50% percentage of the people preferred to invest in for five years. Most of the investor's objective for investment is retirement plan.

The investor is suggested to make sure that while investing in fixed deposits the tenure or period for which he invests is right. Instead of simply making a wrong decision by investing

in the wrong place at the wrong time, it is advisable that they take help from financial planner. Although 52% of the people were confident in the investment they made, steps could be taken to boost the confidence and morale of the remaining 48% of the investors which could be done through appropriate communication and by educating investors to invest in appropriate investment areas according to their reasons for investment and their priorities. Right information should be provided to them at the right time different communication modes so that they come to know about the latest trends in the market.

The study was on the topic "Investment in Tax saving scheme: An overview". There were 98 responses from different type of investors from different age, sex, profession, etc where most of them preferred to invest in tax saving schemes. The private employees are the major people who invest in this scheme for the objective of retirement plan. In the respondents the major investors are from the age limit of 15-35 and they are doing investment in life insurance scheme for the objective of retirement plans and some for children's education, children's marriage, etc. The problem faced by the investors is lack of awareness about the different investment scheme. Some people are not ready to take risk they are ready to accept the low return from their investment scheme. In this study it is observed that people prefer the investment schemes which provide high safety even if the return from the investment is low. They are currently satisfied with their investment schemes and they are confident to continue with their investment.

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A Study On The Issues Faced By The Retailors Due To Kerala Flood 2018 With Special Reference To Aluva

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Parvathi K**

Dr. Indu Manishkumar***

Abstract

A few months back, in August, Kerala witnessed the worst flood since 1924. All the districts were placed in red alert as the devastating face of water washed away the lives and landmass of the state in a matter of few days. We conducted a survey in the aftermath of flood and found that they wanted to convey their problems, suggestions and remedial measures to the responsible authorities through us. A significant problem that the retailers faced was the financial instability. Water rushing into offices and warehouses caused inventory damage. Buildings and roads were submerged which caused hindrance to the transportation facilities. Many of the retailers who received compensation were not satisfied with it because the compensation received was inadequate in comparison to the volume of damage occurred. Aluva is a place which affected badly by the flood.

Keywords: flood, disaster management, retailers, risk

1. Introduction

From 8th of August 2018, Kerala, a southern state of India, severely affected by the heavy flood caused by the remarkably high rainfall during the monsoon. As per the statistics, one-sixth of the total population of Kerala had been directly affected by the worst floods and related incidents.

This study examines the impact of Kerala flood (2018) on retail shops with special reference to Aluva. Through this project, we have focused on the impact of flood on 'retail shops' because they are an integral part of the economy as well as a major source of revenue for the government. Thus, an impact on them would mean an effect on the whole society. Due to these happenings, the entire market has been pulled down and it showed a considerable decrease in the economic growth.

2. Objectives of the study

- (i) To find overall difficulties faced by retailers due to flood in Aluva.
- (ii) To advocate suggestions on improvement of current scenario.

3. Research Methodology

The study conducted is descriptive and exploratory in nature. It is designed to gather descriptive information which included surveys and fact finding enquires. For the purpose of selecting samples for the study, convenience sampling method is adopted. 40 retailers from various parts of Aluva were interviewed with structured questionnaire. Both primary and secondary data and descriptive analysis were used for the study.

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4. Literature Review

Flooding is a weather-related hazard that is most widespread around the globe and occur anywhere. A flood is defined as water overflowing onto land that usually is dry.

History of Flood in India

India is situated in the monsoon climate zone of south Asia. About 210 severe floods with serious consequences have occurred in India during the 30 years from 1966 to 1995 - almost seven floods every year. Chennai had experienced catastrophic flooding in 1943, 1976, 1985, 1998, 2002, 2005 and 2015 due to heavy rains associated with cyclonic activity.

The worst hit in the Kedarnath, Uttarakhand caused a cost of damaged bridges and roads worth \$285 million, dam projects worth \$ 30 million and loss to tourism worth \$195million. Kerala, experienced numerous floods in the past. However, the 2018 floods are quite reminiscent of the "Great Floods of '99" that occurred almost a century ago in 1924.

There are at least seven implications of these catastrophic floods that have a strong and lingering bearing on Kerala's economy. With scaling down of consumption, GST collections may be adversely affected.

Disaster management during floods Kerala

Torrential rains hit the State next day and on the 9th August 2018 as the Aluva Mahadeva temple in Kochi was seen submerged in water due to flash floods. The National Disaster Response Force flew in 58 rescue teams in one of the largest rescue missions conducted in the decade. Each team had 30 to 40 trained personnel and were completely equipped with necessary gear, equipment and pre-hospitalization medicines to carry out their mission.

The Army, Airforce and the Navy stepped into the rescue mission with their own teams. They airlifted stranded people, and built temporary bridges for evacuation.

Timely relief without pilferage

The Prime Minister, Mr. Narendra Modi, sanctioned an additional grant of Rs.500 Cr for relief and rehabilitation. The PM of Kerala initiated Nava Kerala Mission focusing to address the problems prevailing in the 4 areas namely, agriculture, education, housing, and health as a result of harsh flood hit. This will be executed with the involvement of local self-governments. To meet with the emergency requirements Kerala Government had taken loan from World Bank, ADB, and other funding agencies. This amount was utilized for rebuilding roads, public institutions, health sector, public utilities, water supply, flood control, irrigation, coastal conservation, rehabilitation of coastal areas and environmental protection. Retailing in Kerala is a subject too subtle and relevant as Kerala is known for more as a consumer state rather than a producer state. Disaster management, to be effective needs active cooperation among every section of the society, including general public, business enterprises, Government, armed forces, safety and security personnel's etc. Only then will it be ensured that the disaster is brought under control and is managed properly.

5. Results and Discussion

5.1 Demographic details of the respondents

The majority of the respondents in and around Aluva are male entrepreneurs, 92.5% being them. The rest, 7.5% consist of women respondents and transgenders being none. Most of the affected people fall under the category of having a monthly income below Rs.10, 00,000 (87.5%) and small and medium enterprises were largely affected. The rest are in other categories, and in low proportion being 2.5% and 5% falling under various categories.

5.2 The difficulties faced by the retailers in Aluva

Table 1 : The difficulties faced by the retailers in Aluva

Sl. No	Factors	Response	Number of respondents	Percentage(%)
1	if the premises or business of respondents were directly affected or not	Yes	39	97.5
		No	1	2.5
2	if the respondents own or have rented the premises			97.5
				2.5%
3	whether the business of the respondents had to be closed	Yes	40	100
		No	0	0
4	if the respondents had to move out of the premises while repairs took place	Yes		52.5
		No		47.5
5	if the business was insured or not for damage to stock	Yes	11	27.5
		No	29	72.5
6	if the building had been insured for covering damage	Yes	12	32.4
		No	25	67.6
7	if, for those who received the insurance amount, was adequate to meet the losses or not	Yes	1	3.8
		No	25	96.2
8	if the respondents had to face any hindrance in receiving the stock due to lack of transportation facility	Yes	19	51.4
		No	18	48.6

Source: Questionnaire

From table 5.1, it is clear that, majority of the respondents' premises were directly affected (97.5%), whereas, only 2.5% aren't directly affected by flooding. As per the analysis, the 26 respondents, being 65% of the respondents have rented their premises and the balance 14 people, constituting 35% own the premises which were affected by flood. 65% of the respondents rented their premises for business purposes, which might have an effect on the insurance claim as insurance for building goes to the owner and the concerned respondent receives nothing unless goods are insured.

From the table, it is clear that 100% of the respondents had to close their business due to flood or due to the aftermath of it. About 52.5% of the respondents had to move out of their premises while the repairs took place after flood. The remaining 47.5% did not have to move out while the repairs were going on. Majority of the respondents, being 72.5% had not taken insurance for covering damage to stock and had to bear the losses. The remaining 27.5% had taken insurance to cover the damage to stock.

It is understood that only 32.4% of the respondents had taken insurance to cover the damage to the buildings. But the major portion, being 67.6% had not taken insurance to cover up the losses happening to the building. Only 3.8% responded that the amount received by way of insurance was adequate to meet the losses. But the remaining 96.2% was not satisfied with the amount received from insurance and it was not adequate enough for them to meet the losses. It can be inferred from the table that 51.4% of the respondents had to face difficulty in receiving stock due to lack of transportation facility at the time and after flood.

5.3. Areas of the business/premises affected

The below chart shows that 85% responded that their sales area was affected during the flood and a 45% said that their office area was flooded. 30% responded that their cellar/basement

was affected and another 37.5% pointed out that their store room was affected whereas least affected area was separate warehouses (2.5%).

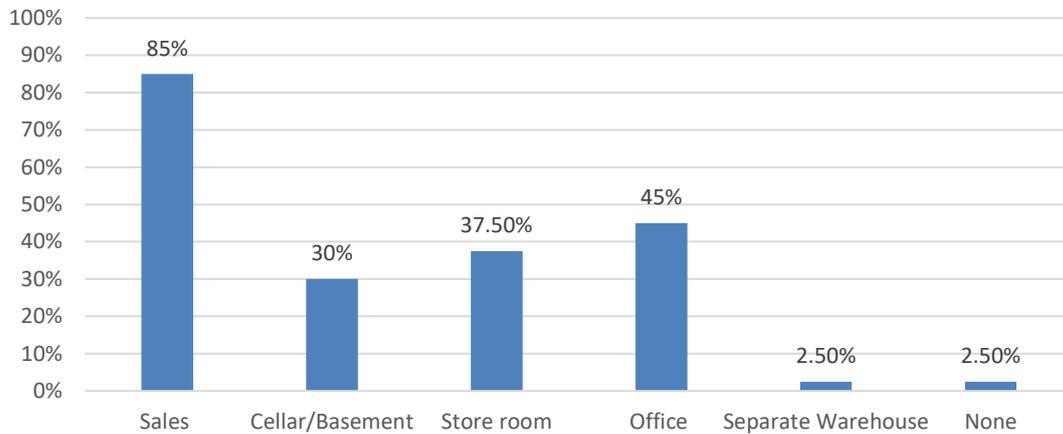


Figure 1 : Areas of the business/premises affected

5.4 The services that were affected due to flood

The below chart makes it clear that electricity service of 97.5% of the respondents were cut off due to flood. Telephone services of 42.5% and Network of 32.5% of the respondents, were not available. 7.5% of the respondents pointed that their heating, gas, other services such as water, transportation etc. were also affected due to flood.

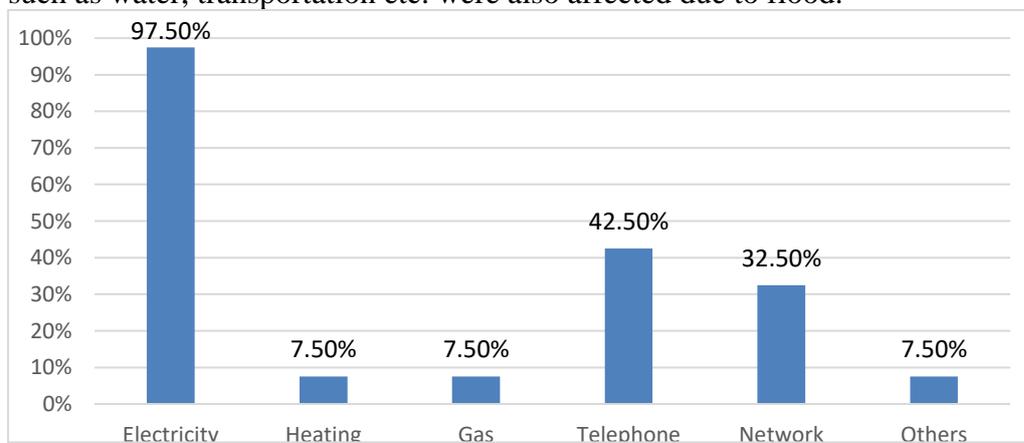


Figure 2 : The services that were affected due to flood

5.5 The period for which they had to close the business

The above chart shows that majority of the respondents, being 37.5% had to close down the business for a week. 27.5% responded that they had to shut down the business between 7-14 days. 5% said that they had to close down the business for 14-21 days or 21-30 days each. A significant portion, 22.5% mentioned that it was above 1 month that they had to close the business. One respondent has still not been able to open the business.

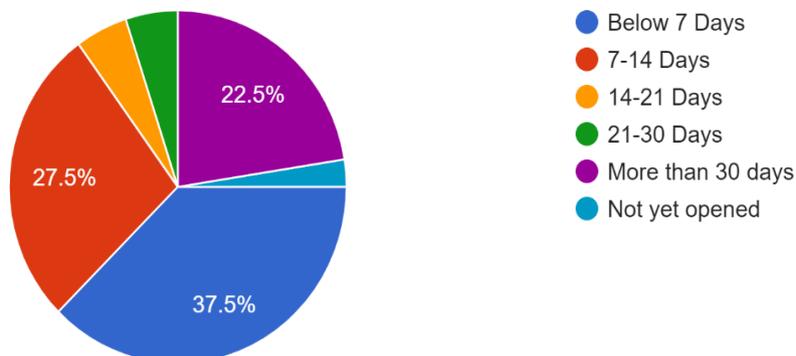


Figure 3 : The period for which they had to close the business

5.6 The period for which the respondents had to move out while the repairs took place.

Table 2 shows that 34.8% of the respondents had to move out of the premises while repairs were going on, for below 7 days, 21.7% for 21-30 days and another significant 26.1% for more than 30 days. 7.3% had to move out for 7-14 days and 4.3% for 14-21 days. The remaining 4.3% has the repairs still going on.

Table 2 : The period for which the respondents had to move out while the repairs took place.

Sl. No	Period	Number of respondents	Percentage (%)
1	Below 7 Days	8	34.8
2	7-14 Days	2	8.7
3	14-21 Days	1	4.3
4	21-30 Days	5	21.7
5	More than 30 Days	5	26.1
6	Repairs still going on	1	4.3
	Total	40	100%

Source: Questionnaire

5.7 Reporting of the flooding to someone

It can be understood from the graph that, 90% of the respondents reported the flooding to the local authorities be it Panchayats or Municipalities. 30% reported the flooding to Police station while 20% reported it to the news channels and 5% to the Fire station.

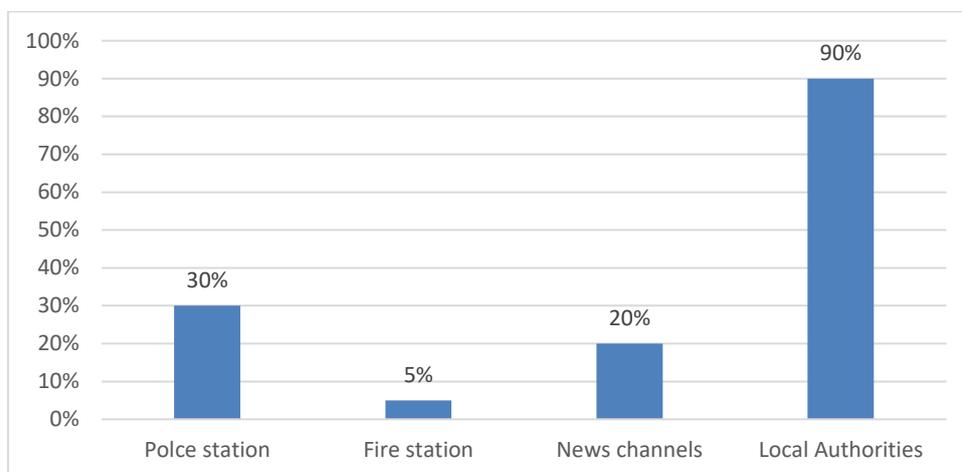


Figure 4 : Reporting of the flooding to someone

5.8 Estimated loss of revenue due to flood

It is clear from Table 3 that 30% of the respondents incurred a loss below Rs.100,000 while another 30% incurred a loss between Rs.100,000 and Rs.250,000. Another 22.5% suffered a loss between Rs.250,000 and Rs.500,000. A 17.5% of the respondents suffered a loss above Rs.500,000, going even to the extreme of Rs.450000000 or even Rs.500000000.

Table 3: Table showing the estimated loss of revenue due to flood

Sl. No	Loss	Number of respondents	Percentage (%)
1	Below 100,000	11	30
2	Between 100,000 & 250,000	11	30
3	Between 250,000 & 500,000	9	22.5
4	Above 500,000	9	17.5
	Total	40	100%

Source: Questionnaire

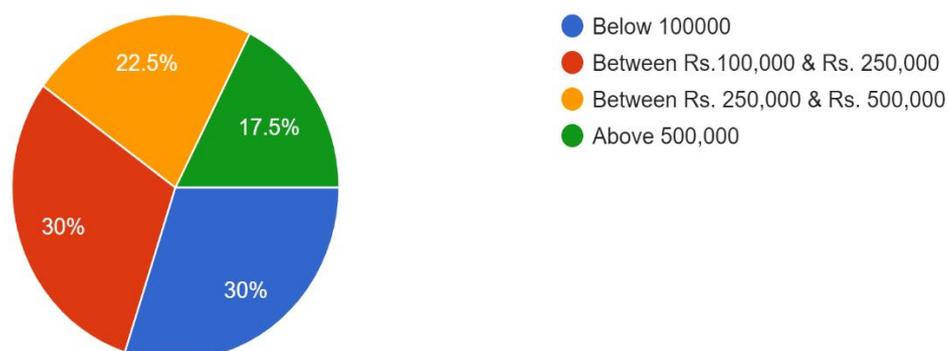


Figure 5 : Estimated loss of revenue due to flood

5.9 Suggestions and conclusion

As the Kerala flood (2018) was a major disaster that the state has ever witnessed it washed away the lives and hopes of many. The most affected and the least noticed was the retail

sector. Because of the traumatic affect the business had to shut down for a long period of time. As a consequence the revenue of the state considerably decreased. At that point of time a significant problem that they faced was the financial instability. In order to uplift the financial position of flood hit retailer, government as well as non-government organisations must take initiatives to provide financial aid. Credits must provide inventories at a subsidised rate. Provisions for exchanging damaged furniture and fittings at a lower rate must be made possible. Banks and other NBFCs must extend their credit period for the retailers affected by flood. Special preference must be given to those retailers who did not receive any insurance coverage.

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A Study On Impact Of Digitalisation On Tax Administration In India

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Abstract

The globalization and digitalisation trend has created huge increase in trade transactions. Tax Administrations were capable of handling such developments up until recently. Multiple projects started internationally require transparency in their functions and tax liabilities. To conduct these operations effectively became an effortful task. Tax administrations need actionable data insights to handle these problems, improve services complying with the latest technology and optimize operational excellence. Digitalisation has helped develop various industries, enhancing them with better logistics and global reach. The same trend wave applies in proper tax administration. Greater digitalisation has helped increase the foreign reach for many companies. For example, shareholders and customers may be located in different countries, and the company itself can organise complex supply chains which again cover many more countries. This might not be good for national tax administration of such businesses.

Keywords: Digitalisation, Tax transparency, Globalisation

Introduction

Digitalisation is continuously creating immense changes in the society, government and the economy. The point of digitalisation is to create the next best way to conduct a task which involves much less manual labour and with pinpoint accuracy. Tax regulation systems are a significant part of this revolution, but changes to digitalize taxes are increasing at a decreasing rate in many arbitration. The complex and competing forces that affect tax mean that many countries are struggling to reap the full benefits of modern technology in their tax system.

Digitalisation is attractive to governments for many reasons, for example, it can help tax authorities gain additional insight into the economy and taxpayers' affairs – and thereby help to close the tax gap. It can also reduce the administrative burden both on the collecting authority, and, if done correctly, to the taxpayers themselves. And additionally, it can make the process of compliance simpler

But more than just being an efficiency measure, digitalisation can transform how a tax system functions. Pre-populating citizens' tax returns fundamentally alters the tax compliance landscape, shifting to a model where the government prepares returns automatically and citizens are responsible for auditing them. Pre-populated tax returns may not consider tax planning and may not always apply the most tax optimal treatment for a given citizens' affairs. The change in the trust dynamics leads to a need for more citizens to

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know more about their tax affairs and it shifts the role of tax professionals from a primarily preparatory role to a confirmatory one.

While significant reductions in the cost of the tax system – both for the government runs it and the taxpayers complying with it – can be realised, there are certain best-practice approaches that should be considered and common pitfalls to beware of. For example, testing with pilot studies and stepped rollouts will reduce the difficulty of transitioning to digital administration methods. On the other hand, making new systems mandatory too quickly will pass costs onto taxpayers and will adversely affect the digitally excluded.

This paper looks at the whole story of digitalisation, from the goals of taxation right down to the specific tools used to administer it. It considers the needs and desires of different stakeholders in the tax system and how each affects the way that digitalisation will be carried out. It reviews what good looks like for each.

Literature Review

Werner Brandt President, ICC Germany, says that the change to digitalization brings certainly brings challenge as well as good opportunities for the tax function. Digitalization can reduce the administrative burden and bring more efficiency in the tax payment system and also to the tax payers, it should be aimed that for a better tomorrow's function, key data provided by the company is processed in a timely manner.

Juswanto & Simms, Lipniewicz 2017, In their study found that, one of the consequences on functioning and organization of the economy is digital disruption. Only 9 out of the top 20 companies on the world market capitalization are digital but 10 years ago, only 1 was digital. It is the biggest challenge to use this trend ensuring that digital companies contribute rationally to their contributions to tax revenue.

Saumen Chattopadhyay and Arindam Das Gupta,2002 Their study focused on the behavior of taxpayers in India to find out how they are influenced by cost of compliance. But the data collected was not sufficient as it was also needed from the Income Tax records.

Shome, P. (2014)[14] in his book 'Taxation Principles and Applications A Compendium' has presented selected papers, with significant extracts from - 66 - them, with their scope, approach and analysis by modifying and updating where useful.

Kumar, S., Nagar, A. L., Samanta, S. (2007)[15] in their paper, "Indexing the Effectiveness of Tax Administration", examines the effectiveness of direct tax administration in India through an economic model. The paper taken into account collection of taxes and constructs a tax enforcement index thereby recommending policy reforms for improving efficiency and effectiveness of tax administration

Das-Gupta, A. and Andrade, F. (2012)[19] in their paper, "An Analysis of the Effectiveness of the State Tax Administration in India with Particular Reference to the Value-Added Tax" reviews the effectiveness of state level Value-Added Tax (VAT) administrations in India.

Bird, R. M. (2015)[21] in his article, 'Improving Tax administration in Developing Countries' has discussed upon certain aspects of tax administration in reference to developing countries. He highlights important aspects which need to be considered and improved by countries in order to move further between analysing an optimal tax structure and understanding how a more - 76 - effective tax system may become reality.

Research Problem

The study explores how the tax administrations in national and international level react to the concurrent changes in the globalised environment and in the situation where tax policies

have seen more changes than in the past three years. Phases of these changes in tax administration policies and its implementation cannot be separated in different stages. It is an ongoing process where policies are altered according to the then current economic situation. Digitalisation, without a doubt, has complemented with this movement with its various assisting features. We study how the tax administration has reached where it is now with its compliance with Information and Communication Technology.

Objectives

- This study navigates the journey of development of tax administration with the help of advancing technology.
- Studies the simplicity in digital tax system.
- There are key factors which make different tax systems variously harder or easier to digitalize.
- To break through the key factors which make different tax systems harder or easier to digitalise.

Research Methodology

The study is exploratory and analytical in nature, which is based on secondary data. The data for the study were collected from various published source like books, journals, research articles and websites. The main aspects of the study have been discussed in detail with experts, researchers, and other eminent personalities in this field in order to get an insight into the subject.

Analysis And Discussions

Digitalisation: The Next Evolution

The propagation of digital technologies over the past twenty years has been substantial, marking one of history's most rapid rates of adoption of new technologies.

The charged growth of ICT services is presenting policymakers with three key challenges. The first challenge is to build standard performance index to measure the extent to which ICT is being incorporated in different social settings. During most of the sector's development, ICT stakeholders focused primarily on access, building the networks that today connect much of the planet; they devised metrics accordingly. In a world of near ubiquity in terms of access, policymakers need a new way to look at the ICT sector.

The second challenge is concerned with the lack of tools to determine the impact that the mass adoption of connected digital technologies and applications is having on both societies and economies.

The third challenge is for policymakers to adopt new policy which are tools to accelerate digitization and reap its accompanying benefits. Over the past twenty years, policymakers established rules to enhance access to information and communication services — setting policies that boosts competition and promotes infrastructure sharing. After this, they need to create an understanding of the ways in which they can instigate adoption and boost the usage of digital applications and its services by consumers, businesses, and public institutions.

A modern tax administration relies on its ability to seamlessly incorporate new digital technology into the workplace and services. To help succeed with adoptions, tax administrations should consider establishing the following components:

Compliance strategy

Digital transformation requires compliance management. This includes the development of compliance methodologies and the reorganization of units around key taxpayer segments such as large businesses, subject matter experts (SMEs) and individuals. Management also

requires a vision about tax fraud prevention and detection. Any compliance strategy must align with the values and behavior of the employees responsible for tax assessment, auditing, revenue collection and management. Taking such an approach helps tax administrations prioritize oversight activities and approaches and effectively coordinate scarce resources towards them. Properly designed key performance indicators (KPIs) tied to the compliance strategy can be used to monitor the progress, of capacity-building efforts and objectives on an ongoing basis.

Legislative framework

Digital transformation may require new tax and procedure laws that modernize administrative and procedural provisions across all major taxes. Given the pace of new technologies, it's critical that legal systems align to legislation that addresses the implications of new technologies on the current tax system. This pertains to many aspects including confidentiality, privacy, user terms and conditions, liability on contracts between tax administrations and taxpayers and so on. The challenge here is to replace rigid 'as-is' thinking that tax lawmakers often practice with innovations that can absorb and handle the new global and digital-driven economy.

Operational framework

An operational framework presents a blueprint for a tax administration's core processes and compliance procedures. This includes the design of a governance model, organizational structure, guidelines for operational processes to achieve the compliance strategy, management reporting and roles and responsibilities within the organization. No operational framework fits all tax administrations. Frameworks need to have the ability to consider different country contexts, cultural peculiarities, social, political and economic opportunities, an organization's technological maturity as well as changing global tax environments.

Tax technology and infrastructure

To optimize the benefits of tax technologies as well as manage compliance risks and rising future revenues, tax administrations should consider developing a strategy to guide the direction of innovations and provide a clear picture of the end-state design of a tax technology infrastructure. New technology has its own set of requirements, including a suitable physical environment for installation, continuous support in the day-to-day environment, ongoing maintenance and license costs, new security requirements, monitoring and planning for future improvements and so on. Many of these challenges can be resolved through service level agreements with a trusted cloud service provider. The Tax Technology Strategy guides the direction for all innovations and provides a clear picture of the end-state design of a tax technology infrastructure for the tax administration

Change management, training and education

Digital transformation brings substantive change. Tax administration staff will need to receive proper training for the growth and extension of individual skills, abilities and competencies concerning the new operational blueprint and tax technologies. It's also important to structure tax administration in such a way that roles and functions are clearly defined and differentiated, lines of communication and accountability untangled, and decision-making procedures transparent and functional. A key component of change management is to make people comfortable with technology so that they can use it as a tool to support them in their daily operations

Performance measurement

Performance measurement dashboards and reporting presents a feasible way to maintain buy-in, ongoing support and strategic guidance from governments and politicians. They also enhance process transparency and accountability. Effectively measuring performance involves periodically assessing set KPIs, relevance, progress, efficiency and the impact of activities with respect to project objectives. The tangible outcome of monitoring and measuring can be presented in periodic progress reports (e.g. semi-annual or annual) to key stakeholders. Sharing successes (and mistakes) with the organization is an integral part of obtaining buy-in and credibility from that organization. It can also be used to inform key stakeholders and the general public, helping to build trust.

Findings

From the 1970s, technological advancements have shaken the world and brought significant changes in the way businesses and other concerns are conducted and managed in the modern world. Looking at any business division, be it manufacturing, logistics, HR or finance, IT is the backbone that supports its efficient and seamless functioning. It may be difficult to gauge which business division has been the greatest beneficiary of technological advancement, but it is amply evident that the finance function, which is the closest to the tax function, has benefited immensely.

Use of technology in the finance function has had a significant impact on the entire spectrum of business processes. The ERP systems used in finance functions today have helped businesses heighten their efficiency and derive substantial value from these processes. This has resulted in overall savings for organizations. In today's world, use of modern world ERP systems has become more of a business necessity than a luxury because it empowers a business with a significant competitive edge and enables it to emerge as a vanquisher, compared to its less tech-savvy opponents. Moreover, with rapidly growing businesses, both in size and geography, it is as much near to impossible to compress voluminous data in statutory filings or internal MIS reports without the use of appropriate technological enablers. The comfort and control of financial data this bestows on the CFO of a big conglomerate is unparalleled in the ERP era, and businesses that have implemented these systems find it impossible to imagine how they would have functioned efficiently without the support of technological advancements and their timely adoption.

This is the scenario in which tax functions may need to operate in the near future in most organizations. Consequently, it makes good sense for businesses to gear up and begin investing in automation in their tax functions now rather than postpone this decision. Technological advancement has worked wonders in other business divisions, therefore, it is beyond doubt that technology, once it is employed, will significantly enhance the efficiency of tax functions and add synergies to the business as a whole.

Conclusion

Tax authorities move at varying speed toward greater digitisation of tax administration, and at the same time, businesses need to develop a detailed understanding of digital tax requirements in their markets. Businesses must also discuss whether their tax management and its functions are able to meet digital data and filing obligations as per the latest jurisdictions and is prepared to defend audits in real time or near real time.

Businesses will be required to perform the digital solutions that can work within and across countries and that can respond to evolving compliance and controversy needs in case they arise. They should explore the use of data analytics for tax planning and compliance

functions, to measure and mitigate possible risk, to efficiently target altercations interventions and resolve issues as they happen.

Businesses should consider what investment may be needed to respond to the increasing demand for digital tax information and how to manage the risks inherent in the expansion of electronic data submission. Taking the time to understand these issues and explore forward-looking solutions today — and conveying these options to policymakers — may help avoid more costly and time-consuming remedies tomorrow.

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A Study on Applications and Future Prospects of Non-Conventional Sources of Energy in Wayanad District, Kerala

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Abstract

Environment is the natural surrounding which helps in the growth and development of life on planet Earth. Overconsumption and utilisation of the resources that the environment provides, especially the non-renewable sources like oil, coal etc. cause harm to the environment and affects the life of Humans. Therefore it is necessary to uphold the quality of the environment by engaging in environment friendly methods for satisfying human needs. This project is mainly focused to understand the extent to which households have implemented renewable energy systems and the possible future implementation of non-conventional sources by non-users. Non-conventional energy should be given importance due to the fact that the planet is rapidly running out of conventional fuels. The researchers have considered three sources of energy such as solar, biogas and rainwater for the study. This research focuses on the perspective of users and non-users in relation to the usage of non-conventional sources of energy in households of Wayanad District in India.

Keywords: *Non-Conventional sources of energy, solar energy, biogas, rainwater harvesting*

1.Introduction

Environment could be anything which surrounds us. It could be biotic or abiotic in nature. The natural environment helps in the growth and development of life on planet Earth. It provides ample resources for all living beings for sustenance. Resources consists of both renewable as well as non-renewable resources. Overconsumption and utilisation of these resources especially non-renewable sources like oil, coal etc cause harm to the environment and affect the life of Human. It is therefore necessary to uphold the quality of the environment by engaging in environment friendly methods for satisfying human needs. Energy is the primary input for almost all activities of a human life. It helps in improving the quality of life. Energy is mainly classified into two-conventional energy and non-conventional energy. Conventional energy is also known as non-renewable energy and these resources take a long time to replenish once it is over. Coal, oil, petroleum etc comes under this energy. The other one i.e. nonconventional energy is otherwise known as renewable energy and these sauces are available in plenty. Bio energy, solar energy, tidal energy, wind energy is its types.

Human mostly prefer using conventional energy and it is a known fact that the resources are limited and its uses are unlimited. So over consumption leads to the extinction of these resources and it will take decades to again evolve these resources. So for the protection and

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safety of our environment it is a necessary to shift to the use of non-conventional energy. This can be done through the use of solar energy, bio energy, wind energy etc. Here bioenergy is a form of renewable energy that is made out from recently living organic materials popularly known as biomass, which is mainly used to produce transportation fuels, heat, electricity and other products. Solar energy is another inexhaustible type of energy that uses daylight through a variety of ever-evolving technologies such as star heating, photovoltaics, solar thermal energy, solar architecture, molten salt power plants and artificial photosynthesis.

Wind energy is a process by which wind is used to generate electricity. Tidal energy may be a kind of hydropower that converts the energy obtained from the tides into types of power, i.e. electricity. Tides are more predictable than sun or wind. Although it is not widely used now it is a good source of non-conventional energy, when efficiently used can be the best source to generate electricity in the future. Three aspects of non-conventional energy explored in this research are: Solar, bio gas & rainwater harvesting. Solar energy refers to capturing the energy from the Sun and later on changing it into electricity. We can then use that electricity to illuminate our homes, streets, and businesses, and power our machines further. Biogas refers to a combination of various gases created by the breakdown of organic matter within the absence of atomic number 8. Biogas is made from raw materials like agricultural waste, manure, municipal waste, material, sewage, inexperienced waste or scraps.

Rainwater harvest (RWH) could be a straightforward technique by that downfall is collected for future usage. The collected rainwater may be stored and utilized in different ways or directly used for recharge purposes. Kerala a small state located in the south west tip of Indian Peninsula is the most populated state in India with a density of population of about 749 per sq.km. The conventional sources of energy mainly are fuel wood, petroleum products and electricity. Recently Kerala started depending on solar and hydropower for electricity.

Kerala a state blessed with abundant renewable sources could use it efficiently and provide sufficient energy and essential modern amenities to the people. The major non-conventional source of energy used in Kerala are solar and bio energy. The study concentrates on Wayanad district in Kerala with a small level of population and a rural texture. With the introduction of many household non-conventional instruments, it is necessary to analyze the extent to which such methods have been applied and made use of in this district. This research primarily focuses on the uses and the implementation of some non-conventional methods in households.

1.1 Statement Of The Problem

We can say that a man's basic activities primarily depend on energy. Energy is the life blood of development. The rate of economic development is sometimes measured on the levels of energy consumed. Many underdeveloped countries experience the shortage of energy. In India energy resource has become very crucial in the context of development in different sectors of economy. When compared with other countries, India's problem of energy crisis is far more severe. The best way to diminish this problem is to tackle the increasing energy usage in houses. Households in India continue to depend primarily on conventional energy sources like electricity, gas, etc. Some steps taken were, to shift the dependence on conventional energy sources like kerosene to others. The use of bio-gas is one such step to meet the energy crisis to some extent. A country like India requires cheap, reliable and

assured energy sources for different purposes like water lifting, lighting, cooking, etc. The conventional sources of power like electricity, kerosene, etc have become scant and expensive. The supply of these sources of energy is not only inadequate but the distribution system is also flawed. The energy sources used as alternatives to conventional energy in households include wind energy, solar energy, and rain water harvesting system, composts and biogas. The present study is an attempt to examine the application level and future prospects of the use of non-conventional energy in households in the district of Wayanad.

1.3 Significance Of The Problem

Increasing use of non-renewable resource is an upcoming threat to our environment and has already started showing its effects. This can be easily solved by shifting to non-conventional energy sources. People are not using this facility widely just because of lack of awareness. This study mainly focuses on creating awareness about the advantages of using renewable resources and thus promoting its use.

1.4 Study Objectives

- To analyze various non-conventional energy used by the population.
- To study the importance of use on non-conventional energy among households in rural area.
- Future prospects of non-conventional energy among households in rural areas.
- To suggest ways and means to save energy among households in rural areas

1.5 Design Of The Study

a. Description of Research Design and Procedures Used

The study is purely descriptive in nature

b. Sources of data

Primary data: - Primary data is information that you collect specifically for the purpose of your research. These are collected through direct interview with the help of a structured questionnaire.

Secondary data: - Secondary data refers to data that was collected by someone other than the user. These are collected from journal, magazines, published papers and internet.

c. Universe and Sampling Procedures

In this study we had taken a sample size of 30 in which 15 of them are users of various non-conventional energy sources and 15 non users.

d. Data Analysis

For the purpose of deciding output simple percentage is being used in this study.

1.6 Scope Of The Study

The study has been confined to a limited geographical area i.e., Wayanad district. It is confined to understand the usage of non-conventional energy in households and problems that confront the users. The study further covers the future prospects of renewable sources in one's own house.

1.7 Limitations Of The Study

- a. Limited time period
- b. Small size of sample acquired because of lack of users

1.8 Review Of Literature

Das & Sikdar (2016) discusses about various non-conventional energy sources and its current status in India. Energy is primary for the survival of human beings as well as nature. Everything that takes place in the nature is due to the flow of energy. Energy consumption is related to the development and progress of mankind. India relies deeply on conventional

sources of energy like thermal, hydro and nuclear and also on its large supply of coal for its infrastructural developments and other activities. The incrementing prices of these conventional sources project that resources such as fossil fuels would run out in future which will adversely affect worldwide socioeconomic development. The developing countries would be the ones mostly impacted by the energy crisis. Despite conventional energy being the prime most energy source, its restricted reserves and large scale environmental degradation resulted from their widespread use, specifically global warming, urban air pollution and acid rain, has lead to the identifications of non-conventional sources for a global sustenance. They have concluded that India has a greater scope for non-conventional energy and also for its progress. India possesses the biggest decentralized solar energy programmed, second largest biogas and stove programmers, and also the fifth largest wind generation programmed within the world.

Fiala & Michalíková (2011), describes the different possible ways in which solar energy could be transformed into chemical energy for the surface treatment of metal which would be used for acquiring solar radiation. These metals are used in the photovoltaic systems. The electrochemical process used for absorbing solar energy is copper plating. The authors discusses about the disadvantages of depending on the season, daylight and cloudiness of areas.

Dr. N. J. Ekins-Daukes(2009), the author says that every source, conventional as well as non-conventional are all procured from the sun (even indirectly). Absorption of solar radiation and converting it into usable form would only help mitigate emissions of carbon dioxide and other greenhouse gases and also the conservation of non-renewable resources like fossil fuels. The author compares the perspective of developing and developed countries towards solar energy. To eradicate this difference the governments of the world must provide incentives or subsidies. The author concludes by saying that if the industry continues to expand with its gradual growth then by 2050 there would be a substantial impact on the greenhouse gas emitted by other forms of energy.

Lahlou (2017), explores the option of biogas alternating the usage of fossil fuels. Biogas production is mainly an anaerobic breakdown of organic material into methane in an oxygen less atmosphere. The project highlights the cost involved and eco-friendly changes biogas can bring to the world. The author concludes by saying biogas production is an efficient way in saving the environment and leads to sustainable development.

JeanCharles (2007), the author focuses his paper on rainwater harvesting systems in developing countries. Scarcity of water is something faced almost every country. Quantity and quality of water is the main concern now or in the near future. Rain can be used as an alternative source of water when properly harvested. The paper also concentrates on a developing countries technical, physical and social environment. The author had adopted ground catchment for rain water collection. Even though it is sustainable, being an open water source it allows mosquitoes to breed.

2. Analysis And Interpretation

Type of Renewable Sources of Energy used by user Respondents in Households

Table 2.1 – Type of Renewable Source used in Houses

Particulars	No. of Users
Solar Panel	11
Biogas	9
Rainwater Harvesting	4
Total	24

Source : Primary Data

Interpretation: Majority of the respondents use solar panel that is 11 of the total responded users, least number of users are of rainwater harvesting that is 4 users. It is also identified from the study that 8 respondents use more than one renewable source of energy. Hence the number of users is 24 as shown in the above table.

Factors that motivated Respondents to invest in Non-Conventional Sources

Table 2.2 – Motivating factor which led to investment in renewable sources of energy

Particulars	No. of Response
Environmental protection	8
Renewable powers are the future	13
Congenial policies in renewable energy at state level	6
Total	27

Source : Primary Data

Interpretation : From the above Table 2.2, it can be observed that 8 users who had responded has made the decision to invest in renewable energy for environmental protection. Out of the 27 responses, 13 users believe renewable powers are the future and 6 users were motivated due to congenial policies in renewable energy at state level. From the study it was clear that 11 respondents had more than one motivational factor. Therefore the number of responses had resulted in 27 as shown in the above table.

Concern of the Respondents regarding the low amount of Renewable energy being produced

Table 2.3 - Concern regarding the low amount of renewable energy being produced

Particulars	No. of Respondents	Percentage
Very Concerned	11	36.7
Concerned	18	60
It doesn't affect me	1	3.3
Total	30	100

Source : Primary Data

Interpretation : From the above Table 2.3, it can be observed that 60 percent of the respondents are concerned, 36.7 percent of the respondents are very concerned and 3.3 percent of the respondents are least concerned regarding the low amount of renewable energy being produced.

Future possible investment regarding renewable energy systems within the next 5 years

Table 2.4 - Possible investment initiative regarding renewable energy systems within the next 5 years

Particulars	No. of Respondents	Percentage
<i>Users</i>		
Definitely Yes	13	86.7
Not Sure	2	13.3
	15	100
<i>Non-Users</i>		
Definitely Yes	9	60
Not Sure	6	40
	15	100
Total	30	

Source : Primary Data

Interpretation : From the above Table 2.4, it can be observed that 86.7 percent of users and 60 percent of non-users who have responded are willing to invest in renewable energy systems whereas 13.3 percent of the users and 40 percent of respondents remain uncertain about the possibility of such investments.

3. Findings, Suggestion And Conclusion

Findings

Following are the findings interpreted from the study:

- All the respondents are well aware about the non conventional sources of energy.
- Majority of the respondents who use non-conventional energy are farmers.
- Majority of the respondents who uses renewable energy has mostly invested in solar panels than in biogas and in rainwater harvesting.
- A main disadvantage found by users of renewable energy in using these sources is the installation cost.
- It is observed that most of the users were supported by government subsidies for the installation.
- It is found that majority of the users had invested in non-conventional energy because renewable sources of energy are the future.
- It is found that most of the respondents relied on friends/relatives for sources of information regarding prices of renewable energy.
- It is observed that many of the respondents used their own fund for installation.
- It is found that all of the users who had responded had got clear guidance about the policy on renewable energy.
- Most of the users' system of renewable energy has been operational for more than two years.
- It is found that majority of the users system has undergone inspection by a regulatory body.
- It is found that many of the users say that they have not incurred any losses with respect to the operation of renewable energy sources.
- Majority of the respondents feel concerned due to the lack of usage of non-conventional sources of energy.
- It is identified that many of respondents has found it to be very important to use renewable energy system in India.

- Majority of the non-user respondent would invest in any forms of renewable energy in the next five years.
- It is found that many of the respondents look for quality rather than cost-effectiveness.
- It is found that majority of the respondents are of the opinion that by 2030 solar energy would be successfully implemented across the globe.

Suggestion

“Our country doesn't have any appreciable quantity of fossil fuel reserve. Hence we depend upon other nations to fulfill our energy needs. This posed a serious impact on our economy which ultimately affects our nation's development. Hence identifying renewable energy would be an ultimate solution to solve energy crisis in the near future. So our society needs more awareness towards the utilization of renewable source which would benefit both the environment and economy.”- Sabarathinam, a Respondent.

Thus Non-Conventional Sources of energy is the only solution for the prolonged sustenance of Earth as well as to bestow time for resuscitating her depleting resources. The researchers by conducting this limited study have sort out some suggestions that would boost the usage of renewable sources especially in households.

- Improving Awareness – People are aware about what renewable resources are from schools itself. What they lack is where to approach to make an investment. The Government has brought in many initiatives to promulgate these type of resources. Likewise in Kerala, the government had established ANERT particularly for energy conservation and non-conventional resources
- More Government Involvement – Administer additional facilities especially to households in order to make renewable energy more feasible. Like catering more subsidies, maintenance facilities, etc.
- Governments, companies and the like should take more promotional activities in which advertisements plays a crucial role, it can be used to boost the sales figure. It must not only be limited to newspapers.
- Frequent assessment and maintenance of the installed systems by technical regulatory bodies would ensure long-term applicability of the units.
- Government should promote ongrid solar rather than the offgrid solar projects and also remove the usage of lead batteries because along with saving the environment it is also gradually harming it.

Conclusion

The study enabled the researcher to understand the application and future aspects of non-conventional energy in households in Wayanad. Non-conventional energy should be given importance due to the fact that the planet is rapidly running out of conventional fuels. The use of renewable sources of energy will have a positive impact on the environment. Through the use certain renewable energy systems in households, one will be able to contribute to this positive change.

This project is mainly focused on understanding the extent to which households have implemented renewable energy systems. By conducting a survey, it is found that a major part of the community has not made good use of renewable energy. Solar energy, being the more popular option of renewable energy, is considered to be an expensive option regarding initial cost and installation of the same. Rainwater harvesting is not widely practiced despite the benefits it offers to the users. The survey showed that the majority of the respondents, who use renewable sources of energy, are actively making use of biogas.

The government has introduced many subsidies and projects to encourage the use of renewable energy systems but individuals are informed of the same by conversing with their family and friends instead of directly enquiring the websites which provide clearer and better understanding of the renewable energy source and its implementation. The existence of subsidies and benefits provided regarding renewable energy systems seem to go unnoticed by many. The lack of marketing to encourage the use of such systems is one of the main reasons why the community has not made full use of renewable energy. The community, as a whole, has expressed their concerns for the environment. Proper mode of communication of information regarding the benefits of renewable energy has to be implemented via direct mail, advertisements, newspaper, magazines, etc., in order to reach out to the community. A collective effort is the route to a healthier and happier environment.

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The Future Prospects Of Non-Conventional Energy In Households: An Overview

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DR. A.S. AMBILY**

Abstract

This project focuses on understanding the importance and effect of non-conventional energy on the environment. Due to the major increase in the need for environment friendly lifestyle, to help benefit the economy, there arises the need of non-conventional sources of energy. One of the main contributions which a society can make is to implement non-conventional energy systems in their households. The report contains a collective observation highlighting the urgency of implementing non-conventional energy within the society.

The main non-conventional medium, which is taken to facilitate this research is rainwater harvesting. This study analyzes the various to households from the use these non-conventional energy sources and the possible effect it will have on the environment as a whole. The benefits attained by household by way of using non-conventional energy systems are also observed. Various government initiatives and subsidies are provided to encourage the use of such systems. These subsidies are mainly focused on providing financial support to the users of non- conventional energy systems.

Despite such efforts, most households are not equipped with non- conventional energy systems. The lack of awareness contributes as one of the reasons why the majority of households do not engage in such usage.

Keywords: Non-conventional, Energy, Environment

Introduction

The environment holds the key to a healthy community. Human consumption and utilization of resources causes harm to the environment and thereby threaten the well-being of the community. It is therefore necessary to uphold the quality of the environment by engaging in environment friendly methods of satisfying human needs. Taking such initiatives to improve the health of the environment will bring a positive impact on the health of the community in the near future. The World Health Organization (WHO) defines environment, as it relates to health, as “all the physical, chemical, and biological factors external to a person, and all the related behaviors.” The interaction between humans and the environment is a deciding factor when it comes to the quality of life, years lived, status of health, etc.

Humans use energy for the purpose of development and creating an easier way of living. From the electricity used to facilitate lighting in households to the use of fuels in cars and airplanes to facilitate transportation, energy has proved to be a major factor in the lives of people and the society. There are two types of energy:

- i. Conventional

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ii. Non-conventional energy

Conventional energy is the use of non-renewable sources of energy such as petroleum, natural gas, coal, etc. Non-renewable sources of energy pose a certain level of threat to the environment through greenhouse gas emissions and other damages. Non-conventional energy helps promote a healthy environment. Various methods of non-conventional energy can be used by individuals, household, industries, etc, in order to achieve the same.

Review Of Literature

For the study, references from published papers have been considered. The study consists of about 5 Literature Reviews on the uses, current status in India, technical, economic and policy aspects and applications of various non-conventional energy sources.

Timilsina, Kurdgelashvili & Narbel (2011), analyzes the technical, economic and policy aspects of solar energy development and deployment in the study. At first solar technologies were composed with small-scale photovoltaic (PV) cells, but now it is represented by concentrated solar power (CSP) and also by large-scale photovoltaic systems that feed the electricity grids. The solar energy market has expanded rapidly due to supportive policies, increased volatility of fossil fuel prices and the environmental externalities caused by it such as the greenhouse gas emissions. The only barrier which affects further expansion of its market is the cost.

Victor F. Medina (2016) discusses about the various forms of saving potable water through rainwater harvesting. He states that rainwater harvesting is a perfect substitute of water especially in water-stressed areas. He describes it as the diverting, capturing and storing of rainwater and later channelizing this rainwater for different purposes.

Naik & Neupane (2008) talks about the usage of rainwater harvesting system during the last fifty years and why it is brought again to meet the global need of water. They discussed the need for concentrated water harvesting systems in order to avoid dependency when there is an irregular rainfall and also the drastic effect of the growing urbanization on the water resources like ground water.

Suyog Vij (2010-2011) discusses about the usage of kitchen waste for biogas production. Kitchen wastes are organic materials once exposed to the microbes filled atmosphere causes health issues such as malaria, typhoid, and cholera. Improper waste management only leads to the contamination of waste water and increased growing conditions for flies and further emits bad odor producing greenhouse gases leading to global warming. Biogas plants eradicate this threat by producing high class renewable fuels substituting firewood and other gases by diminishing CO₂ and discharge of methane. It uses kitchen wastes efficiently and in a cost effective manner with an added feature of being environment-friendly.

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Need & Importance Of Non-Conventional Energy

The frequent use of conventional energy sources has deteriorated the quality of the environment to the same degree. The burning and usage of conventional energy sources such as petroleum, coal, etc is one of the main reasons for ozone depletion. It remains a major environmental problem. The release of chemical compounds containing gaseous chlorine or bromine, through industries and other human activities prove to be the main reason behind the weakening of the Earth's ozone layer. This in turn increases the amount of ultraviolet radiation and consequently gives rise to health issues due to the same.

The burning of fossil fuels in power stations increases the emission of sulphur dioxide and thereby creates another threat- acid rain. Acid rain is the precipitation of acidic components in wet or dry forms. This threatens the well-being of plants and animals which are exposed to such conditions. Power stations consume fossil fuels to satisfy the electricity demands of the community. If individual buildings are to become independent and generate solar energy through panels, the decreased demand for power from power stations will help decrease acid rain events.

Using non-conventional energy to satisfy ones requirements shows a great deal of care and awareness that one has for the world he is living in. Non-conventional energy are pollution free and can be used to generate energy which does not threaten the health of the environment. Wind, tides, solar, biogas, rainwater, etc, are example of natural resources which can be used to generate non-conventional energy for the purpose of satisfying human needs. By implementing and encouraging the use of non-conventional energy systems in households, there rises a chance to make a better environment and to restore what has been lost.

Objectives Of The Study

- To study and understand the concepts of non-conventional source of energy.
- To study the importance of the uses of non-conventional energy among households
- To study the future prospects of non-conventional energy among households

- To suggest ways and means to save energy among households

Research Methodology

The study is based on secondary data. The secondary data is based on the information collected from journals, articles, and websites.

Analysis & Interpretation

Concept of Non-Conventional Energy

Energy

Energy acts as a platform to facilitate economic prosperity, without which, there would be inefficiency within the economy. It is a form of power which enables mankind to hone all their inventions and innovations by the mere use of it. It is all around and therefore, energy has proved to be a vital tool for survival.

Conventional energy

The term "conventional" describes a tradition or a way of doing certain things. These traditions are formed over time. The older the tradition, the more profound it is in its usage. This term can be used to refer to the traditional method of using energy. A conventional energy is that which do not concern with the health of the environment. The use of such energy forms have continuously damaged the environment and causes it to become unhealthy day by day. Some examples include coal, petroleum, firewood, etc.

Non-Conventional energy

The term "non-conventional" refers to something that is not considered traditionally. On the basis of energy, it defines new and improved methods of using energy source by taking into account the health of the environment. It is renewable and therefore, does not harm the environment. One of the main characteristics of non-conventional energy is that it is environment friendly. The use of such energy benefits both the community and those living in it. Examples of non-conventional energy include solar, tidal, wind, biomass, etc.

Objectives of Non-Conventional Energy

It is necessary to stress the importance of equipping households with certain tools which can act as a medium for using non-conventional energy source. The implementation of such tools can be applied to various other platforms such as shops, industries. etc, but as citizens of this community, it is important to make a change within homes and the habits of those belonging to this community. The following are the main objectives which state the importance of implementing non-conventional energy systems for individuals:

- To make use of the better alternatives towards energy usage
- To promote a healthy environment
- To work towards the recovery of the deteriorating quality environment
- To enable the opportunity of a better lifestyle
- To work for the future by implementing changes today

Benefits of using non-conventional energy sources

1. They are inexhaustible sources of energy. This means that the supply of non-conventional energy sources is abundant. No amount of use can deplete it and therefore, it does not pose a restriction to its usage. Conventional energy source, however, are limited.
2. There is no harm done to the environment through the use of non-conventional energy sources. It is to be considered as a matter of pride if one relies on non-conventional means instead of conventional means to satisfy their day-to-day requirements.
3. Non-conventional energy systems ensure a promising restoration of the health of the

environment. It helps to reduce carbon dioxide emissions and minimize the growing concerns of greenhouse effect. It is a solution to which many can and should contribute.

4. Non-conventional energy sources are renewable resources which exist everywhere. It is therefore, geographically dispersed and made available to many.
5. Fluctuation of prices within an economy will not affect the operating costs of non-conventional energy systems. This provides the user with cost-benefits which many products do not possess.
6. There will be new employment opportunities with the growth in non-conventional energy systems.
7. Non-conventional energy promotes healthy alternatives towards energy usage. This in turn improves the current state of the environment.

Rainwater harvesting

Water plays an important role to many for various purposes. Hygiene, consumption, etc are only one of many benefits of water. Today, there arises a problem of water shortage in several parts of the world. It is, therefore, important to save water and reduce its wastage.

Rainwater harvesting is a form of using non-conventional energy. The system collects rainwater from various surfaces and stores them for future use. It is a viable and least expensive method of using an energy source. This makes it a potential investment in places which experience an adequate amount of rainfall.

Benefits of rainwater harvesting

1. It is affordable. Rainwater harvesting only requires the collection and storage of rainwater. These requirements are rather simple and less expensive than other forms of non-conventional energy systems, thus making it an open option to all.
2. Water collected from rainwater harvesting can be used to satisfy non-drinking purposes within the household and it helps reduce water bills.
3. The absence of chemicals within the harvested water makes it suitable for irrigation. It proves to be ideal for irrigation purposes.
4. Areas with low water levels can make use of the rain and make water easily available to all households.

Conclusion

Besides sustainable development, renewable energy can promote development in the socio-economic areas of country. A good energy policy by government should ensure the adequate use of renewable sources of energy to cater to the needs of the people thereby leading to inclusive growth. Energy is a major factor responsible for sustainable development and poverty reduction efforts. It affects all aspects of developmental issues such as health, population levels, education, social, economic, and environmental including livelihoods, access to water, agricultural productivity, and gender-related issues. None of the Millennium Development Goal (MDGs) can be met without major improvement in the quality and quantity of energy services in developing countries like India. It is estimated that approximately 1.3 billion people worldwide have no access to electricity. 2.7 billion people continue to rely on fuels such as traditional biomass and coal for cooking and heating and this is expected to rise to 2.8 billion in 2030. In order to decrease our dependence on fossil-fuel energy and increase the use of renewable energy strong policy is required with a firm political will to implement the government policy. Also working on the Public-Private Partnership (PPP) model will not only increase the use of clean energy but also involve the general public and bring about inclusive growth.

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कपकोट ब्लॉक के सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालय में अध्ययनरत् किषोर छात्र-छात्राओं के समायोजन का तुलनात्मक अध्ययन।

मनोज जोषी*

सार :- वर्तमान जॉच में ढोधकर्ता द्वारा सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालयों में अध्ययनरत् किषोर विद्यार्थियों के समायोजन का तुलनात्मक अध्ययन समायोजन के तीन आयामों के परिप्रेक्ष्य में किया गया है। न्यादर्ष चयन हेतु यादृच्छिक एवं उद्देष्ट्यपूर्ण न्यादर्ष विधि का उपयोग किया गया है। सांख्यिकी विष्लेषण हेतु विभिन्न सांख्यिकीय पद्धतियों जैसे- मध्यमान, प्रमाणिक विचलन एवं 'टी' प्राप्तांक का प्रयोग किया गया है।

प्रस्तावना

आज की बदलती परिस्थितियों के कारण प्रत्येक व्यक्ति के लिये आवष्यक है कि वह अपने आप को इस प्रकार व्यवस्थित करने की क्षमता रखे कि वह जीवन के किसी भी क्षेत्र में पीछे ना रहे इसी से व्यक्ति आज बढ़ती हुई मांग के साथ सामंजस्य स्थापित करते हुए सफलता को चूम सके और बदलती परिस्थितियों से समायोजन कर सके। सृष्टि के निम्नतम प्राणी से विकसित प्राणी मानव सभी जीवों को अपने पर्यावरण से सामंजस्य स्थापित करने के संघर्ष करना पड़ता है अनुकूलन की ये प्रक्रिया षेषवावस्था से प्रारंभ होकर आजन्म चलती है और व्यक्ति अनेक कुंठाओं का षिकार हो जाता है फलस्वरूप उसके सम्भावित विकास पर प्रतिकूल प्रभाव पड़ता है।

समायोजन अनवरन्त चलने वाली प्रक्रिया है। अनवरन्त रहते हुए इसमें स्थिरता एवं गतिहीनता का अभाव पाया जाता है। व्यक्ति एवं समाज की प्रगति तथा सफलता उसके पर्यावरण परिस्थितियों से समायोजन स्थापित करने में सर्वाधिक सक्षम है। वह सामाजिक प्राणी के रूप में केवल भौतिक आवष्यकताओं से ही अनुकूलन नहीं करता वरन् वह सामाजिक दबावों के आगे भी अपने आप को अनुकूलित कर लेता है। समायोजन व्यक्ति के लिए हर क्षेत्र में जरूरी है। समायोजन के विभिन्न क्षेत्र जिनमें व्यक्ति अपने आप को समायोजित करने की कोषिष करता है वे क्षेत्र पारिवारिक, सामाजिक, षैक्षिक, सांवेगिक आदि हो सकते हैं। विद्यार्थी समाज की महत्वपूर्ण इकाई है। ये ही राष्ट्र के भावी निर्माता होते हैं। अतः विद्यार्थियों की प्रत्येक गतिविधियों पर ध्यान दिया जाना आवष्यक है। भारत की अधिकांश जनसंख्या ग्रामों में निवास करती है। अतः षैक्षिक दृष्टिकोण से भी ग्रामीण क्षेत्रों पर भी ध्यान देना परम आवष्यक प्रतीत होता है। स्किनर(1974)- "समायोजन के षीर्षक के अन्तर्गत हमारा अभिप्राय इन बातों से है जो सामूहिक क्रियाकलापों में स्वास्थ्य तथा उत्साहमय ढंग से भाग लेना, समय पढ़े पर नेतृत्व में भार उठाने की सीमा तथा उत्तरदायित्व वहन करना तथा सबसे बढ़कर समायोजन में अपने को किसी प्रकारका धोखा देने से बचने की कोषिष करना।"

गेट्स(1995) "समायोजन निरन्तर चलने वाली प्रक्रिया है, जिसके द्वारा व्यक्ति अपने और वातावरण के बीच संतुलन बनाए रखने के लिए अपने व्यवहार में परिवर्तन करता है।"

गेट्स व एडमस(1964) "समायोजन के द्वारा व्यक्ति अपने व्यवहार को परिस्थिति के अनुसार अनुसार परिवर्तन कर समायोजित हो जाता है।"

सब प्रकार से समायोजित व्यक्ति वह होता है जो पहले तो अपने आप से ही सन्तुष्ट और समायोजित हो तथा अपने चारों ओर फैले वातावरण या परिवेष से उसका सही तालमेल हों। इस दृष्टि से समायोजन के क्षेत्रों को व्यक्ति तथा उसके वातावरण में निहित माना जाना चाहिए। एक व्यक्ति की दुनियाँ जहाँ उसके अपने षारीरिक और मानसिक स्वास्थ्य तथा व्यक्तित्व के महत्वपूर्ण पहलुओं के इर्द-गिर्द घूमती है वहाँ उसे अपने सामाजिक परिवेष तथा काम काज के क्षेत्रों में भी समायोजित होने की आवष्यकता पड़ती है।

अध्ययन के उद्देष्ट्य

किसी भी कार्य की सफलता के लिए सर्वप्रथम उसका लिखित उद्देष्ट्य होना आवष्यक है। अतः प्रस्तुत अध्ययन के निम्न उद्देष्ट्य हैं-

1. सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालयों में अध्ययनरत् किषोर विद्यार्थियों के समायोजन स्तर का तुलनात्मक अध्ययन करना।
2. लिंग के आधार पर विभाजित सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालयों के छात्र-छात्राओं समायोजन स्तर का तुलनात्मक अध्ययन करना।
3. षहरी ग्रामीण क्षेत्र के सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालयों के छात्र-छात्राओं के समायोजन स्तर का तुलनात्मक अध्ययन करना।
4. सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालयों के विज्ञान एवं कला वर्ग के छात्र छात्राओं की समायोजन स्तर का तुलनात्मक अध्ययन करना।
5. सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालय के छात्र-छात्राओं को उनके अभिभावकों के षैक्षिक स्तर के अनुसार विभाजित कर समायोजन स्तर का तुलनात्मक अध्ययन करना।

परिकल्पनाये

प्रस्तुत षोध के उद्देष्ट्यों की प्राप्ति हेतु निम्न परिकल्पनायें निर्मित की गयी हैं।

1. सरकारी एवं गैर सरकारी उच्चतर माध्यमिक स्तर के छात्र-छात्राओं में लिंग के आधार पर समायोजन स्तर में सार्थक अन्तर नहीं होता है।
2. सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालयों में अध्ययनरत् किषोर विद्यार्थियों के समायोजन स्तर में सार्थक अन्तर नहीं होता है।
3. सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालयों के षहरी एवं ग्रामीण छात्र-छात्राओं के समायोजन स्तर में सार्थक अन्तर नहीं होता है।
4. सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालयों के विज्ञान एवं कला वर्ग के विद्यार्थियों के समायोजन स्तर में सार्थक अन्तर नहीं होता है।
5. अभिभावकों को षैक्षिक स्तर के आधार पर विभाजित करने पर बच्चों की समायोजन स्तर में सार्थक अंतर नहीं होता है।

* षोध छात्र, षिक्षा संकाय, एस.एस.जे. परिसर अल्मोड़ा, कुमाऊँ विष्वाविद्यालय नैनीताल, (उत्तराखण्ड, भारत)

तालिका 1

लिंग के आधार पर विभाजित विद्यार्थियों के समायोजन की तुलना ।

क्रम सं०	विद्यार्थी	सं०	मध्य०	मा०वि०	मा०वि०	टी०मान	सार्थकता स्तर
1	छात्रा	50	13*7	5*1	1*24	0*08	0*05
2	छात्र	50	13*7	7*14			

उपरोक्त तालिका से स्पष्ट होता है कि छात्र-छात्राओं के समायोजन में 'टी' का प्राप्त मान (0*08), डीएफ = 98 के आधार पर 0*05 सार्थकता स्तर पर तालिका मान से कम है। इसलिए दोनों समूहों के समायोजन में कोई सार्थक अन्तर नहीं होता है। इसका कारण वर्तमान समय में अभिभावकों तथा समाज का लड़कियों के प्रति दृष्टिकोण में बदलाव लाना है।

लड़कियों को भी लड़कों के समान शिक्षा तथा विकास के अवसर प्राप्त हैं। इसलिए दोनों को समायोजन स्तर समान है। लड़कियों को भी लड़कों के समान शिक्षा तथा विकास के अवसर प्राप्त हैं। इसलिए दोनों का समायोजन स्तर समान है।

तालिका 2

छात्र एवं छात्राओं की समायोजन की सांवेगिक, सामाजिक एवं शैक्षिक आयाम के परिप्रेक्ष्य में तुलना ।

क्रम सं०	आयाम	शहरी			ग्रामीण			मानक त्रुटि	टी-मान	सार्थकता स्तर
		सं	मध्य०	मा०वि०	सं०	मध्य०	मा०वि०			
1	सांवेगिक	50	2*9	3*1	50	3*16	2*64	0*57	0*45	0*5
2	सामाजिक	50	7	2*1	50	6*64	2*88	0*50	0*72	
3	शैक्षिक	50	3*9	2*1	50	4*04	3*14	0*53	0*83	

उपरोक्त तालिका से स्पष्ट होता है कि छात्र एवं छात्राओं की समायोजन की सांवेगिक, सामाजिक, एवं शैक्षिक आयामों में 'टी' का प्राप्त मान क्रमशः 0*45, 0*72, 0*83 है जो डीएफ= 98 के आधार पर 0*05 सार्थकता स्तर पर तालिका मान से कम है। इसलिए दोनों समूहों के सांवेगिक, सामाजिक, एवं शैक्षिक समायोजन में कोई सार्थक अन्तर परिलक्षित नहीं होता है। इस कारण लड़कियों तथा लड़कों के साथ समाज में समान व्यवहार हो सकता है। जिससे कि वह समान रूप में समायोजित है।

पाण्डे (2012) ने भी अपने शोध कार्य में समान निष्कर्ष पाये। उन्होंने छात्र-छात्राओं का सांवेगिक, सामाजिक एवं शैक्षिक समायोजन समान पाया।

तालिका 3

शहरी एवं ग्रामीण क्षेत्रीय विद्यार्थियों के समायोजन की सांवेगिक, सामाजिक एवं शैक्षिक आयाम के परिप्रेक्ष्य में तुलना ।

क्रम सं०	आयाम	शहरी			ग्रामीण			मानक त्रुटि	टी-मान	सार्थकता स्तर
		सं	मध्य०	मा०वि०	सं०	मध्य०	मा०वि०			
1	सांवेगिक	51	2*4	1*79	49	3*02	2*70	0*45	1*37	0*5
2	सामाजिक	51	6*32	2*54	49	7*39	2*51	0*50	2*14	
3	शैक्षिक	51	3*46	2*27	49	4*39	2*93	0*52	1*78	

उपरोक्त तालिका से स्पष्ट होता है कि समायोजन के सामाजिक आयाम में 'टी' का प्राप्त मान = 2*14 और डीएफ = 98 के आधार पर 0*5 सार्थकता स्तर पर तालिका मान (1*98) से अधिक है। इसलिए दोनों समूहों के सामाजिक समायोजन में सार्थक अन्तर परिलक्षित होता है। अतः शून्य परिकल्पना सामाजिक समायोजन के सन्दर्भ में अस्वीकृत होती है। शहरी क्षेत्रीय विद्यार्थी ग्रामीण क्षेत्रीय विद्यार्थियों की अपेक्षा अधिक समायोजित पाये गए। संभवतः इसका मुख्य कारण ग्रामीण विद्यार्थियों को सामाजिक क्रियाकलापों में प्रतिभाग के कम अवसर तथा सुविधाओं की कमी होना प्रतीत होता है।

दूसरी ओर शहरी एवं ग्रामीण क्षेत्रीय विद्यार्थियों के सांवेगिक एवं शैक्षिक समायोजन में 'टी' का प्राप्त मान क्रमशः 1*37, तथा 1*78 डीएफ = 98 के आधार पर 0*05 सार्थकता स्तर पर तालिका मान से कम है। इसलिए दोनों समूहों सांवेगिक एवं शैक्षिक समायोजन में कोई सार्थक अन्तर दृष्टिगत नहीं होता है। यह ग्रामीण क्षेत्रीय विद्यार्थियों के कठिन परिश्रम एवं लगन का ही परिणाम है कि उनकी शैक्षिक उपलब्धि शहरी क्षेत्रीय विद्यार्थियों के समान है जिससे कि वह स्वयं को शैक्षिक रूप से समायोजित करने में सक्षम है। अतः शून्य परिकल्पना सांवेगिक एवं शैक्षिक समायोजन के सन्दर्भ में स्वीकृत होती है।

तालिका 4

कला एवं विज्ञान वर्ग के विद्यार्थियों के समायोजन की सांवेगिक, सामाजिक एवं शैक्षिक आयाम के परिप्रेक्ष्य में तुलना ।

क्रम सं०	आयाम	कला			विज्ञान			मानक त्रुटि	टी-मान	सार्थकता स्तर
		सं	मध्य०	मा०वि०	सं०	मध्य०	मा०वि०			
1	सांवेगिक	50	2*9	2*76	50	2*8	3*08	0*58	0*172	0*5
2	सामाजिक	50	6*66	2*27	50	6*7	2*71	0*49	0*102	
3	शैक्षिक	50	3*68	2*04	50	4*28	3*09	0*52	1*15	

उपरोक्त तालिका में कला एवं विज्ञान वर्ग के विद्यार्थियों के समायोजन के तीन आयामों सांवेगिक, सामाजिक, एवं शैक्षिक के सन्दर्भ में आंकड़ों को प्रदर्शित किया गया है।

तालिका से ज्ञात होता है कि समायोजन के तीनों आयामों में 'टी' का प्राप्त मान क्रमशः 0.17, 0.10, 1.15 है। 'टी' का प्राप्त मान डीएफ = 98 के आधार पर 0.05 सार्थकता स्तर पर तालिका मान से कम है। इसलिए दोनों समूहों के मध्य समायोजन के तीनों आयामों में कोई सार्थक अंतर प्रतीत नहीं होता है। अतः पून्य परिकल्पना सांवेगिक, सामाजिक, पैक्षिक समायोजन के सन्दर्भ में सत्य पायी जाती है।

तालिका 5

अभिभावकों के पैक्षिक स्तर के आधार पर विभाजित विद्यार्थियों के समायोजन की सांवेगिक, सामाजिक, एवं पैक्षिक आयामों के परिप्रेक्ष्य में तुलना।

क्रम सं०	आयाम	उच्च शिक्षित अभिभावक			निम्न शिक्षित अभिभावक			मानक त्रुटि	टी-मान	सार्थकता स्तर
		सं	मध्य०	मा०वि०	सं०	मध्य०	मा०वि०			
1	सांवेगिक	50	2.84	3.14	50	2.84	2.29	0.54	0.43	0.5
2	सामाजिक	50	7.2	2.6	50	6.4	2.5	0.51	1.56	
3	पैक्षिक	50	3.9	2.7	50	4.16	2.74	0.54	0.48	

उपरोक्त तालिका में अभिभावकों के पैक्षिक स्तर के आधार पर विद्यार्थियों के समायोजन परीक्षण के आँकड़ों को सांवेगिक, सामाजिक, एवं पैक्षिक आयामों के सन्दर्भ में प्रदर्शित किया गया है। तालिका से स्पष्ट होता है कि दोनों समूहों के सांवेगिक, सामाजिक एवं पैक्षिक समायोजन में 'टी' का प्राप्त मान क्रमशः 0.43, 0.56, 0.48 एवं डीएफ = 98 के आधार पर 0.05 सार्थकता स्तर पर तालिका मान से कम है। इसलिए उच्च शिक्षित एवं निम्न शिक्षित माता-पिता के बच्चों में सांवेगिक, सामाजिक एवं पैक्षिक समायोजन में कोई सार्थक अन्तर दृष्टिगत नहीं होता है।

निष्कर्ष:

सरकारी एवं गैर सरकारी उच्चतर माध्यमिक विद्यालयों में अध्ययनरत विद्यार्थियों के समायोजन के आधार पर, लिंग के आधार पर, पहेरी ग्रामीण के आधार पर, कला एवं विज्ञान वर्ग के आधार पर, पैक्षिक विभाजन के आधार पर कोई सार्थक अन्तर नहीं पाया गया। वर्तमान समय में सरकारी एवं निजी दोनों प्रकार के विद्यालयों में अध्ययनरत विद्यार्थियों के अभिभावक अपने बच्चों की शिक्षा एवं उनके विकास के प्रति जागरूक हैं। निजी विद्यालयों में अध्ययनरत विद्यार्थियों के समान ही सरकारी विद्यालयों में अध्ययनरत विद्यार्थियों को उनके विकास के अवसर उपलब्ध हैं। ग्रामीण एवं पहेरी क्षेत्र में भी पर्याप्त जागरूकता देखने को मिली है। जिससे विद्यार्थियों का विकास उचित स्तर पर देखा गया है।

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Working of Software Testing with Approaches

Simarjeet Kaur*

***Abstract:** For making any project or software error free and bug free, testing is required. Without detecting errors and bugs, software will not work for which it is made and the output will not meet the desired results which will cause the loss to organization of software in business. So, before the launch or release of the software testing is performed on multiple levels for making the software or project successful. The process of testing involves different approaches and methods for finding bugs so that bug report can be generated after that the list of bugs and errors is sent to debugging phase. Testing is done by the person known tester. Many methods of testing available, some of them are efficient and on the other hand side some of them are time consuming also. So, this is also an important thing to choose the particular technique for testing. Software testing is an important task and important part of the software development life cycle. Entire work of software developer goes waste if testing is not performed accurately. Testing also work as a base for the debugging phase. This research paper will describe about the important and some of basic aspects of testing including levels of testing and approaches to it and how the process of testing works and so on.*

***Key Words:** Testing, Bugs, Integral, Debugging, Software*

Introduction: Testing is done in order to find out the fault or problems related with the software project or website before its launching. [1] This process is performed for making the project successful so that project become fault free and error free. Many techniques and methods exist for performing the process of testing. [2] The technique to be used for performing the process of testing on software or website, is depends on the type of stuff. It can be a single unit to be test or group of units or can be any particular module to be tested or collection of modules to be tested. [3] In this way appropriate type or technique is used for performing the various test on the given input. Main motive of testing is to find out that the software or website is working properly for which it is created. Firstly, expected output is recorded. After that appropriate test and techniques are used for generating the output by performing testing on the website or software to be used. After that output obtained by the process of testing is recorded. [4] Now, the results of output obtained after performing the various tests on the input given, is compared with the expected output recorded.

Objective: The whole success of the software or any website or any project depends upon the proper working of the system. For making sure that system is working properly software developer need to find out the loopholes of the system. Without finding out the faults and loopholes of the system, it is not possible to check that system is working properly. So, to handle and fixing the bugs of the system proper testing is needed. Testing helps the software developer to make the system error free and successful. That's why testing is required for making the system good.

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Working: Testing starts with module test plan. Then modules are divided into test units. After that test unit is divided into modules. Now various modules are tested. After that all these modules are connected with each other. Then testing starts system test and acceptance test. These test modules help to find out the fault in the system. After that system test plan and acceptance test plan is made. After these steps software requirements and client requirements are identified. In this way various problems related to the project can be find out and can be fixed in the debugging phase. Thus ,testing is helpful for find out the problems related with the project. Working of the process of testing and the whole procedure in which testing works, is shown in the figure given below:-

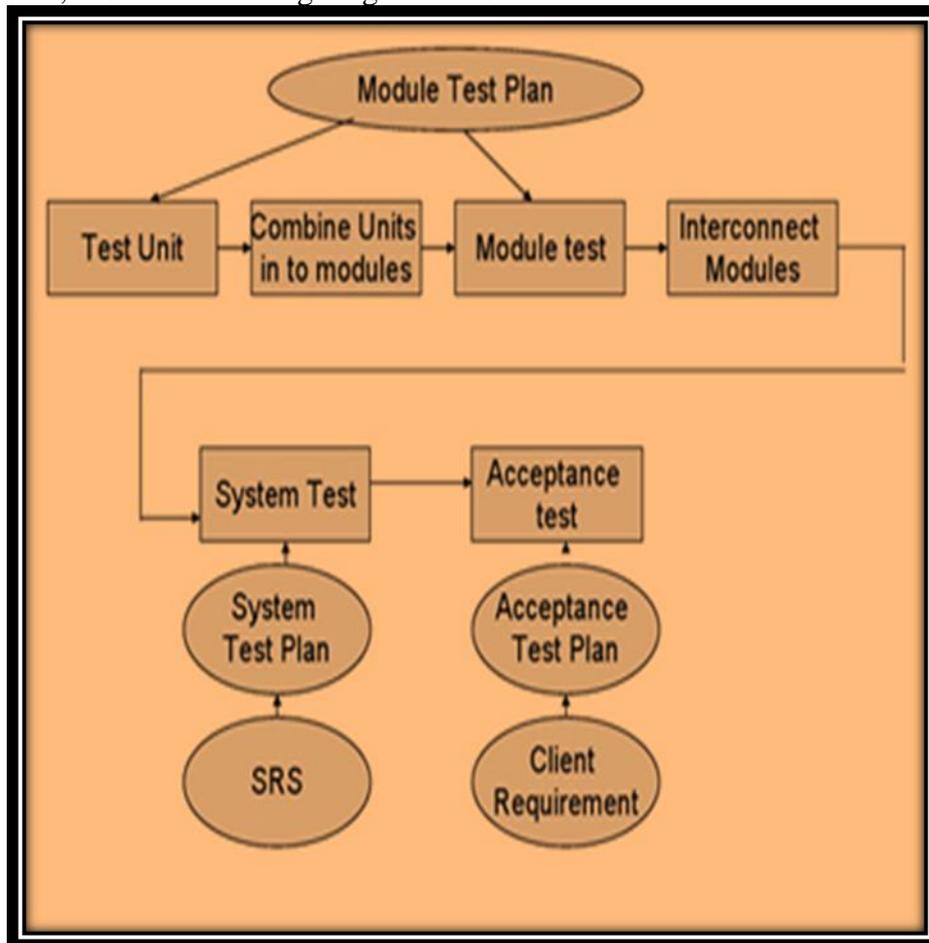


Fig. 1: Working of Software Testing

Approaches/Levels: There are two types of testing. Types or approaches are given below:-

1.Functional Testing: This type of testing used to test the functions of the system to find out that they are working correctly or not. Components of functional testing are given below:

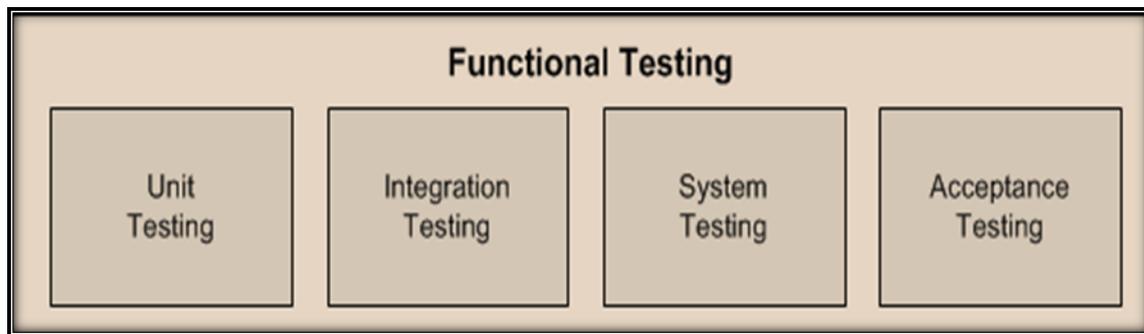


Fig. 2:Functional Testing types

- **Unit Testing:** Modules made by software developers are tested individually in this testing. This testing consider the various modules for testing.
- **Integration Test:** In this testing the various modules are integrated after unit testing and collectively tested. This testing consider the integrated modules for testing.
- **System Testing:** In this testing ,the whole system is tested against various error and bugs. This testing consider the whole system for testing.
- **Acceptance testing:** In this testing, whole system is tested to check that system is working accurately according to the user's need or not. This testing consider the acceptance of the user.

2.Non-Functional Testing: In this testing ,testing is done to checking that system is working according to the non-functional requirements like usability ,performance ,compatibility etc. This testing involves these types:

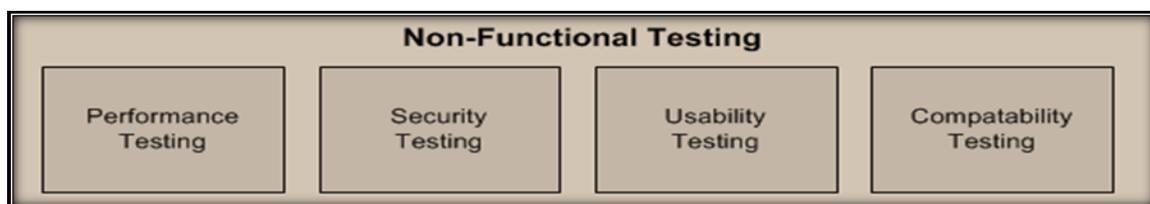


Fig. 3: Non-Functional Testing types

- **Performance Testing:** This testing is used to check that how much load and stress can be handle by system and how system behaves in such type of conditions.
- **Security Testing:** This testing is used for testing that how secure the system against. This testing helps to find out the various vulnerabilities of the system.
- **Usability Testing:** This testing used to check that how much efficient system is and how much user friendly the system is for the user. This includes learnability of the user also.
- **Compatibility Testing:** This testing is used to check the compatibility of the system against various factors including hardware and software both.

Acknowledment: While making this research paper, I have put all of my best and possible efforts for making this research paper. I hope this research paper will be useful and helpful for the authors who want to do further research Related to Software testing and techniques to software testing..

Conclusion: The power of testing is useful in software industry because a software project cannot be successful without proper process of testing. From the above research paper we can say that a software developer should not ignore the power of software testing. There are many helpful software testing techniques exist. But Still there is chance of more better testing

techniques that can be developed in the future for making the process of testing more efficient and accurate.

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Self-Management of Excessive Tension: A Study of Managers at NALCO

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Abstract

Stress and strain is an integral part of modern-day managers in corporations; more so, in the current globalised world. It adversely affects their health, productivity and well-being. Managing stress in the workplace of the managers appears to be a huge challenge for many corporations. Many previous studies on Self-Management of Excessive Tension (SMET) have indicated how SMET has led to a reduction of stress in managers. A pre-post study was conducted to investigate the effect of the five days residential SMET program for the managers of a large public sector energy Organisation in India. Two psychometric instruments; Positive Affect (PA) and Negative Affect (NA) Scale (PANAS) and Self-esteem Scale were administered before and after the SMET workshop. The study showed a significant increase, in PA scores as well as self-esteem scores and NA significant decrease in NA scores of the managers: The paper concludes how the SMET workshop enhanced emotional well-being and self-esteem of the managers in the Organisation. The author also indicates a few areas of further research.

Key Word: Yoga, Manager, Positive and negative effect, Self-esteem, SMET, PANAS, Nalco

Introduction

Economic liberalization: India had played an important role in global trade over the earlier centuries. Though it had closed the borders over last few decades, the change seems to have been initiated through the process of liberalization. The economic liberalisation in India refers to ongoing economic reforms in India that started on 24 July 1991. After Independence in 1947, India adhered to socialist policies. Attempts were made to liberalise the economy in 1966 and 1985. In 1991, after India faced a balance of payments crisis, the IMF required India to undertake a series of structural economic reforms. The new neo-liberal policies included opening for international trade and investment, deregulation, initiation of privatisation, tax reforms, and inflation-controlling measures (Wikipedia, 2014).

Further, India's growth miracle has attracted worldwide attention, particularly, because this growth has been pursued to the wide ranging economic reforms introduced in the early 1990s. Many other developing countries intensified linearization during this period, but were unable to experience a similar spurt in their economic growth. One distinctive feature of India's Liberalization experience is the gradual and calibrated manner in which reforms were introduced, especially with respect to external Liberalization, be it in the financial, agricultural or manufacturing sector (UNCTAD, 2012).

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In other words, Indian economy has gone through liberalization since 1990s, leading to rapid globalisation. This pace of globalisation has been picking up, leading to economic growth, infrastructure development, and employment generation. On the other side, while meeting the high targets and the rapid pace of growth under constraints, the managers of large corporations have been facing many challenges; time management, stress, health issues of non-communicable diseases (Shah, & Patnaik, 2011).

Stress at work place: In the corporate organisations, the managers are expected to meet the challenges of profitability, growth, customer satisfaction, employee attrition and statutory compliance along with deadlines to achieve the above objectives. These challenges create stress at workplace.

The relationship between work stress and well-being has flourished over the past 20 years. One of the major advances in this literature has been the emergence of the Allostatic Load model as a central organizing theory for understanding the physiology of stress. This has been considered as health outcomes that are associated with exposure to psychosocial stressors at work and provide insight into how workplace experiences affect well-being. Within an Allostatic Load framework, with a focus on primary (e.g., stress hormones, anxiety and tension) and secondary (e.g., resting blood pressure, cholesterol, body mass index) mediators, as well as tertiary disease end points (e.g., cardiovascular disease, depression, mortality). Recommendations are provided for how future research can offer deeper insight into primary Allostatic Load processes that explain the effects of workplace experiences on mental and physical well-being (Daniel, & Christopher, 2013).

Stress, according to Robbins (2003) is an opportunity, demand, constraint, threat or challenge can create stress for an individual when the effect of the event is uncertain and important. Factors relating to the environment, the organization, and the individual can also trigger stress (Robbins & Judge, 2007). This happens especially when he/she is unable to deal with the demands or constraints encountered. While stress at work as a concept has been in existence since long and has been widely studied, both the antecedents and consequences of stress in modern day are very different and have strong implications in ones' personal and professional lives too.

Further, if the stress continues for long duration, it affects the growth and potential development of the individual and which starts declining at both personal and professional levels. This is more so, as an individual goes against his or her own true nature of self. Eventually, the emotional upsurges take over his/her discrimination faculties and lead him towards destruction. All these leads to stress leading to ill-health, lower the productivity, and other related issues.

As the business environments become more competitive, businesses more dynamic and organizational roles become more complex, the potential for organizational role stress increases. Varied sources of work stress have been identified by researchers. Five categories of stressors were identified by Landy and Trumbo (1976) such as excessive competition, hazardous working conditions, job insecurity, task demands and long or unusual working hours. Marshall and Cooper (1976) classified stress as intrinsic to a job or role, career growth, relationship with colleagues and Organisational climate and structure as five main clusters of work stress.

Srivastava (2009) found that the role of an employee in the organization may create conditions that cause stress for employees at work effecting the quality of work life. Such Organizational role stress has been found to be negatively related to managerial

effectiveness. Nelson and Burke (2000) suggest that a number of factors such as role ambiguity, lack of power and role conflict can also be stressful. Sharma and Devi (2008) further add that role overload, lack of senior level support, lack of group cohesiveness, inequity at workplace, role stagnation, resource inadequacy in the role, constraints on change contribute to the stress of employee.

Role of yoga in stress: Patanjali suggests a solution, that the above can be overcome by adopting "Yoga as a way of life" (Taimni, 1961). According to him, Yoga is all about controlling the thought processes of human beings (Taimni, 1961). In other words, Patanjali, many other spiritual and Yogic leaders have recommended Yoga for overcoming stress and taking care of the physical, emotional and psychological well-being of individuals. This has become imperative in the modern day life.

Pattanjali defines yoga is a technique used to calm down mental thoughts to reach the true Self (Iyenger, 1996) and skills to manage life that fosters moderation and harmony is the message of Patanjali's yoga sutra (Becker, 2000). Yoga harnesses our will, emotions, expands our power of insight, vision and analysis. Yoga is a science to harness the will, calm the mind and steady the emotions, without losing the sharpness of intellect is the key to human progress (Nagendra & Nagarathna, 1997). The integrated Yogic technique is able to accommodate and bring a harmonious work culture without expecting any return (Chakraborty, 1978).

Yoga offers us a holistic lifestyle of bliss, efficiency, emotional equipoise, mental clarity, intellectual sharpness and physical well-being. It is towards the holistic lifestyle that we should move through SMET (Nagendra & Nagarathna, 1997).

Emotional Intelligence: To meet various opportunities and challenges in a corporate setup, more so, in a globalized world, manager is expected to have high levels of their emotional intelligence (EI) and positive emotion that helps them in the execution of work without hampering their well-being. If not adequate, there can be an opportunity to develop this EI. Emotional Intelligence has evolved as an area in the last three decades. This has gained further significance in the context of globalization. "Emotional Intelligence is the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth" (Mayer & Salovey, 1997).

While elaborating what makes a leader, Goldman (1998), the thought leader of EI states "effective leaders possess high degrees of emotional intelligence. Along with IQ and technical skills, emotional capabilities are the entry-level requirements for executive positions. Emotional intelligence is playing an important role at the highest levels of the company, and is often linked to exceptional performance. Social skill is another key component to successful management".

Review of literature on stress management

Few previous studies on executives had shown significant improvement in EI. Specifically, an integrated yoga practice program of one month has shown significant improvement of the EI level of Managers in (Adhia, Nagendra, & Mahadevan, 2010). In another study, managers undergoing one-hours of SMET program for one month period reported significant improvement in EI (Kumari, Nath, Nagendra, & Sharma, 2007) and EC (Kumari, Nanth, & Nagendra, 2007). In another study, the five days SMET program also showed significant improvement in EI (Ganpat & Nagendra, 2011) as well as in executive functions based on Brain wave coherence (Ganpat & Nagendra, & Muralidhar, 2011). In a recent study of

managers in Nalco, a large public sector energy corporation found a significant increase in the scores of cognitive abilities, anxiety scores and in lowering the symptoms of distress in Nalco managers (Singh, Pradhan, & Nagendra, 2013).

Effect of Yoga on Positive Affect Negative Affect Scale (PANAS): An emotion is defined as a mental and physiological state associated with a wide variety of feelings, thoughts, and behaviors. It is a prime determinant of the sense of subjective well-being and appears to play a central role in many human activities as quoted by (Narasimhan, Nagendra, & Nagarathna, 2011). These emotions were grouped under positive and negative effect. Positive Affect Negative Affect Scale (PANAS) is a tool to measure the person both positive and negative emotion aspect which is very essential for anybody irrespective of professions (Watson, Clark & Tellegen, 1988). In a randomized control study design on prisoners in 7-British jails participated in either yoga program (1 class per week) or a control group for 10-week. Yoga group had increased self-reported a positive effect, and reduced stress and psychological distress compared to control group (Bilderbeck, Farias, Brazil, Jakobowitz, & Wikholm, 2013). Similarly, an open-arm pre-post study having 450 participants were undergoing integrated yoga module that consisted of asanas, pranayama, relaxation, notional correction and devotional sessions. Three hundred and twelve pre-post sets of data showed an increase in Positive Affect by 13% and Negative Affect reduced by 47% after a weeklong Yoga program. Even short term open armed study can bring a significant positive change in individual's positive and negative effect (Narasimhan, Nagendra, & Nagarathna, 2011).

Effect of Yoga on self-esteem: In a Randomized Control Trial study, which consisted of 226 normal, healthy participants were undergoing a set of integrated yoga module that include asanas, pranayams, meditation, notional correction, and devotional sessions. The control group took part in physical exercises (PE) both groups had under supervision for 6-day/week, for eight weeks, 1hour/day. The effect size for self esteem in the Yoga group was higher than control group in three domains of self-esteem. The results suggested that both groups had an influence of self esteem in different magnitude of changes (Deshpande, Nagendra, & Nagarathna, 2009).

The research gap of present study

The author found the research gap in India and the significance of exploring the impact of SMET training on Nalco participant's on their emotional health benefits. Hence the current study aimed to evaluate the effect of SMET training on Positive Affect and Negative Affect Scale (PANAS) and self-esteem.

Methodology

Keeping the above objectives in mind, the researcher selected Nalco, where the research objectives can be met fruitfully. Purposive sampling was adopted for conducting the study. Nalco is a large scale public sector undertaking in the production sector.

Participants

In this research study, the sample size was calculated using the G*Power (a general power analysis program) 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009). The minimum sample size need for this study was (no = 65) calculated based on previous study, i.e. The effect size was calculated as 0.456, fixing alpha = 0.05, power = 0.95 (Narasimhan, Nagarathna & Nagendra, 2011) and But present current study consisted of seventy participants. All the participants were recruited from Nalco executive undergoing Self-Management of excessive tension (SMET) workshop at S-VYASA. Both male and female participants with the age ranging from 25 to 60 years were included in this study. Participants having multiple

ailments and health related issues and women during menstruation were excluded based on general routine health check up by resident doctors. The current study was approved by the Institutional ethics committee and an informed consent form was obtained from all the participants after explaining them regarding the trial of the research.

Limitations of the study: This study was confined to Nalco; only one large PSU managers over a period of one year. Such studies could be done in other sectors with similar growth pattern such as aviation, Hospitality, education, etc. to map and mitigate stress levels among employees. Further, there was no control group and only subjective variables were measured, short term in a residential setup.

Assessment

Positive and Negative Affect Schedule (PANAS): All subjects were recorded before the start and end of the SMET workshop. Positive and negative affect schedule (PANAS). The PANAS is comprised of a total 20-item with two sub-scales 10-item each measure to assess positive and negative effect. Participants were asked to rate themselves on the scale over past 5-day using a Likert scale from 1 ("very slightly or not at all") to 5 ("extremely"). The PANAS alpha internal consistency reliabilities are high, ranging from 0.86-0.90 for positive affect and from 0.84-0.87 for negative affect (Watson, 1988; Watson, Clark & Tellegen, 1988).

Rosenberg Self-esteem Scale: This is a self-reported scale consisted 10-item evaluates individual global feeling of self worth. The rating scale ranges from 1 (strongly agree) to 4 (strongly disagrees). It is validated and reliable for self-esteem measures (Rosenberg, 1965).

Study Design: The current study was designed as a single armed pre-post study, wherein the subjects were interviewed on the record both before and after the 5 days SMET intervention.

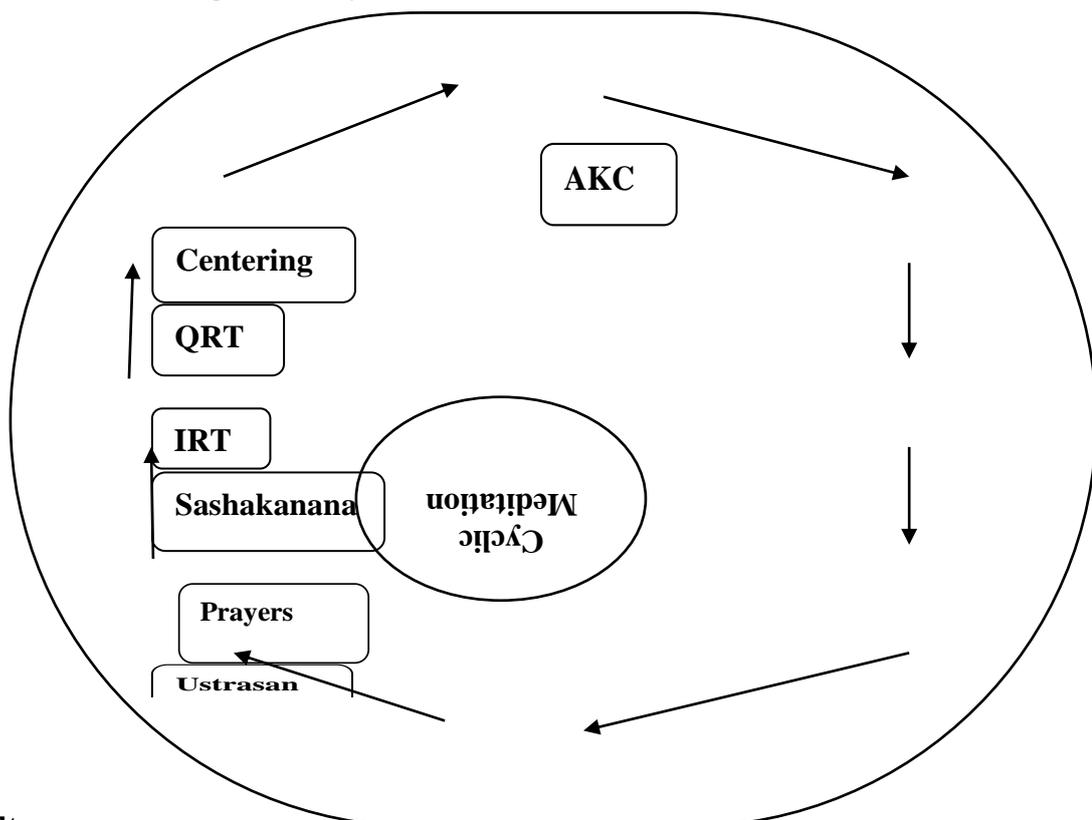
Intervention Adopted

SMET Intervention: SMET comprises of a set of theory. The practices (Cyclic Meditation) based on the principle of 'stimulation followed by relaxation' derived from Mandukyakarika. Cyclic Meditation (CM), consisting of a set of eight techniques practiced cyclically, is a key process in SMET, and was practiced for 30 minutes every day. CM is very different from any other form of meditation. It comprises of a set of physiological stimulations (Yogic postures) followed by relaxation techniques, i.e. The Instant Relaxation Technique (IRT), the Quick relaxation Technique (QRT) and the Deep Relaxation Technique (DRT). The CM process is given below in a pictorial format and more details about the structure of the SMET program are given in Table-1. As explained above, the SMET has multiple component/dimensions. The details of SMET are provided in Figure-1.

Table 1: SMET Program details

SMET THEORY	SMET Practices
<p>Theory</p> <ol style="list-style-type: none"> 1. Introduction to SMET 2. Concept and Physiology of Stress 3. Stress and its Release 4. Executive Growth 5. Group Dynamic 6. SMET and Yoga Therapy Research 7. Integrated Approach of Yoga therapy 8. Pranayam and Health 9. Yoga for Mastery over Emotion (Bhakti Yoga) 10. Action in Relaxation (Karma Yoga) 11. Concept and Basis of Yoga (Happiness Analysis) 	<p>Practice Session</p> <p>Cyclic Meditation</p>

Schematic diagram of Cyclic Meditation



Results

Data were analyzed using paired 't' test to assess the effect of SMET intervention for five days.

PANAS

It was observed that the scores of negative affect were lower ($p < 0.001$) and positive scores were found to be higher ($p < 0.01$) following the SMET intervention of five days. The significant change in the scores is quoted in Table-2.

Self-esteem

It was evident that the self esteem scores was higher ($p < 0.001$) following the SMET intervention. The significant changes in self-esteem scores were reflected in Table-2

Table-2: the Pre & Post scores of positive & negative effect, self reported self esteem is given in the form of Mean±SD.

n=70	PRE	POST	Percentage	P values
Positive affect	37.4±6.35	40.31±5.97**	-7.78	P<0.001
Negative affect	14.13±6.09	12.54±4.26**	11.25	P=0.004
Difference of (Positive-Negative)	23.27±9.10	27.22±8.21	-19.34	P<0.001
Self-esteem	21.79±4.05	23.3±4.52***	-6.93	P<0.001

Legend: *** $p < 0.001$, ** $p < 0.01$, comparing Pre and Post scores of the above mentioned variables by using paired 't'-test

Discussions

The present study found there were improvements in positive effect, self-esteem score and decrement negative affect scores after SMET training program.

My findings are supported by the previous scientific finding on the beneficial effects of yoga on emotional effect measured using PANAS (Bilderbeck, Farias, Brazil, Jakobowitz, & Wikholm, 2013; Narasimhan, Nagendra, & Nagarathna, 2011) and self-esteem (Deshpande, Nagendra, & Nagarathna, 2009). The current findings also substantiate the a few studies conducted in targeted Nalco managers, where SMET has been shown positive improvements in EI (Adhia, 2010, Kumari, Nath, Nagendra, & Sharma, 2007), recent mental status symptoms somatisation, anxiety, social dysfunction, and depression (Ganpat & Nagendra, 2011).

Mechanisms: The component of SMET consisted of cyclic meditation, lecture sessions, and talks on Indian Psychology of Gita. The effect of Cyclic meditation immediately after a single session found a reduction in oxygen consumption (Sarang & Telles, 2006), increase high frequency component of HRV (Patra & Telles, 2010); improve the cognitive domains measured by memory (Subramanya & Telles, 2009), attention task (Sarang & Telles, 2007; Subramanya & Telles, 2009), P300 auditory oddball task (Sarang & Telles, 2006). Further quality of sleep was enhanced in subsequent night on day practice day of CM (Patra & Telles, 2009). This suggests that CM which is a key practice of SMET practice could bring about change not only at the level of gross level but also at the tissue level.

Major Findings and Conclusions: SMET program had enhanced the psychological well-being of Nalco participants in a residential setup where in they were not exposed to any work related stress. SMET appears to be a very powerful tool, with lesser investments (time, money, and resources) resulting in high impact outcomes of positive effect, lower negative effect, higher self-esteem. This study was first of its kind where in the strong psychological tools like PANAS, self-esteem was studied in a considerably good sample size.

Applications of the study: This study has a wide range of applied value. SMET practice can be introduced in an industrial setup to ensure better health and to remain unaffected with stress at the workplace.

Suggestions for future: In the future a large sample size with a follow up and assessment of objective variables needs to be studied to explore the effectiveness of SMET in the industrial set up where the managers really face the challenge of work and targets. In summary five days SMET program had a positive influence on positive affect scores, reducing negative affect scores and enhancing self-esteem scores of Nalco participants.

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Mitigation of adverse affect of Water stress on morphological characters in *Vigna mungo* (L.) Hepper

Amita singh*

Key words: Specific leaf Area, *Vigna mungo*.

In the post green revolution period, water stress problem is a major concern affecting the agriculture production. Competition with high yielding variety of cereals has shifted pulses to marginal lands. About 40% of the total world population suffer from protein malnutrition and situation being more alarming in a developing country like India. To increase the present yield level understanding various morphological process which are negatively affected due to drought condition is a matter of great concern. Potassium, being a major plant nutrient which influences the water economy and crop growth through its effects on water uptake, root growth, maintenance of turgor, transpiration and stomatal regulation (Nelson,1980). Moreover, adequate potassium nutrition helps in increasing crop tolerance to water stress and promote root growth and results in better uptake of nutrients and water (Polizotto, 1986 and Umar et al.1990). Foliar application of KCl and KNO₃ involves number of morphological changes, which lead to change in flowering behaviour and growth parameters and ultimately increase the yield of the crops.

Among the pulses *Vigna mungo* (L.) Hepper or Black gram (Urd) is the most important pulse crop being sown commonly as a mixed crop subsidiary to cotton, maize or jowar. Poor monsoon and extended dry condition during critical growth period have a devastating influences on the crop performance. The production of the urd could not be increased per unit area because even today 60-70% of the crops are grown under rain fed condition

The aim of the present investigation was to study the effect of water stress on different morphological aspect. Study was also undertaken to examine the effect of KCl and KNO₃ in restoring the metabolic alteration resulting from water stress.

During water stress, the concentration of solutes inside the plant cells rises, and therefore water potential drops. This in turn destabilized the cellular membrane and disrupts photosynthesis. The retardation in plant growth under water stress is attributed to reduced accumulation of dry biomass due to inhibition of physiological processes (Singh et al.2000).).Number of leaves, specific leaf area showed a significant decrease in plants subjected to water stress compared to that of control. It was found that water stress imposed during vegetative growth was more detrimental to nodulation and nitrogen fixation than that imposed during the reproductive stage. (Pena-cabriales and Castellanos 1993). When K⁺ is deficient, the stomata cannot function properly and water losses from plant may reach damaging level.Increased application of K has been shown to enhance photosynthesis rate ,plant growth, yield and drought resistance in different crops under water stress conditions.

Material and Methods:

Material and Methods

The seeds of *Vigna mungo* (L.) Hepper or Black gram (Urd) were surface sterilised with ethanol for 5 minutes followed by thorough wash with distilled water. Surface sterilized seeds 200 in number of *Vigna mungo* were inoculated by keeping them dipped in 96 hour

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old culture of *Rhizobium phaseoli* & of equal densities 0.05 OD at 610 nm for 12 hour at 25°C to 30°C.

The inoculated seeds were sown in earthenware pots (30x 30 cm) containing garden soil 4kg. The plants were irrigated with ground water at 1,3,5, and 7 days interval drought (DID) up to 25 DAS (Days after sowing). Control plants were watered at regular intervals.

Thus plants were subjected to four conditions of treatment-

1. Control plants with sufficient water supply.
2. Stress plants.
3. Stress plants in combination with foliar application of 200ppm KCl
4. Stress plants in combination with foliar application of 200ppm KNO₃

The experiment culture was carried out in completely randomized design (CRD). Each treatment was analysed with at least 5 replicates and standard deviation (SD) was calculated.

Morphological parameters i.e. Shoot length, root length, Number of leaves, **Specific leaf area**, Fresh weight, Dry weight, were recorded at every ten day interval from day 25 up to day 55 each treatment and also in combination with foliar application of 200 ppm KCl or KNO₃.

Result and discussion

The present investigation was carried to study the effect of drought stress on the morphological aspect on T₉ variety of Black gram. The responses of Black gram to applied potassium as KCl and KNO₃ under simulated drought condition was also studied. Generally for quantification of growth, parameters like plant fresh weight, dry weight, leaf area etc. are taken into account (**Hunt, 1978**) In the present work growth parameters like shoot growth (fig.1), root spread (fig.2), number of leaves (fig.3), specific leaf area (fig.4), fresh weight (fig.5), dry weight (fig.6) of plants was significantly reduced in stress plants. Analysis of the results of root spread in the test plants showed that root spread increases during water stress conditions compared to controls (**Jiang and Huang, 2001**). It significantly reduced the shoot length. In plants treated with KCl and KNO₃ shoot length and root spread, fresh weight and dry weight increased. Number of leaves and specific leaf Area were reduced compared to the respective control plants. (picture 1,2) The SLA and nutrient concentration in the leaf is linear. (**Naidu et al. 2001**). Foliar application of potassium had a significant effect on leaf Area developments. As water availability is reduced, many plants show reduction in leaf turgor, leaf water potential, stomatal opening and growth (**Colom and razzana 2001**). **Khanna Chopra et al. (1980)** observed that K-application increased leaf growth of maize grown under moisture stress. **Sinha and Nair (1971)** also observed that more leaf area formation and retention during drought period resulted in higher yields by K-application in tapioca.

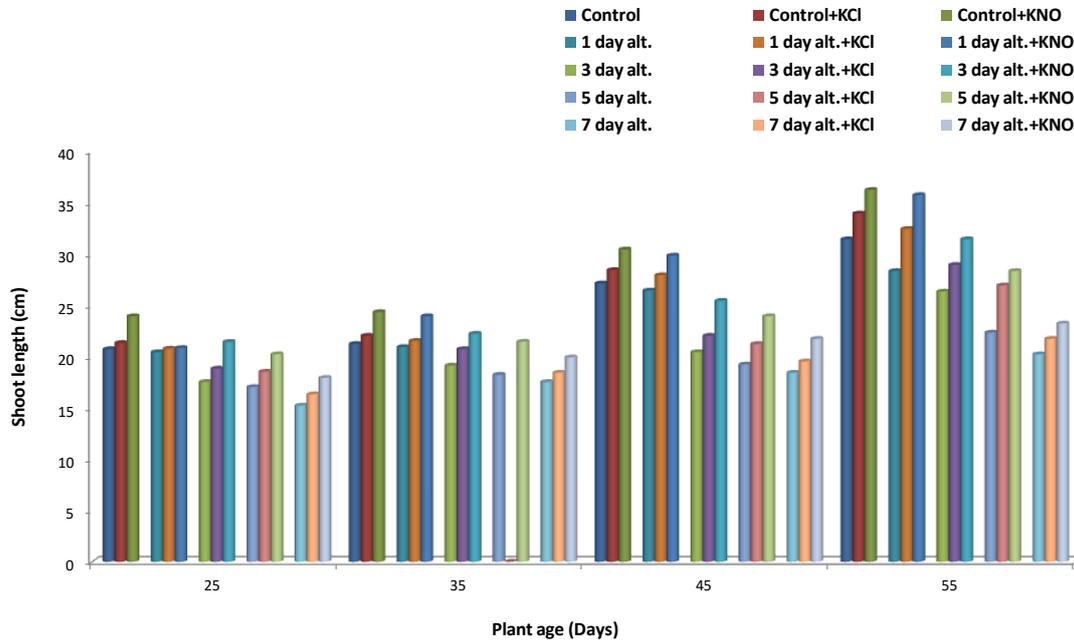


Fig-1 *Vigna mungo*: Shoot length at different age of growth in black gram under water stress (days) and also treated with KCl or KNO₃.

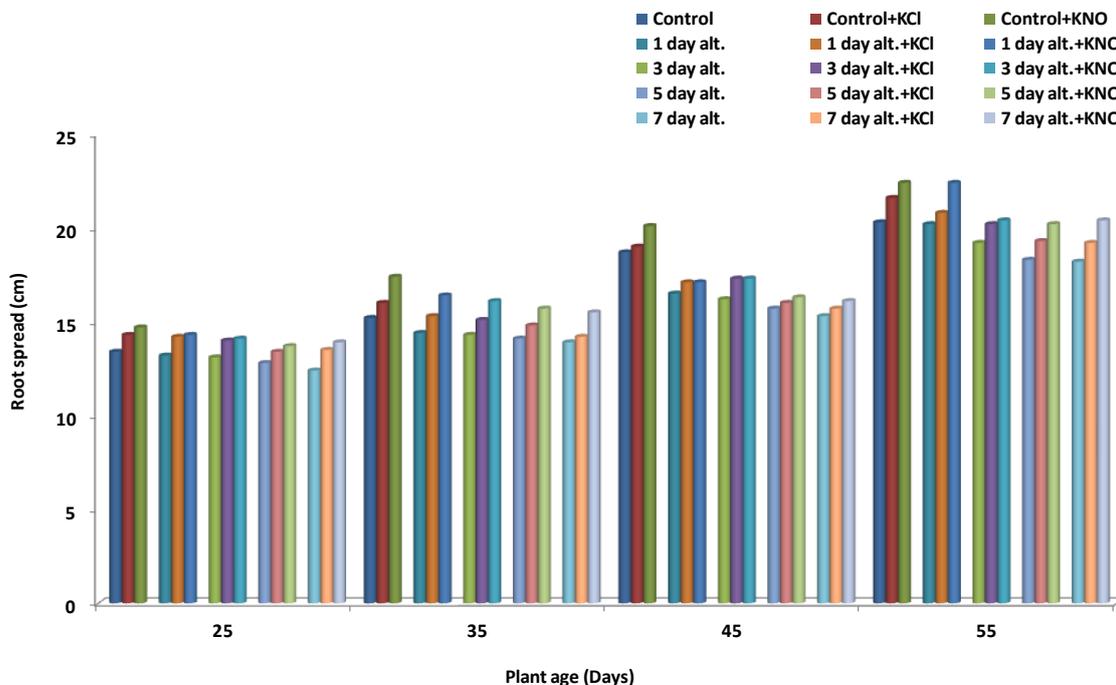


Fig-2 *Vigna mungo*: Root spread at different age of growth in black gram under water stress (days) and treated with KCl or KNO₃.

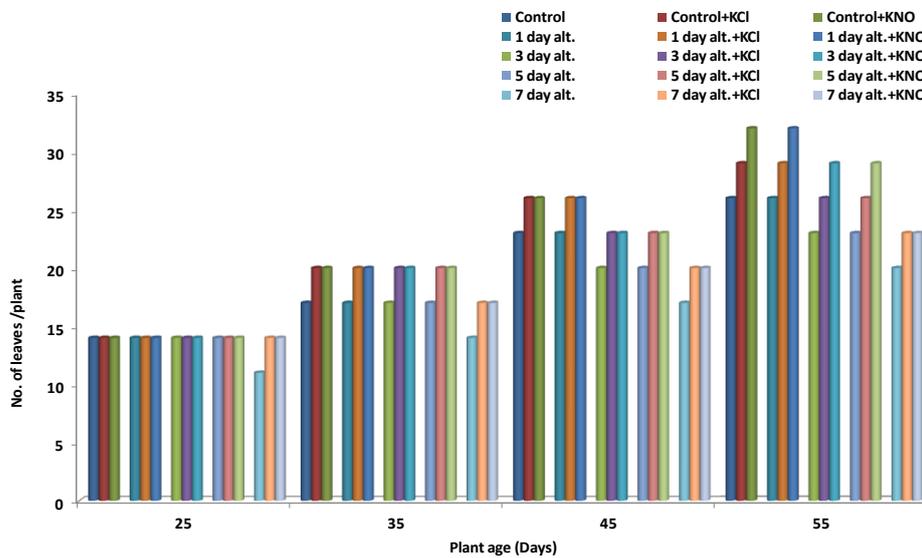


Fig-3 *Vigna mungo*: No. of leaves at different age of growth in black gram under water stress (days) and also treated with KCl or KNO₃.

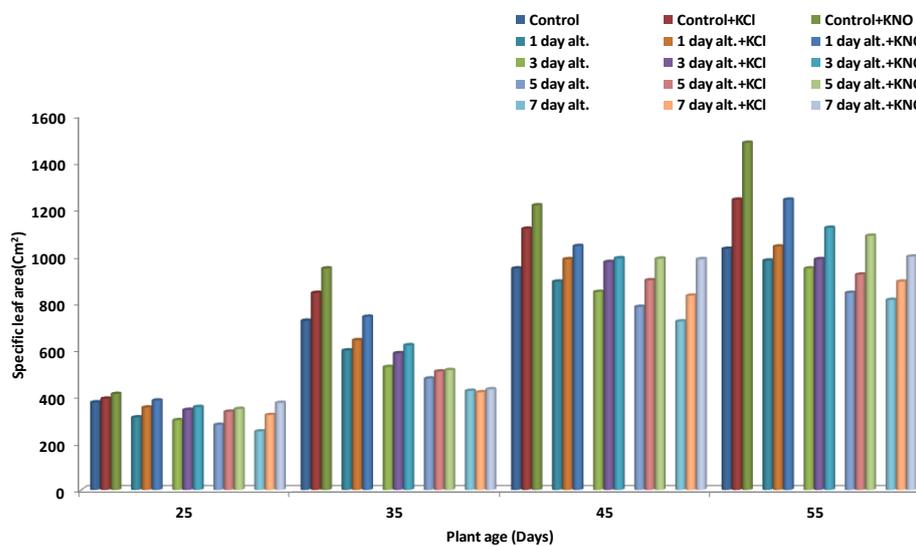


Fig-4: *Vigna mungo*: Specific leaf area at different age of growth in black gram under water stress (days) and also treated with KCl or KNO₃.

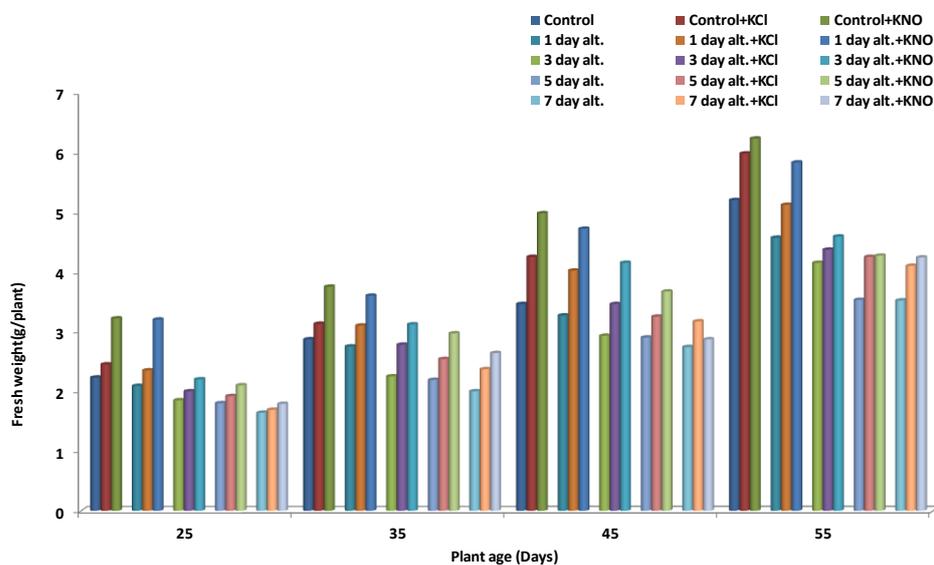


Fig-5: *Vigna mungo*: Fresh weight at different age of growth in black gram under water stress (days) and also treated with KCl or KNO₃.

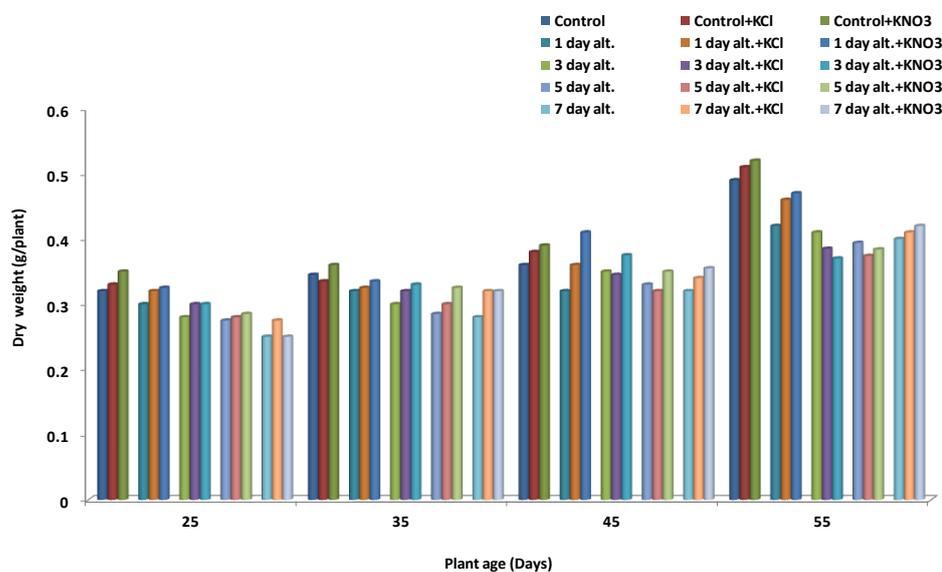
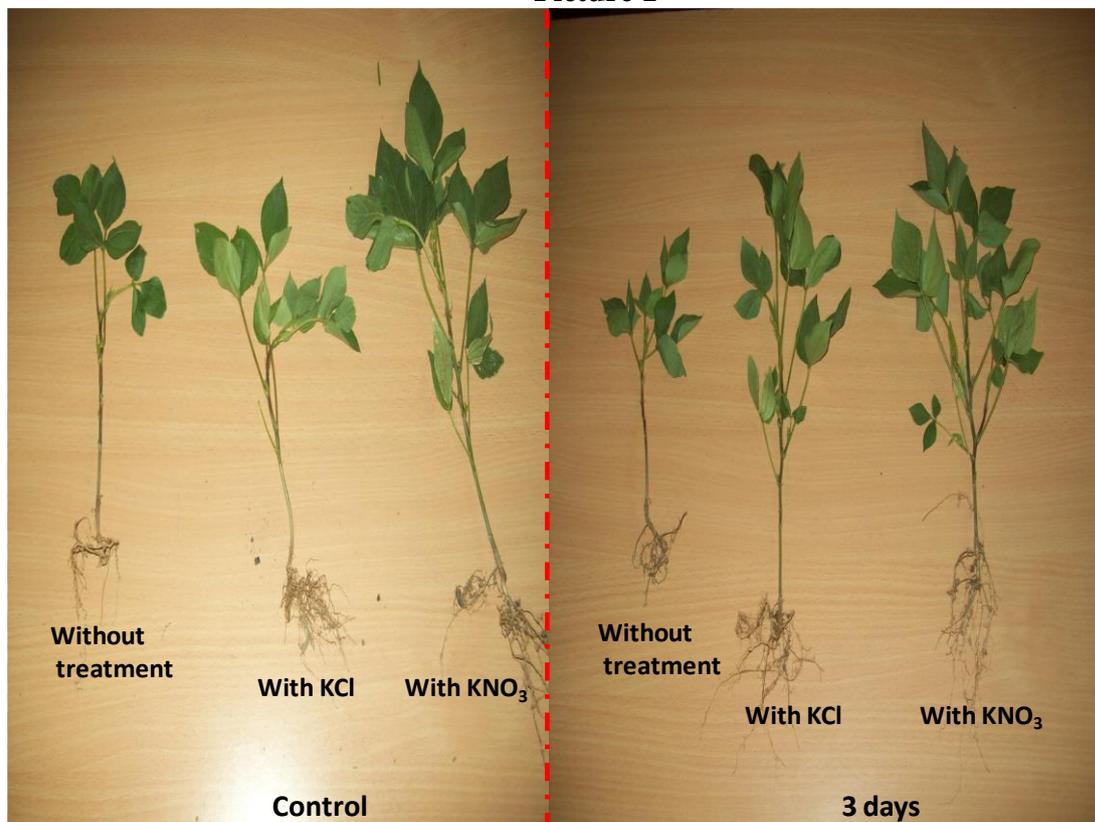
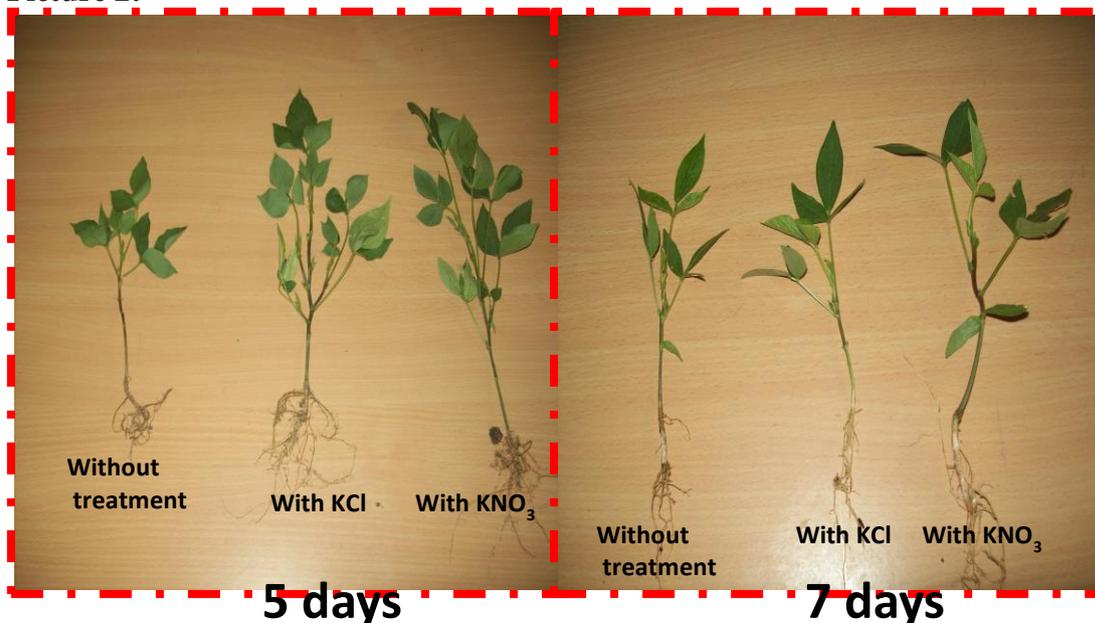


Fig-6: *Vigna mungo*: Dry weight at different age of growth in black gram under water stress (days) and also treated with KCl or KNO₃.

Picture 1



Picture 2:



The result of the present investigation indicates that water stress has adverse effect on the various morphological, on the test plant *Vigna mungo*. Applied K mitigates the adverse effects of water stress in Black gram by favourably influencing internal tissue moisture photosynthetic rate and nitrogen metabolism. KNO₃ have better impact on mitigating stress

than KCl because interaction of N and K during formative phases and seed-filling stages give higher yield.(Majumdar et al.1980) The extent of change in any plant process mainly depends on the severity and duration of water stress and also on the stage of plant development when the water stress has occurred.(Kramer,1983).

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Role Watershed Development Programme: An Empirical Analysis

Dr.D.Adeppa*

Introduction

Recognizing that the equity aspect in watershed projects, especially in the major government supported projects, is at an initial level, its translation into actual practice is mainly in the form of an add-on to the 'core' activities of watershed development. This may be because the initial concern was mainly on taking the idea of participatory watershed projects to the ground level, getting positive results in terms of productivity enhancement, creating demonstration effects and setting up appropriate machinery for project implementation. As a result, most of the evaluation studies had focused on the issue of total benefits at micro watershed level, rather than looking at the distribution. Similarly the studies have often focused on primary level indicators such as membership, presence, formation of SHGs, etc. Whatever limited evidence one finds from the literature is far from being encouraging. The evidence not only suggests low impact on equity, at times, they indicate increased deprivation in terms of women's/poors' access to resources besides bearing additional work load towards project activities.

Of late, the issue of equity in watershed development has been raised by a number of researchers and also policy makers. The Parthasarathy Committee has recognized that watershed project must keep in mind interest of the landless (and also other marginalized communities). In absence of this, 'all the water harvested will be cornered by the dominant elite'. It is further noted that this issue had been flagged by a number of representations from the state government. The study by Joy and Paranjape (2004) provides a fairly detailed discussion on the issue of equity and its specific relevance to watershed development. Underlining the emphasis on equity laid down by Eswaran Committee, the authors make a clear case for addressing the issue of 'equitable access to water or equitable sharing of the increased water' as the central thrust of equity in watershed development especially, in the context of dry land regions. In what follows the present study tried to highlight some of the major impacts of watershed programme on women in rain-fed Anantapur district of Andhra Pradesh.

Gender integration, as noted above, included two sets of activities: facilitating participation and supporting to undertake some women managed activities, mainly outside watershed and NRM agenda. There is a pre-defined strategy known as 'gender oriented participatory operational pedagogy' almost along the lines of the operational strategy in relation to watershed management (WOTR 1999). This includes a set of pre-defined activities to be undertaken by NGO - PIA and women in villages. The main activities or outputs as elaborated in the gender operational strategy are appointment of women social worker at watershed level, formation of women SHGs, exposure and capacity building of the social worker, SHGs, providing at least 33 per cent representation to women, undertaking certain developmental activities which may be related to reducing drudgery of women or enhancing

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their income formation of the network of SHGs within a watershed (known as Samyukta Mahila Samiti), deciding on activities to be undertaken as part of the women's development fund and so on.

The strategy though comprehensive than other watershed interventions, however, focuses mainly on addressing the 'needs' of women and harnessing their 'efficiency'. As a result, one finds that women/their groups are involved in tasks like managing water supply for drinking or domestic use or, taking care of the hygiene conditions, but do not have any clear cut role in managing and developing the watershed or enhancing its resources. Participation is expected to generate certain benefits of the development intervention. These benefits or impacts in a watershed development context could be both short term and long term and having positive or negative outcomes. Some studies have highlighted the impact of watershed on women.

Watershed programme recognizes as potential engines for agricultural growth and sustainable development in rain-fed areas. Success and sustainability of watershed programs are directly related to collective action for conserving natural resources to enhance crop productivity, livelihoods for sustainable income development and gender equity. Women are key players as managers and direct actors in managing natural resources in the watershed and addressing the household food security. However, often they have passive role in decision-making process because of their low educational levels, social customs, and economic dependence.

Several studies in the recent past while assessing the impact of watershed programmes in India have documented important lessons learnt. Participatory watershed management is a multi-disciplinary, multi-institutional approach for NRM and providing food security through diversification of livelihood options and increased productivity. Evaluation of number of watershed programs indicated the extent of peoples' participation and its importance in success of development process, role of institutions for enhanced community participation. Watersheds with better community participation and sound technical inputs enhanced the impact.

Supporting policies are must for effective watershed development programmes. An important concern in watershed development is the sharing of the costs of land and water resources development, equitable distribution of the benefits consequent to enhanced crop production. The focus on land development often gave projects a male orientation. Even though government guidelines encouraged greater participation of women in watershed groups, women were often not recognized as members of the watershed committee in their own right; they were viewed as being there to fill the quota required under the guidelines (Seeley et al. 2000). At present in some parts of India social customs do not allow active participation and involvement of women in functioning of committees and village organizations. Watershed development in India is gender insensitive as all the benefits accruing are being cornered exclusively by men. Women were generally the losers in watershed development as they lose the access to common lands for grazing of animals and fuel collection. Women generally paid the cost of development in most watersheds such as plantation programs in the common pool resources.

Self Help Groups

The Watershed Committee shall constitute SHGs in the watershed area with the help of WDT from amongst poor, small and marginal farmer households, landless/asset less poor agricultural labourers, women, shepherds and SC/ST persons. These Groups shall be

homogenous groups having common identity and interest who are dependent on the watershed area for their livelihood. Each Self Help Group will be provided with a revolving fund of an amount to be decided by the Nodal Ministry.

The Watershed Committee (WC) will comprise of at least 10 members, half of the members shall be representatives of SHGs and User Groups, SC/ST community, women and landless persons in the village. One member of the WDT shall also be represented in the Watershed Committee (WC). Where the Panchayat covers more than one village, they would constitute a separate subcommittee for each village to manage the watershed development project in the concerned village. Where a watershed project covers more than one Gram Panchayat, separate committees will be constituted for each Gram Panchayat. The Watershed Committee (WC) would be provided with an independent rented office accommodation.

Results and Discussion

Sanction of Watershed Programmes

The government sanction watershed to a particular village or area depending upon the necessity and available funds. Table 1 gives the details of year of sanction of watershed in sample villages.

Table 1: Year of Sanction of Watershed as per the Responses of Sample Women

Year	Developed	Underdeveloped	Grand Total
2007	35 (19.44)	36 (20.00)	71 (19.72)
2008	24 (13.33)	42 (23.33)	66 (18.33)
2009	32 (17.78)	28 (15.56)	60 (16.67)
2010	28 (15.56)	23 (12.78)	51 (14.17)
2011	29 (16.11)	23 (12.78)	52 (14.44)
2012	32 (17.78)	28 (15.56)	60 (16.67)
Total	180 (100.00)	180 (100.00)	360 (100.00)

Source: Field Survey

It is evident from table 1 that the year of sanction watersheds in sample villages is erratically distribution. As per the responses of 19.72 per cent sample women the watershed was sanctioned in 2007. In 2008 watershed is sanctioned as per the reports of 18.33 per cent sample respondents. The watershed is sanctioned in 2009 as per the statement of 16.67 per cent respondents. Another 16.67 per cent of women recollected and reported that their watershed is sanctioned as per the responses of 14.44 per cent of sample women. Around 14.17 per cent of sample women reported that the watershed was sanctioned in 2010.

Number of SHGs in Watershed

In the implementation of watershed programme the government issued guidelines for the participation of SHG members. Table 2 gives the particulars of number of SHGs taking part in watersheds as per the responses of sample women.

Table 2: Number of SHGs in Watershed

No. of SHGs	Developed	Underdeveloped	Grand Total
>4	57 (31.67)	72 (39.78)	129 (35.73)
5	38 (21.11)	36 (19.89)	74 (20.50)
6	32 (17.78)	29 (16.02)	61 (16.90)
7	26 (14.44)	22 (12.15)	48 (13.30)
8	15 (8.33)	12 (6.63)	27 (7.48)
9	10 (5.56)	8 (4.42)	18 (4.99)
10 and above	2 (1.11)	2 (1.10)	4 (1.11)
Total	180 (100.00)	181 (100.00)	361 (100.00)

Source: Field Survey

Table 2 makes it clear that there are less than 4 SHGs involved in watershed programme implementation as reported by 35.73 per cent of sample women. According to the responses of 20.50 per cent of sample respondent women 5 SHGs taking part in the implementation of watershed programme. 6 SHGs are involved in the implementation of watershed programme as stated by 16.90 per cent of sample women. Nearly 13.30 per cent of women declared that in their village. 7 SHGs are involved in the implementation of watershed programme. The involvement of 8,9 and 10 and above SHGs is reported by 7.48 per cent, 4.99 per cent and 1.11 per cent of sample women.

SHGs Financed

As per the guidelines Department of Rural Development, Government of Andhra Pradesh, the SHG involved in the implementation of programme shall be financed from time to time. Table 3 gives the details of number SHGs financed under watershed programme in sample villages.

Table 3: Number of SHGs Financed by Watershed

No. of SHGs	Developed	Underdeveloped	Grand Total
2	76 (42.22)	85 (47.22)	161 (44.72)
3	52 (28.89)	64 (35.56)	116 (32.22)
4	38 (21.11)	25 (13.89)	63 (17.50)
5	14 (7.78)	6 (3.33)	20 (5.56)
Total	180 (100.00)	180 (100.00)	360 (100.00)

Source: Field Survey

It can be inferred from table 3 that the number of SHGs financed by watershed is less than the number of SHGs involved in the implementation of the programme. Nearly 44.72 per cent of women reported that 2 SHGs were financed under watershed development programme in their respective villages. As per the reports of 32.22 per cent of women 3 SHGs were financed by watershed programme. Nearly 17.50 per cent of sample women stated as per their knowledge is concern 4 SHGs were financed by watershed programme in their villages. As per the responses of 5.56 per cent of sample women 5 SHGs were financed by watershed programme.

User Groups

The number of user groups in a particular watershed is not common. It depends upon the area and population covered by a particular watershed. Table 4 gives the details of number to user groups in watersheds as per the responses of sample women.

Table 4: No. of User Groups (Membership in user groups)

No. of User groups	Developed	Under developed	Grand Total
Below 12	42 (23.33)	48 (26.67)	90 (25.00)
13 to 15	39 (21.67)	57 (31.67)	96 (26.67)
16 to 20	47 (26.11)	34 (18.89)	81 (22.50)
21 and above	52 (28.89)	41 (22.78)	93 (25.83)
Total	180 (100.00)	180 (100.00)	360 (100.00)

Source: Field Survey

It can be found from table 4 that the number of uses groups in watershed is less than 12 as reported by one fourth of sample women. The number of water user groups varies between 13 to 15 as stated by 26.67 per cent of sample respondents. Nearly 22.50 per cent of sample women reported that the user groups in the watersheds of their villages varies between 16 to 20. Around 25.83 per cent of women reported 21 and above user groups in their watersheds.

Number of Members in Watershed Committee

The particulars with regard to number of members in sample watersheds are presented in table 5.

Table 5: Respondents Awareness on Members in Watershed Committee

No. of Members	Developed	Underdeveloped	Total
Below 10	56 (31.11)	72 (40.00)	128 (35.56)
11 to 15	103 (57.22)	74 (41.11)	177 (49.17)
16 and above	14 (7.78)	29 (16.11)	43 (11.94)
No Response	7 (3.89)	5 (2.78)	12 (3.33)
Total	180 (100.00)	180 (100.00)	360 (100.00)

Source: Field Survey

The watershed committee consists of 15 to 20 members. The members includes farmers, persons with awareness on watershed programme, VO members, MGNREGS mater, village key persons, ward members, educated villagers etc. As per the responses of 35.56 per cent of sample women the number of members in watershed committee is below 10. As per the knowledge of 49.17 per cent of sample women the number of members in watershed varies between 11 to 15 members. Around 11.94 per cent of sample women reported that the strength of watershed committee is 16 and above members. The remaining 3.33 per cent of women declared that they have no idea on the strength of watershed committee.

Awareness on Election of VO Leader

All the SHGs in a village forms village organization (VO). To lead the VO, there is a leader for each VO. The awareness of sample women on the members who elects the leader election of village organization is presented in table 6.

Table 6: Awareness of Sample Respondents on the Body which Elects VO Leader

Particulars	Developed	Underdeveloped	Grand Total
VO Members	157	148	305
	(87.22)	(82.22)	(84.72)
Others	6	7	13
	(3.33)	(3.89)	(3.61)
SHG Members	12	14	26
	(6.67)	(7.78)	(7.22)
Govt. Officials (DRDA)	3	9	12
	(1.67)	(5.00)	(3.33)
No Response	2	2	4
	(1.11)	(1.11)	(1.11)
Total	180	180	360
	(100.00)	(100.00)	(100.00)

Source: Field Survey

It is clear from table 6 that a preponderant majority i.e. 84.72 per cent of sample respondent women declared that the members having membership in Village Organization (VO) elects the leader of VO. It means that these members are quite aware of the body which elects the VO leader. The remaining members seem to be unaware of body which elects the VO leader. According to 7.22 per cent of sample women respondents all the SHG members in a village elects the leader of VO. DRDA officials nominate the VO leader as per the responses of 3.33 per cent of respondents. Others like Panchayat members, Mandal officials etc nominate the VO leader as per the responses of 3.61 per cent of sample respondents. The remaining 1.11 per cent not responded.

Monitoring of Watershed Activities

As per the guidelines issued by the Commissioner of Rural Development, Government of Andhra Pradesh, the village organizations are expected to regularly monitor the activities of watershed that are going on within the limits of the village. As such during field survey the sample women were requested to answer the question that “whether the VO is monitoring the activities of watershed programme or not”. The responses to this question were registered and presented in table 7.

Table 7: Respondent's Views on the regularly of Monitoring the works of Watershed

Responses	Developed	Underdeveloped	Grand Total
Yes	28	24	52
	(15.56)	(13.33)	(14.44)
No	141	133	274
	(78.33)	(73.89)	(76.11)
Don't know	11	23	34
	(6.11)	(12.78)	(9.44)
Total	180	180	360
	(100.00)	(100.00)	(100.00)

Source: Field Survey

It is regrettable to note that majority of women reported that the Village Organization is not regularly monitoring the activities undertaken under watershed development programme. Around 78.33 per cent of women from developed areas and 73.89 per cent of women from underdeveloped areas reported that the VO is not regularly monitoring the watershed programme in their respective villages. Only 14.44 per cent of sample women declared that the VO is monitoring the watershed development programme activities regularly. The remaining 9.44 per cent of women denied to respond to the question as they are not quite aware of monitoring by VO.

Awareness about Training

For effective management of the activities of Village Organization (VO) and Self Help Groups (SHGs) the Society for Elimination of Rural Poverty (SERP) as well as Department of Rural Development, Government of Andhra Pradesh gives training to both the members of VO as well as SHGs in the state. The awareness levels of sample respondent women about such training is registered during field survey and presented in table 8.

Table 8: Respondents Awareness about Imparting of Training to VO/SHG Members

Responses	Developed	Underdeveloped	Grand Total
Yes	163	149	312
	(90.56)	(82.78)	(86.67)
No	17	31	48
	(9.44)	(17.22)	(13.33)
Total	180	180	360
	(100.00)	(100.00)	(100.00)

Source: Field Survey

It is clear from table 8 that a preponderant majority i.e. 86.67 per cent of sample women were aware of the training given to VO/SHG members from time to time. In this regard the women of developed areas are ahead with 90.56 per cent. Around 17.22 per cent of women in underdeveloped areas and 9.44 per cent of women in developed areas are not aware of training programmes given to VO/SHG members in the study area. It means that nearly 13.33 per cent of total sample are quite unaware of trainings.

Conclusion

Gender integration, as noted above, included two sets of activities: facilitating participation and supporting to undertake some women managed activities, mainly outside watershed and NRM agenda. There is a pre-defined strategy known as 'gender oriented participatory operational pedagogy' almost along the lines of the operational strategy in relation to

watershed management (WOTR 1999). This includes a set of pre-defined activities to be undertaken by NGO - PIA and women in villages. The main activities or outputs as elaborated in the gender operational strategy are appointment of women social worker at watershed level, formation of women SHGs, exposure and capacity building of the social worker, SHGs, providing at least 33 per cent representation to women, undertaking certain developmental activities which may be related to reducing drudgery of women or enhancing their income; formation of the network of SHGs within a watershed (known as Samyukta Mahila Samiti), deciding on activities to be undertaken as part of the women's development fund and so on.

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Role Of Small Scale Business In Changing An Indian Economy

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Abstract

The work is an academic exercise which attempt to study “the contribution of small-scale Business in changing a Indian economy”, with reference to India economy. The problems that stem government effort in promoting the development of small-scale sector, problem encountered by small-scale operations and it likely prospects. The researcher by undertaking this survey, she will be able to unearth the contribution of small-scale business toward changing a Indian economy. Research question were formulated from which the major finding were obtained and decision were made. Therefore, one of the findings is the employment generation which small-scale sectors contribute to any nation’s economy, if it is well managed.

Keywords: Planned economy ,industrialization ,employment

Introduction

Industrialization is the central dynamic force for most countries. It has been a key growth objective of India's planned economy, with heavy investments being made in this sector. Labour productivity is highest in manufacturing industries; this has assisted in raising national income at a faster pace. It is a precondition for agricultural development and it induces development in other sectors (Tiwary & Singh, 1999). The importance of industrialization in economic development is crucial for a growing economy with a large population like India, so prosperity through industrialization has been a long-term strategy for the Indian government. Communities, businesses, and governments have debated the results of industrialization, a debate that has continued to grow unabated. Being reliant on agriculture and having a large population base has made India impoverished, and hence industrialization is roughly a synonym for economic development as a means to conquer poverty and provide employment.

India's focus on growth witnessed two problems. One is population and the other industrialisation. India realised that in order to become more self-reliant and increase economic growth some changes had to be made. During the 1980s India moved away from its planned market, emphasizing industry growth. Its economy grew at about 5.5% annually. Prior to those years there was a 3.5% growth and recently it has been about 6%, although 8–9% growth is required for the 10 million new jobs needed each year (United States-Asia Environmental Partnership [US-AEP], 2005).

At the same time industries contribute significantly to pollution. Small industries have contributed significantly in the area of urban as well as rural establishments. Raising concerns on environmental grounds are seen not so much as a problem with large industries, as they are more supportive of environmentally protective issues, but more so in the case of small industries. These small industries seem to have acute environmental problems. The scope of the study will be limited to undersatnd, what does the term Small Scale Sector

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means in the broader sense in India. To critically analyze the Financial Incentives available to the Small scale sector in India .

Review Of Literature

Brahma and Subas (1979) examined the development of small scale industries in India with special reference to its development in Pune region. In this regard the data was collected from 276 modern units and 98 traditional units. The main focus of the study was to find out the problems of development of small scale industrial units, along with other problems, the study indicated that the problems of raw material and marketing by small scale units are the major problems. The irregular supply and low quality of raw material are very common, with regard to marketing, delay in payment and exploitation at the hands of middlemen are the other noteworthy problems mentioned in the study.

Kaur (1982) conducted a study of Haryana during the period 1966-78 and found that there was overwhelming concentration of industrial units and employment opportunities in Gurgaon, Ambala and Sonapat districts and the relative change in the number of units, output and employment observed during the study period. Further, author indicated that inter district disparities in the growth of industries had widened and with the help of location quotient and coefficient of localisation, a high degree of spatial concentrations was observed in wool, silk and synthetic fiber, wood and wooden products, food manufacturing, beverages and cotton textile industry group.

Mohanty (1983) examined the marketing structure of small scale industrial products by taking a sample of 178 small units of Cuttack. The study revealed that 64 percent of the units sell their products directly to the consumers, while 36 percent sell their products through distributive agencies. It has been further observed that if marketing cost is taken into consideration, it constitutes only a small percentage of the total value of production of small units which indicates that small units do not take pains to develop market for their products, further, it was found that Director General Supplies and Disposal and other Government stores do not purchase items from small units.

Amin (1999) focused on the regional spread and structural set up of small scale industries in Gujarat and examine the regional share of small scale industries in the industrial sector of the state. Further, the author attempt to make an overall assessment of the performance of the industries among three homogenous regions of the state during the period 1965-1985: the study found that the spread of small scale industrial sector across the industrially homogenous regions is positively influenced by basic economic characteristics of the concerned region. The pattern of regional distribution of the SSI sector suggests the growth prospects of SSI sector over a period of time

Small Scale Business In Changing The Indian Economy

There are various reasons for stressing conscious planning and development of small scale business industries in India, Some will be enumerated in this project as found out in the course of this research that small scale business have dot to contribute to the changing a Indian India economy. Such contributions include the following:-

1. **EMPLOYMENT CREATION:** - Small scale industries create employment to the India citizens which will reduce dependency on government to provide job for every body and also to a large extent reduce government expenditure in a way of contributing to a balanced budget for the economy. The most cumbersome task challenge in industrial promotion in any economy is the ability to create employment with risking an unmanageable high rate of inflation. During the period, in 1984 to 1986, India witnessed an era of

retrenchment of works in both private and public sectors of the economy coupled with the large number of graduates from our tertiary institution every year. The level of unemployment rise to an alarming and unbearable rate. Energetic men and women were seen everyday on the street of urban cities and town struggling to sell stuffs like cigarettes biscuits, drinks etc. just to earn a living, government did not go on to depends entirely on large enterprises to private employment to the generality of the public. It is to this end that the following questions arise Information the National Economic reconstruction fund (NERFUND) in December, 1996 indicate that expected employment to be generated by the first twenty six enterprise that got approval for loans stood at one thousand three hundred and one (1301) or an average of fifty (50) workers or employees per-enterprise. Small scale industries are generally labour intensive, means that a given unit of investment in that sector directly increases employment opportunities.

The development of entrepreneursip: - The small scale industry is owned and managed mostly by individual who leads to self fulfillment and self actualization. An entrepreneur conceives and generates a business venture ideas, takes moderate risk and beings into existence by putting available resources together, a business enterprise that never was. Since the entrepreneur's aim is to achieve and succeed he always aims for a standard of excellence in his performance. It is very encouraging to see that young India an especially graduate from tertiary institution era taking to entrepreneurship which was not the case a decade ago. The future of small scale business in the country is very bright because more and more graduates enlightened entrepreneurship will always be conscious of producing high quality products to reflect their own image and that of the country. Entrepreneurship development is therefore, a proper oriented meaningful industrialization

Cost consciousness: - The spirit of cost consciousness is well developed in the small scale business. With the introduction of structural Adjustment programme (SAP) 1986 it has become inevitable for successful entrepreneurs to be cost conscious in their activities or spending so that profit can be taught and they gradually develop, in so doing their finances will not only be depended on government and other financial institution.

Provision of self reliance in consumer and Industrial goods: - One of the objectives of the structural Adjustment programme (SAP) is to achieve self-sufficiency and self-reliance which will lead to independent and the ability to stand above. The spirit of independence and individual basis can lead eventually to national goal and economic grounds. Many small scale industries depend on locally sources materials rather than importing them for manufacturing processing or servicing enterprise. Small scale industries are gradually forming a habit of self-reliance, which will yield fruits in the long term and motivate the industrial sector to grow thus, developing the India economy and achieving the micro-economic aggregate.

Dispersal of economic activities:- The constitution of India of 1979, chapter 1.1 section 16 provide that "The state shall direct it policy toward ensuring that the economic system is not operated in such a manner of production and exchange in the hands of a few individual or a group".

It is now clear that Indians cannot depend on government entirely to provide equitable economic development. This is an area of great challenge to the small scale industries in India. Through viable small scale industries the nation can enjoy a rapid widespread economic base, thereby making many people, owners/managers and partners in economic

advised development of different part of the country by extending the benefit of economic progress to the less development areas.

Development of indigenous technology: - Machine and equipment used in production does not constitute what we call technology. It is impossible to know how to use such equipment without acquiring the technology of which they are made up of. Technology as Chief A.F Kolawale put it as... body knowledge on the techniques of condemning material to derive desired product such as machine and equipment used in producing consumer goods”.

The federal government of India embarked on a massive training programme abroad for Indian technicians, engineers and scientists, just to acquire necessary knowledge but this has not yield fruitful results because up to date Indians still import almost everything. Studies carried out by professor S.A Aluko in 1972 and Dr. Sonaika in 1975 have shown that small scale industries in India acquires or Improve domestic technology in the production of several goods such as:- e.g. bakery products, soft drinks, textiles, footwear, jeaneries soap production etc. and what seemed to have been acquired was just further improvement in the technology of production so as to improve the quality of these goods. This suggests that one of the main potential contributions of small scale business in changing India economy is truly indigenous technology. With the introduction of SAP in 1986, the federal government has no reason for importing technology from developed countries instead it uses the funds to improve on India indigenous technology. In conclusion, use the past decade as case point one would notice that small scale industries have been contributing their fain share in changing India's economic.

Factors militation against the development of small and medium scale enterprise

The following are considered as the factors militating against development of small and medium scale enterprises:-

- (1) Lack of business connection:- It is not clear from the questionnaire whether lack of business signifies inability on the part of the particular enterprises to faster fruitful relationship or whether some non-business considerations pre- determinate customers
- (2) When it is noted that almost 16% percent of the respondents also ascribe the cause of their business failure, it would seem that many entrepreneurs believe that their success in business is not strongly related to their ability to perform.

One of the entrepreneurs interviewed by the authors maintains that business success in India especially in the retailing, wholesaling, distribution and contracting sectors is more of a result of who you know, to what part you belong and from what state you come, from or father than whether that you can perform effectively.

- (3) Lack of capital was the primary factor militating the development.

Experience has shown however that the amount of capital or fund available is less important than how we use money your own and that which you can borrow is a very important factor for success. There was a case of a particular entrepreneur who want to establish a printing business, had sufficient money only to buy the printing machine. He depend on a loan to buy an office, purchase the different printing materials own the business, when his loan from the bank was not forth coming because of lack of transitional security of collateral, he had to auction on the machine.

Status Classification Of SSI

According to Sample Survey of 2017-18 of registered small scale industries (for the base year 2001-02), the status classification of SSI units is given below. The status has been compared with the findings of Second All India Census (base year 1987-88).

		SAMPLE SURVEY	SECOND CENSUS
		2017-18	1987-88
1)	Locational Status		
	Rural Areas	42.20%	42.20%
	Urban Areas	48.50%	48.00%
	Metropolitan Areas	9.30%	9.90%
	Backward Areas	48.30%	62.20%
2)	Organisational Status		
	Proprietary Units	80.48%	78.00%
	Partnership Units	16.84%	16.03%
	Limited Companies	2.01%	3.78%
3)	Distribution By Categories of Industries		
	Small scale Industries	96.24%	87.28%
	Ancillary Industries	0.52%	1.57%
	Small Service Establishments	3.24%	11.15%
4)	Activity Status		
	Engaged in manufacturing activity only	50.19%	51.01%
	Engaged in processing activity only	15.23%	10.37%
5)	Ownership Status		
	By scheduled caste entrepreneur	6.84%	4.57%
	By scheduled tribe entrepreneur	1.70%	1.41%
	By women entrepreneur	7.69%	5.15%
6)	Important Parameters		
	Per unit fixed investment (book value) (Rs.	3.08	1.60

Problems in modernization of SSIs

The existence of a huge number of small industrial units manufacturing a variety of products makes technological modernization a difficult task in India. Small industrial units in India are mostly managed by entrepreneurs who are caught up in the day-to-day matters of production and management of their units and find it difficult to keep themselves abreast of the various technological developments. In addition, the GoI has provided protection to the SSIs from competition from local large enterprises and imports through many policy measures. Therefore there is no threat to their markets. The government also gives capital subsidies, excise concessions and backward technology subsidies to the SSIs. All of these reduce any incentive for the small industrial units to constantly upgrade their technology or for technological innovation.

In a business outlook survey conducted by the Confederation of Indian Industry (CII) in 2005, 26 percent of those surveyed highlighted the lack of modernization. The same survey found an encouraging feature that there is an increasing awareness of quality control among the SSIs. 49 percent of the those respondents in the survey had initiated steps for obtaining ISO 9000 certification

Conclusion

The future of small business in India is bright and promising, considering the growing awareness of the importance of small scale industries by the government, financial institution

and other agencies to sustain this, the financing of small scale sector needs the combined and concentrated efforts of the government and the provide sectors for it has become evident that both developed and developing countries. The government importance and potential contribution of small scale business in changing a Indian economy cannot be ignored.

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A Study On Performance Of Derivative With Effect To Nifty Index

CH.SWATHI*

Derivatives are becoming increasingly important in world markets as a tool for risk management. Derivatives instruments can be used to minimize risk. Derivatives are used to separate risks and transfer them to parties willing to bear these risks. The kind of hedging that can be obtained by using derivatives is cheaper and more convenient than what could be obtained by using cash instruments. It is so because, when we use derivatives for hedging, actual delivery of the underlying asset is not at all essential for settlement purposes. Emergence of the market for derivative products most notably forwards, futures and options can be traced back to the willingness of risk -averse economic agents to guard themselves against uncertainties arising out of fluctuations in asset prices. By their very nature, financial markets are markets by a very high degree of volatility

Types Of Derivatives

Forwards: A forward contract is a customized contract between two entities where settlement takes place on a specific date in the futures at today's pre-agreed price. Forward contracts offer tremendous flexibility to the party's to design the contract in terms of the price, quantity, quality, delivery, time and place. Liquidity and default risk are very high.

Futures: A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. Futures contracts are special types of forward contracts in the sense, that the former are standardized exchange traded contracts.

Options: Options are two types - Calls and Puts. Calls give the buyer the right but not the obligation to buy a given quantity of the underlying asset at a given price on or before a given future date. Puts give the buyer the right but not the obligation to sell a given quantity of the underlying asset at a given price on or before a given date.

Warrants: Longer - dated options are called warrants and are generally traded over - the - counter. Options generally have life up to one year, the majority of options traded on options exchanges having a maximum maturity of nine months.

LEAPS: The acronym LEAPS means Long Term Equity Anticipation Securities. These are options having a maturity of up to three years.

Baskets: Basket options are options on portfolios of underlying assets. The underlying asset is usually a moving average of a basket of assets. Equity index options are a form of basket options

Swaps: Swaps are private agreements between two parties to exchange cash flows in the future according to a pre-arranged formula. They can be regarded as portfolios of forward contracts. The two commonly used swaps are: -

Interest rate swaps: These entail swapping only the interest related cash flows between the parties in the same currency.

Currency swaps: These entail swapping both the principal and interest between the parties, with the cash flows in one direction being in a different currency than those in opposite direction.

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Risks Involved In Derivatives

Derivatives are used to separate risks from traditional instruments and transfer these risks to parties willing to bear these risks. The fundamental risks involved in derivative business includes

- A. Credit Risk:** This is the risk of failure of a counterpart to perform its obligation as per the contract. Also known as default or counterparty risk, it differs with different instruments.
- B. Market Risk:** Market risk is a risk of financial loss as a result of adverse movements of prices of the underlying asset/instrument.
- C. Liquidity Risk:** The inability of a firm to arrange a transaction at prevailing market prices is termed as liquidity risk. A firm faces two types of liquidity risks:
 - ❖ Related to liquidity of separate products.
 - ❖ Related to the funding of activities of the firm including derivatives.
- D. Legal Risk:** Derivatives cut across judicial boundaries, therefore the legal aspects associated with the deal should be looked into carefully.

Payoff for Futures contracts

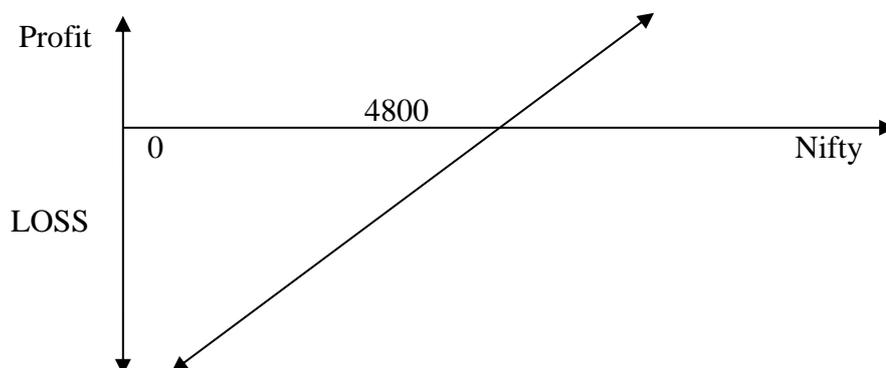
Futures contracts have linear payoffs. In simple words, it means that the losses as well as profits for the buyer and the seller of a futures contract are unlimited. These linear payoffs are fascinating as they can be combined with options and the underlying to generate various complex payoffs.

Payoff for buyer of futures: Long futures

The payoff for a person who buys a futures contract is similar to the payoff for a person who holds an asset. He has a potentially unlimited upside as well as potentially unlimited downside.

Take the case of a speculator who buys a two-month Nifty index futures contract when Nifty stands at 4800. The underlying asset in this case is Nifty portfolio. When the index moves up, the long futures position starts making profits, and when index moves down it starts making losses.

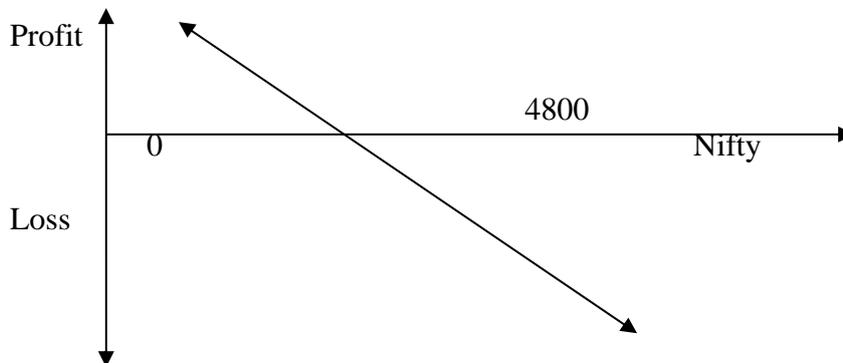
Payoff for a buyer of Nifty futures



Payoff for seller of futures: Short futures

The payoff for a person who sells a futures contract is similar to the payoff for a person who shorts an asset. He has potentially unlimited upside as well as potentially unlimited downside.

Payoff for a seller of Nifty futures



Take the case of a speculator who sells a two-month Nifty index futures contract when the Nifty stands at 4800. The underlying asset in this case is the Nifty portfolio. When the index moves down, the short futures position starts making profits, and when index moves up, it starts making losses.

Currently Available Futures In NSE

Span Margin:: Jan 29, 2019			
Symbol	Mlot	TotMgn%	TotMgnPerLt
LT	50	24.16	46531.63
LUPIN	350	47.75	86364.25
M&M	312	24.57	52743.8
WOCKPHARMA	600	33.98	73579.5
YESBANK	1100	23.82	63511.25
ZEEL	700	24.84	43057
BRIGADE	550	50.83	84899.38
MINIFTY	20	18.56	19568.55
EDELWEISS	250	57.35	144358
COLPAL	550	28.56	60401
BANKNIFTY	25	18.2	45020.6
CNX100	50	18.91	49145.13
CNXIT	50	19.33	36533.15
JUNIOR	25	25.01	65965.5
NFTYMCAP50	75	27.57	60157.13
NIFTY	50	18.54	48857.08
BAJAJAUTO	100	29.05	69763.75
BAJAJHIND	950	72.99	143518.26
BALRAMCHIN	2400	55.64	113916.24
BANKBARODA	700	29.73	90055
BANKINDIA	950	29.93	117013.14
BATAINDIA	1050	47.93	94497.88
BEL	275	37.78	175685.81
BEML	125	30.82	52850.81
BHARATFORG	1000	29.02	81487.5

BHARTIARTL	250	22.71	49283.13
BHEL	75	23.21	36348.5
BHUSANSTL	250	34.63	109680.79
BILT	1900	31	89889
BINDALAGRO	4950	80.14	161261.3
BIOCON	450	30.37	55649.75
BIRLAJUTE	850	48.2	89260.63
BOMDYEING	300	40.96	95792.25
BONGAIREFN	2250	62.33	92911.22
BPCL	550	24.96	53713
BRFL	1150	30.73	103538.4
ESCORTS	2400	50.3	116255.66
ESSAROIL	5650	75.31	1004713.73
FEDERALBNK	851	30.24	84696.21
FINANTECH	150	28.68	93693.88
GAIL	750	31.72	104728.63
GDL	2500	41.26	118793.75
MAHLIFE	350	47.95	119007.8
GESHIP	600	45.21	110181
GLAXO	300	19.91	50760.75
GMRINFRA	1250	42.17	98870.72
GNFC	1475	32.11	86123.55
GRASIM	88	22.92	59727.76
GTL	750	21.77	42673.63
GUJALKALI	1400	46.77	110498.5
HAVELLS	400	41.64	92510
HCC	1400	42.64	112148.08
HCLTECH	650	25.5	40036.75
HDFC	75	19.91	41545.38
HDFCBANK	200	22.66	71799
HDIL	400	54.38	219148.88
IOC	600	38.43	114265.5
ITC	1125	24.48	54002.81
IVRCLINFRA	500	27.61	62955.54
IVRPRIME	400	141.03	146108
J&KBANK	300	30.62	73150.5
JETAIRWAYS	400	32.53	97787
JINDALSTEL	625	58.78	864736.43
JPASSOCIAT	750	40	113213.63
HINDZINC	250	38.04	53914.25
NIITLTD	1450	27.88	48236.29
JPHYDRO	3125	58.71	156408.89
REDINGTON	500	33.85	59234.75

NETWORK18	500	45.03	80485
NAUKRI	150	39.08	59415.16
MICO	50	29.14	56244.75
WWIL	3150	70.62	111684.51
KPIT	1650	48.75	70876.25
GITANJALI	500	34.68	55199.53
GBN	250	39.41	100070.02
JSTAINLESS	1000	52.02	84402.5
JSWSTEEL	275	38.47	99491.86
KESORAMIND	500	39.35	90181.25
KOTAKBANK	275	34.11	101976.88
KTKBANK	1250	33.46	110718.75
LAXMIMACH	100	42.34	99031.25
LICHSGFIN	850	46.71	125403.27
LITL	425	59.42	136749.97
ORIENTBANK	1200	30.85	104184
ISPATIND	4150	67.59	127490.91
HINDOILEXP	1600	62.68	115232.3
PANTALONR	500	29.24	94956.25
PARSVNATH	700	57.37	118758.5
GTOFFSHORE	250	41.53	82974.38
PATELENG	250	35.18	67252.47
DCB	1400	48.31	83605.98
JINDALSAW	250	43.18	98152.29
PATNI	650	34.23	58565
PENINLAND	2750	73.98	203059.51
PETRONET	2200	49.26	83836.5
PFC	1200	38.82	90924.05
PNB	600	30.19	123654
POLARIS	1400	126.22	153209
POWERGRID	1925	35.31	79465.17
PRAJIND	1100	47.17	83851.42
PUNJLLOYD	750	28.34	98700.35
PURVA	500	28.84	53158.75
RAJESHEXPO	1650	48.9	110055
RANBAXY	800	22.45	62964
RCOM	350	28.78	65033.5
REL	550	42.93	496514.63
RELCAPITAL	550	41.59	475616.09
RELIANCE	75	25.43	49085.69
SUNTV	500	74.6	124632.5
SUZLON	1000	26.94	85160
SYNDIBANK	1900	35.1	70808.25

TATACHEM	675	36.66	82285.88
TATAMOTORS	412	21.27	62665.91
TATAPOWER	200	37.66	96260.49
TATASTEEL	382	26.72	71268.67
TATATEA	275	35.52	76882.94
TCS	250	23.41	49917.38
TECHM	200	33.83	48996.5
TITAN	206	33.59	84016.23
TRIVENI	1925	57.61	147068.69
TTML	5225	50.01	102842.22
TULIP	250	35.95	85200.5
TVSMOTOR	2950	39.51	50994.44
ULTRACEMCO	200	49.88	89206
UNIONBANK	2100	35.36	155817.1
UNIPHOS	700	29.72	71765.75
UNITECH	900	41.86	154479.88
VIJAYABANK	3450	42.26	103456.88
INFOTECH	1350	52.36	91550.25
ABAN	50	32.52	61735
ABB	250	24.08	72756.25
ABIRLANUVO	200	31.41	122529.5
ACC	375	25.75	77018.19
ADLABSFILM	225	61.58	160207.24
AIAENG	200	30.13	83456
AIRDECCAN	850	53.95	86339.68
ALBK	2450	38.18	113245.63
ALOKTEXT	3350	33.27	81162.19
AMBUJACEM	2062	17.33	41028.73
AMTEKAUTO	600	20.84	40933.5
ANDHRABANK	2300	37.98	83564.75
ANSALINFRA	650	107.95	197206.61
APIL	200	29.64	44457.5
APTECHT	650	54.2	89331.28
ARVINDMILL	4300	55.53	121540.06
ASHOKLEY	4775	41.88	73308.19
AUROPHARMA	350	62.92	79457
AXISBANK	225	27.29	69879.69
CAIRN	1250	28.93	69359.38
CANBK	800	39.51	94484
CENTRALBK	2000	35.7	80375
CENTURYTEX	425	40.65	171034.31
CESC	550	29.36	79321
CHAMBLFERT	3450	69.05	121034.23

CHENNPETRO	900	36.47	104580
CIPLA	1250	24.33	55834.88
CMC	200	48.95	80584
CORPBANK	600	25.44	54349.5
CROMPGREAV	500	27.29	49883.75
CUMMINSIND	475	23.34	34913.69
DABUR	2700	32.89	87399
DENABANK	2625	51.81	100717.51
DIVISLAB	155	30.52	73007.55
DLF	400	27.94	99462
DRREDDY	400	26.01	58278
EDUCOMP	75	41.17	122344.16
EKC	1000	27.57	81609.2
HEROHONDA	400	22.76	63484
HINDALCO	1595	35.31	97901.55
HINDPETRO	1300	34.68	118995.5
HINDUJAVEN	250	90.94	135832.3
HINDUNILVR	1000	23.03	45597.5
HOTELEELA	3750	43.69	77659.33
HTMTGLOBAL	250	107.46	87540.61
I-FLEX	150	45.88	74038.13
ICICIBANK	175	25.85	57787.38
IDBI	1200	45.97	69708.89
IDEA	2700	27.64	82599.75
IDFC	1475	29.34	90955.54
IFCI	7875	55.29	266938.43
INDHOTEL	1750	31.91	78168.63
INDIACEM	725	35.09	52343.44
INDIAINFO	250	38.13	121979.66
INDIANB	1100	37.9	90795.6
INDUSINDBK	1925	47.65	91592.39
INFOSYSTCH	100	34.85	50579.5
IOB	1475	30.32	82836.5
MAHSEAMLES	600	44.05	112305
MARUTI	200	22.07	38176
MATRIXLABS	1250	48.3	97450.5
MCDOWELL-N	125	30.01	65615.83
MOSERBAER	825	32.07	59346.38
MPHASIS	800	27.5	52720
MRPL	2225	63.64	121365.34
MTNL	1600	39.67	83976
NAGARCONST	1000	27.25	78179.84
NAGARFERT	3500	67.31	97074.18

NATIONALUM	575	32.77	76297.94
NDTV	550	26.84	59554.5
NEYVELILIG	1475	68.04	144831.98
NICOLASPIR	1045	32.59	103512.78
NIITTECH	600	106.7	97092.72
NTPC	1625	35.2	121802.13
NUCLEUS	550	68.19	102542.5
OMAXE	650	70.97	146291.01
ONGC	225	28.1	63338
ORCHIDCHEM	1050	37.53	95127.88
RENUKA	500	44.9	213297.5
RNRL	7150	62.37	645542.97
ROLTA	900	42.18	104604.75
RPL	1675	40.63	114850.31
SAIL	1350	37.39	109684.36
SASKEN	550	127.11	103614.5
SATYAMCOMP	600	21.04	50206.5
SBIN	132	20.3	61807.3
SCI	800	44.64	81218.64
SESAGOA	75	43	103348.19
SHREECEM	200	28.08	73499
SIEMENS	188	21.22	69590.66
SKUMARSYNF	1300	48.71	76157.25
SOBHA	350	37.4	99026.88
SRF	1500	52	90562.5
STAR	850	91.9	140337.13
STER	219	28.4	49428.33
STERLINBIO	1250	30.31	65203.13
STRTECH	1050	70.74	169434.47
SUNPHARMA	225	21.78	48561.69
VOLTAS	900	36.71	72581.79
VSNL	525	36.24	98082.13
WELGUJ	800	33.15	135900.47
WIPRO	600	20.12	48781.5

Conclusions

Derivatives have existed and evolved over a long time, with roots in commodities market. In the recent years advances in financial markets and the technology have made derivatives easy for the investors. Derivatives market in India is growing rapidly unlike equity markets. Trading in derivatives require more than average understanding of finance. Being new to markets maximum number of investors have not yet understood the full implications of the trading in derivatives. SEBI should take actions to create awareness in investors about the derivative market. The derivatives are mainly used for hedging purpose. In cash market the investor has to pay the total money, but in derivatives the investor has to pay premiums or

margins, which are some percentage of total money. In derivative segment the profit/loss of the option holder/option writer is purely depended on the fluctuations of the underlying asset.

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Determinants Of Entrepreneurship In Non Farm Sector In Telangana State

Dr.Yalavarthi Venuprasad*

Abstract

The rural non farm sector consists of all non agricultural activities which include mining and quarrying, household and non household manufacturing, processing, repair, construction, trade and commerce, transport and other services in villages and rural towns undertaken by enterprises. Despite of the prominence of agriculture sector for several decades of planning in India, agriculture sector failed to respond to the ever increasing demand for employment by the rural masses. Due to the specifics to the rural people like low education, low skill formation, low mobility, trained only in traditional occupations, the rural masses could not be gainfully employed out side the farm sector. Thus, a kind of symbiotic relationship existed between rural masses and farm economy in a low level equilibrium manner. Planners and policy makers have thought that non farm employment can be a growth engine of employment in rural areas. Accordingly efforts are made by the government to promote non farm employment in order to ensure employment in rural areas similar to that of industrial employment in urban areas. The present study is initiated to investigate the strengths and weaknesses of the rural-non-farm-sector and its determinants of entrepreneurship of Telangana state in India analyzing the structure and growth of rural-non-farm-sector and its' trends towards employment and income generation to arrive at certain inferences like formulation of possible approaches with a view to promote rural-non-farm-sector self-sustaining in the changing competitive environment.

Key words: *Entrepreneurship, Manufacturing, Non farm sector, Employment*

Introduction

Rural non-farm economy, in recent times, is considered as an effectual strategy for decentralization of economic activities to rural India. The Economic Census of India estimates that around 41.89 million rural people are employed in non-agricultural establishments which registered a growth rate of 4.56 % during 1998-2005. However, the sector has been contending with a number of factors like inadequate rural infrastructure, particularly roads, electricity and communication facilities, lack of sufficient skilled labour and adequate access to credit, information and training facilities etc.

Rural-Non-Farm-Sector (RNFS) includes all economic activities *viz.*, household and non-household manufacturing, handicrafts, processing, repairs, construction, mining and quarrying, transport, trade, communication, community and personal services etc. in rural areas. Rural-Non-Farm-Activities (RNFAs), thus, play an important role to provide supplementary employment to small and marginal farm households, reduce income inequalities and rural-urban migration. Though, agricultural sector has played a very significant role for generation of rural employment in the Asia and Pacific region, its contribution to the overall economy has greatly reduced in the recent past. Therefore, development of various non-farm-activities can effectively be exploited as a potent

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stimulator for further economic growth offering rural communities better employment prospects on a sustainable basis.

Objectives Of The Study

To discuss the socio-economic profile of entrepreneurs in non farm sector.

To identify the determinants of entrepreneurship in non farm sector in Andhra Pradesh.

Hypotheses Of The Study

The relationship between the gender of the sample entrepreneurs and their perceptions about the determinants of entrepreneurship in non farm sector is assumed to be statistically independent.

Methodology

Towards the end of the objectives and hypotheses, the following methodology was adopted.

Sample Design

Towards the end of the objectives and hypotheses 200 non farm enterprises were selected from Vararamachandrapuram and Wazeedu Mandals of Khammam district, Zaheerabad and Ramayampet Mandals of Medak district and Gadwal and Narayanpet Mandals of Mahabubnagar District of Telangana state, mostly by adhering to the principles of stratified random sampling method.

Sources Of The Data

The study was made use of the data from both primary and secondary sources. The secondary sources of the data include the Reports of the DICs. The primary data were collected directly from the respondents by administering a pre-designed questionnaire / schedule.

Period Of The Study

Two year period covering 2014-16 were considered as the study period and necessary data were collected covering the said period in 2014-15.

Scope Of The Study

The study covers both the economic and non-economic performance of the non farm sector. It does not evaluate the management practices in non farm enterprises.

Determinants Of Entrepreneurship In Non Farm Sector

Determinants of entrepreneurship in non farm sector in the study area. The list of determinants includes

Emerging non farm sector

Competition is low

Low investment requirements

Low skill requirements

High growth of food processing industry

Unemployment

State's initiatives

Achievement motivation

Urbanization at faster rate

Results And Analysis

Table-1: Emerging non farm sector

Response	Frequency	Percent	Cumulative Percent
Yes	164	82.0	82.0
No	36	18.0	100.0
Total	200	100.0	

Source: Primary data

Table-1 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on emerging non farm sector. It is observed that 82 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because it is an emerging sector and 18 percent of the respondents did not subscribe to this view.

Table-2: Competition is low

Response	Frequency	Percent	Cumulative Percent
Yes	156	78.0	78.0
No	44	22.0	100.0
Total	200	100.0	

Source: Primary data

Table-2 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on low competition in the sector. It is observed that 78 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because competition is low in this sector and 22 percent of the respondents did not subscribe to this view.

Table-3: High demand for non farm sector products

Response	Frequency	Percent	Cumulative Percent
Yes	152	76.0	76.0
No	48	24.0	100.0
Total	200	100.0	

Source: Primary data

Table-3 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on high demand for non farm sector products. It is observed that 76 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of high demand for non farm sector products in this sector and 24 percent of the respondents did not subscribe to this view.

Table-4: Low investment requirements

Response	Frequency	Percent	Cumulative Percent
Yes	160	80.0	80.0
No	40	20.0	100.0
Total	200	100.0	

Source: Primary data

Table-4 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on low investment requirements for non farm sector products. It is observed that 80 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of low investment requirements for non farm sector products and 20 percent of the respondents did not subscribe to this view.

Table-5: Low skill requirements

Response	Frequency	Percent	Cumulative Percent
Yes	144	72.0	72.0
No	56	28.0	100.0
Total	200	100.0	

Source: Primary data

Table-5 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on low skill requirements for non farm sector products. It is observed that 72 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of low skill requirements for non farm sector products and 28 percent of the respondents did not subscribe to this view.

Table-6: High growth of food processing industry

Response	Frequency	Percent	Cumulative Percent
Yes	160	80.0	80.0
No	40	20.0	100.0
Total	200	100.0	

Source: Primary data

Table-6 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on high growth of food processing industry. It is observed that 80 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of high growth of food processing industry and 20 percent of the respondents did not subscribe to this view.

Table-7: Unemployment

Response	Frequency	Percent	Cumulative Percent
Yes	144	72.0	72.0
No	56	28.0	100.0
Total	200	100.0	

Source: Primary data

Table-7 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on unemployment. It is observed that 72 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of their unemployment and 28 percent of the respondents did not subscribe to this view.

Table-8: State's initiatives

Response	Frequency	Percent	Cumulative Percent
Yes	132	66.0	66.0
No	68	34.0	100.0
Total	200	100.0	

Source: Primary data

Table-8 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on state's initiatives. It is observed that 66 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of state's initiatives and 34 percent of the respondents did not subscribe to this view.

Table-9: Achievement motivation

Response	Frequency	Percent	Cumulative Percent
Yes	148	74.0	74.0
No	52	26.0	100.0
Total	200	100.0	

Source: Primary data

Table-9 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on achievement motivation. It is observed that 74 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of their achievement motivation and 26 percent of the respondents did not subscribe to this view.

Table-10: Urbanization at faster rate

Response	Frequency	Percent	Cumulative Percent
Yes	156	78.0	78.0
No	44	22.0	100.0
Total	200	100.0	

Source: Primary data

Table-10 refers to the distribution of the sample entrepreneurs by the determinants of their entrepreneurship in the non farm sector in Andhra Pradesh with a focus on urbanization at a faster rate. It is observed that 78 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of urbanization at a faster rate and 22 percent of the respondents did not subscribe to this view.

Major Findings

- 82 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because it is an emerging sector and 18 percent of the respondents did not subscribe to this view.
- 78 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because competition is low in this sector

and 22 percent of the respondents did not subscribe to this view.

- 76 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of high demand for non farm sector products in this sector and 24 percent of the respondents did not subscribe to this view.
- 80 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of low investment requirements for non farm sector products and 20 percent of the respondents did not subscribe to this view.
- 72 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of low skill requirements for non farm sector products and 28 percent of the respondents did not subscribe to this view.
- 80 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of high growth of food processing industry and 20 percent of the respondents did not subscribe to this view.
- 72 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of their unemployment and 28 percent of the respondents did not subscribe to this view.
- 66 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of state's initiatives and 34 percent of the respondents did not subscribe to this view.
- 74 percent of the sample entrepreneurs of the non farm sector have stated that they have chosen enterprising activities in non farm sector because of their achievement motivation and 26 percent of the respondents did not subscribe to this view.

Conclusion

NFS is playing a very significant role in the development of rural areas after agriculture has been on a decline due to several reasons. It has become an important source of supplementary income in rural areas and goes along with the broad objective of rural development. So policies and interventions for creating employment opportunities have to be designed for promoting NFS in a big way along with strengthening the existing institutions. It becomes an imperative for the government in this regard to create infrastructure and necessary skills for the rural areas to reduce poverty and also for enhancing economy of the nation. In the wake of a fall in employment from organized sector, non farm employment plays a significant role, due weight must be accorded to fresh policy initiatives must be made by the state.

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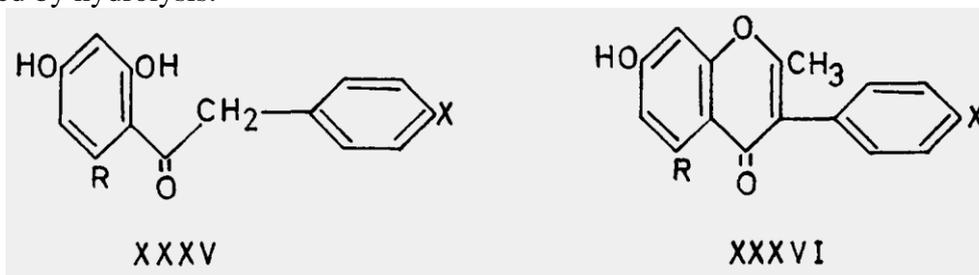
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Synthesis of isoflavones

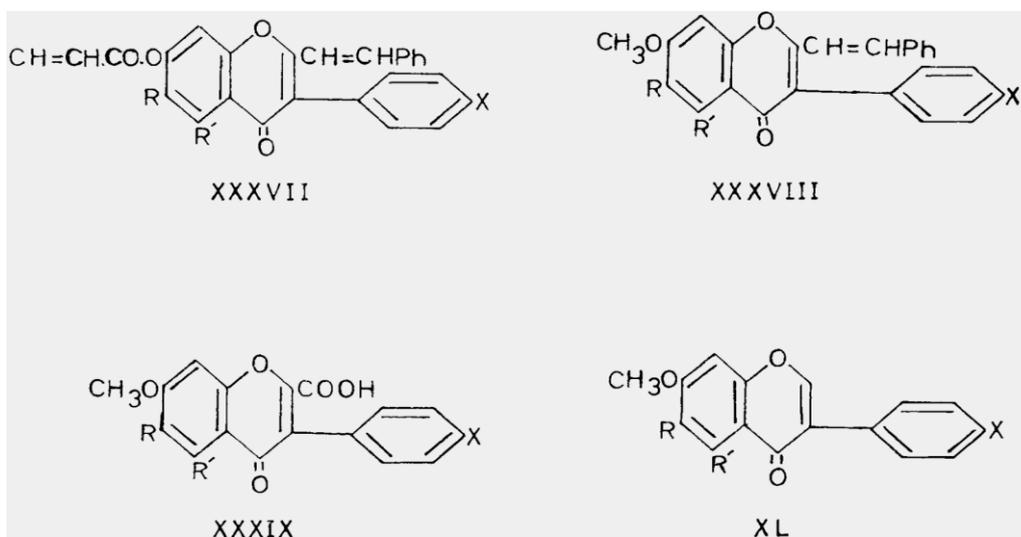
Anupam Vibha*

The synthesis of iso flavones (3-phenyl chromone) requires an appropriate deoxybenzoin and a condensing agent capable of furnishing 2-carbon atom. The synthesis with alkyl or aryl substituents in the 2-position presented no difficulty, but since in naturally occurring compound this position is never substituted, such a synthesis is of value only if the substituents can be removed subsequently. Baker and Robinson in the year 1925 synthesised 7-hydroxy-2-methyl iso-flavone (XXXVI; R, = X = H) for the first time by the condensation of 2,4-dihydroxy/leioxybenzoin (XXXV; R = X H) with acetic anhydride and sodium acetate followed by hydrolysis.



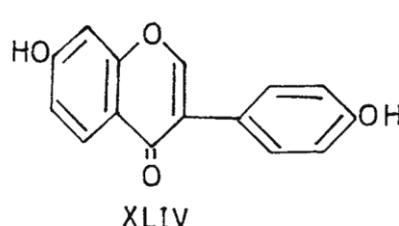
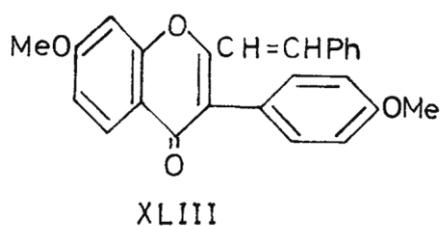
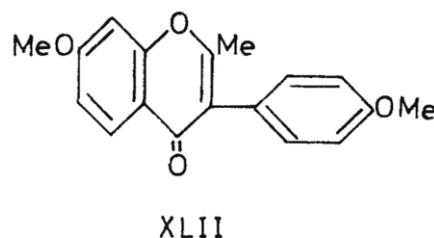
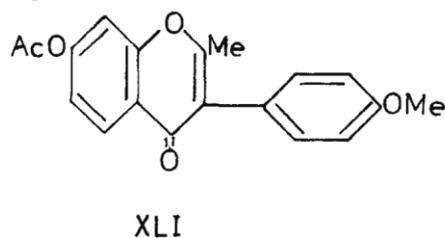
Deoxybenzoin derived from phloroglucinol furnished 5, 7-dihydroxy isoflavones and replacement of acetic anhydride and sodium acetate with benzoic anhydride and the corresponding sodium salt gave 2-phenyl isoflavones. Similarly 2,4-dihydroxy deoxybenzoin (XXXV; R = X = H) on condensation with cinnamic anhydride and sodium cinnamate gave 7-cinnamoyloxy-2-styryl iso- flavone (XXXVII; R = R' = X = H), which was converted into the 7-methoxy derivative (XXXVIII R = R' = X = H). This compound on oxidation with potassium permanganate in pyridine yielded 7-methoxy isoflavone-2-carboxylic acid (XXXIX; R = R' = X = H) which on decarboxylation gave 7-methoxy isoflavone (XL; R = R' = X = H). In an attempt to synthesise genistein, 2,4,6-trihydroxy-4'-methoxy deoxybenzoin (XXXV; R = OH, X = GMe) was condensed with cinnamic anhydride and sodium cinnamate to give 7-cinnamoyloxy-5-hydroxy-4'-methoxy-2- styryl isoflavone (XXXVII; R=H, R'=OH, X= OMe). This on decinnamoylation and subsequent methylation gave a nuclear methylation product, 5-hydroxy-7, 4'- dimethoxy-6-methyl-2-styryl isoflavone (XXXVIII; R = Me, R' = OH, X = OMe). The product, after acetylation of the remaining free 5-hydroxyl group, was subjected to potassium permanganate oxidation to give the corresponding carboxy isoflavone (XXXIX; R = Me, R' = OAc, X = OMe). This on decarboxylation and subsequent hydrolysis gave 5-hydroxy-7,4'-dimethoxy-6-methyl iso-flavone (XL; R = Me, R' = OH, X = OMe;. However, Baker and Robinson in the year 1928 succeeded in synthesising genistein by modifying the conditions of methylation.

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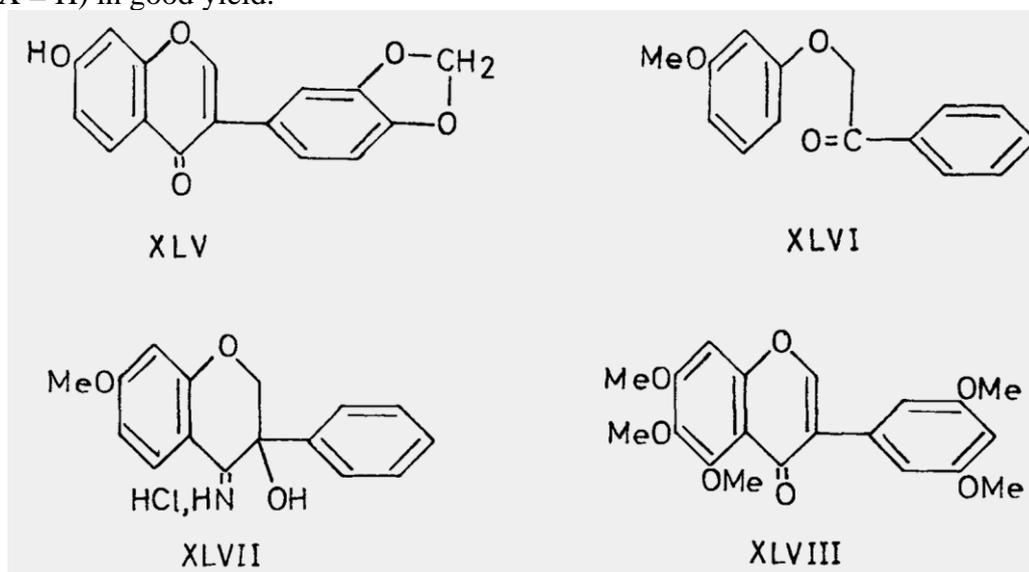


Inspite of numerous attempts at the time to devise a more practicable synthesis of isoflavones bearing no substituents in position-2, it was found almost indispensable to proceed through the 2-styryl isoflavones and isoflavone carboxylic acids derived in small yields by oxidation. However, Baker, Robinson and Simpson put forward an improved method for the preparation of 2-styryl isoflavones and thus the experimental difficulties arising from the use of derivative of cinnamic acid were overcome. They prepared 2-styryl isoflavones by condensing 2-methyl isoflavones with benzaldehyde. The condensation of 2,4-dihydroxy-4'-methoxy deoxy-benzoin (XXXV; R = H, X = OMe) with acetic anhydride and sodium acetate gave 7-acetoxy-4'-methoxy-2-methyl isoflavone (XLI), which was subjected to deacetylation followed by methylation to give 7,4'-dimethoxy-2-methyl isoflavone (XLII). The corresponding 2-styryl derivative (XLIII) was prepared by condensation of (XLII) with benzaldehyde in presence of sodium ethoxide.

This on degradation in the usual way and subsequent demethylation gave daidzein (XLIV) in 5% yield. The synthesis of Ψ -baptigenin (XLV) was also achieved by this method successfully.



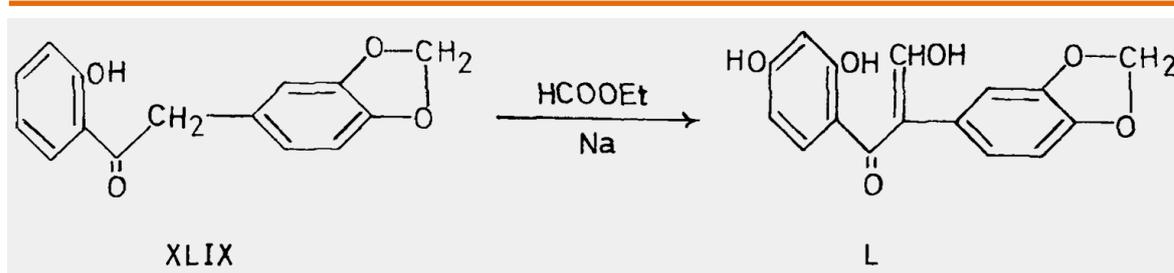
This method also suffers from the severe limitations of poor yield during oxidation and more over as the hydroxyl groups must be protected before oxidation, only those compounds can be prepared in which the required alkoxy groups are not cleaved during final demethylation. A new synthesis of 7-methoxy isoflavone was evolved by Baker et al. in which the oxidation step was avoided altogether. This involved the condensation of m-methoxy phenol with phenacyl bromide to give ω-m-methoxy phenoxy acetophenone (XLVI) followed by conversion into the cyanohydrin. This compound on treatment with zinc chloride and hydrogen chloride in ether underwent an intramolecular Hoesch reaction. The ketimine hydrochloride (XLVII) thus obtained was hydrolysed to yield 3-hydroxy-7-methoxy isoflavanone, which on dehydration by sulphuric acid gave 7-methoxy isoflavone (XL; R = R' = X = H) in good yield.



Ψ-Baptigenin (XLV) was synthesised by Spath and Lederer, whereas Baker et al. failed to prepare irigenin triethyl ether (XLVIII) using this method. Its general applicability has, however, not been fully explored.

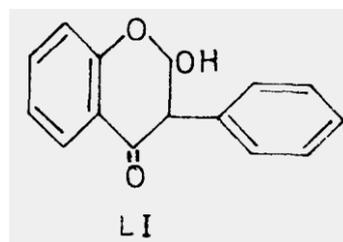
Spath and Lederer in 1930 obtained Ψ-baptigenin (XLV) in a yield of about 8% by treating 2,4-dihydroxy-3',4'-methylenedioxy deoxybenzoin (XLIX) with ethyl formate and sodium in a sealed tube at 100°. Shortly after daidzein and formononetin were synthesised similarly. This synthesis of isoflavones was greatly improved by modifying the reaction conditions. It was found that condensation of the deoxybenzoins with ethyl formate-sodium proceeds smoothly at 0° to give isoflavones in 30% yields. This synthesis of isoflavones is quite suitable when the deoxybenzoins contains only one free hydroxyl group, ortho to the carbonyl, required for ring closure. Isoflavone from deoxytienzoin having two free hydroxyl groups both ortho to the carbonyl is also reported to be synthesised successfully. Shriner and Hull described the preparation of 8-methyl genistein using a trihydroxy deoxybenzoin, but their results could not be reproduced by later workers.

The mechanism of ethyl formate-sodium synthesis of isoflavones has been much discussed. Spath and Lederer however, suggested the following course.



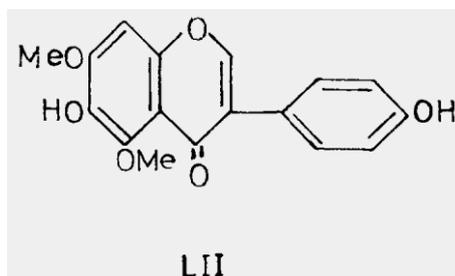
The active methylene group of the deoxybenzoin under-goes formylation followed by enolisation to (L). The unsaturated triol (L) loses water to form an ether linkage on treatment with mineral acid. However, such intermediates have not been isolated either by Spath and Lederer or by Mahal et al. The latter workers are of the opinion that the ethyl formate-sodium synthesis proceeds directly to the formation of isoflavones. The intermediates of the composition postulated above have however been isolated in a few cases. They have been assigned the 2-hydroxy/isoflavanone (LI) structure. These compounds lose a molecule of water in each case on treatment with glacial acetic acid and yield the corresponding isoflavones. Thus Wolfrom et al. in the year 1941 were able to isolate four such intermediate isoflavanones (LI). These intermediates gave negative ferric chloride test. Harper in 1942 and Mehta et al. in 1953 have also reported the same observation. The formation of 2-hydroxy isoflavanones during ethyl formatesodium synthesis is thus suggested.

Vehkataraman et al. however obtained isoflavones directly under conditions, which might have been expected to give the intermediate hydroxy iso-flavanones. Robertson et al. also obtained santaltrimethyl ether (XXXII) and other isoflavones directly by ethyl formate-sodium synthesis.



It is interesting to mention here the observation of Narasindiachari et al. who have found that the use of methyl formate in isoflavone condensation invariably yields γ -hydroxy isoflavanones. This finding has shortly after, been confirmed by the work of Whalley. Consideration of the actual structures of the compounds, the condensing agents and the experimental conditions in these apparently inconsistent experiments does not greatly help in explaining why only in some cases stable intermediates with ethyl formate are formed and why the same intermediates are invariably formed with methyl formate.

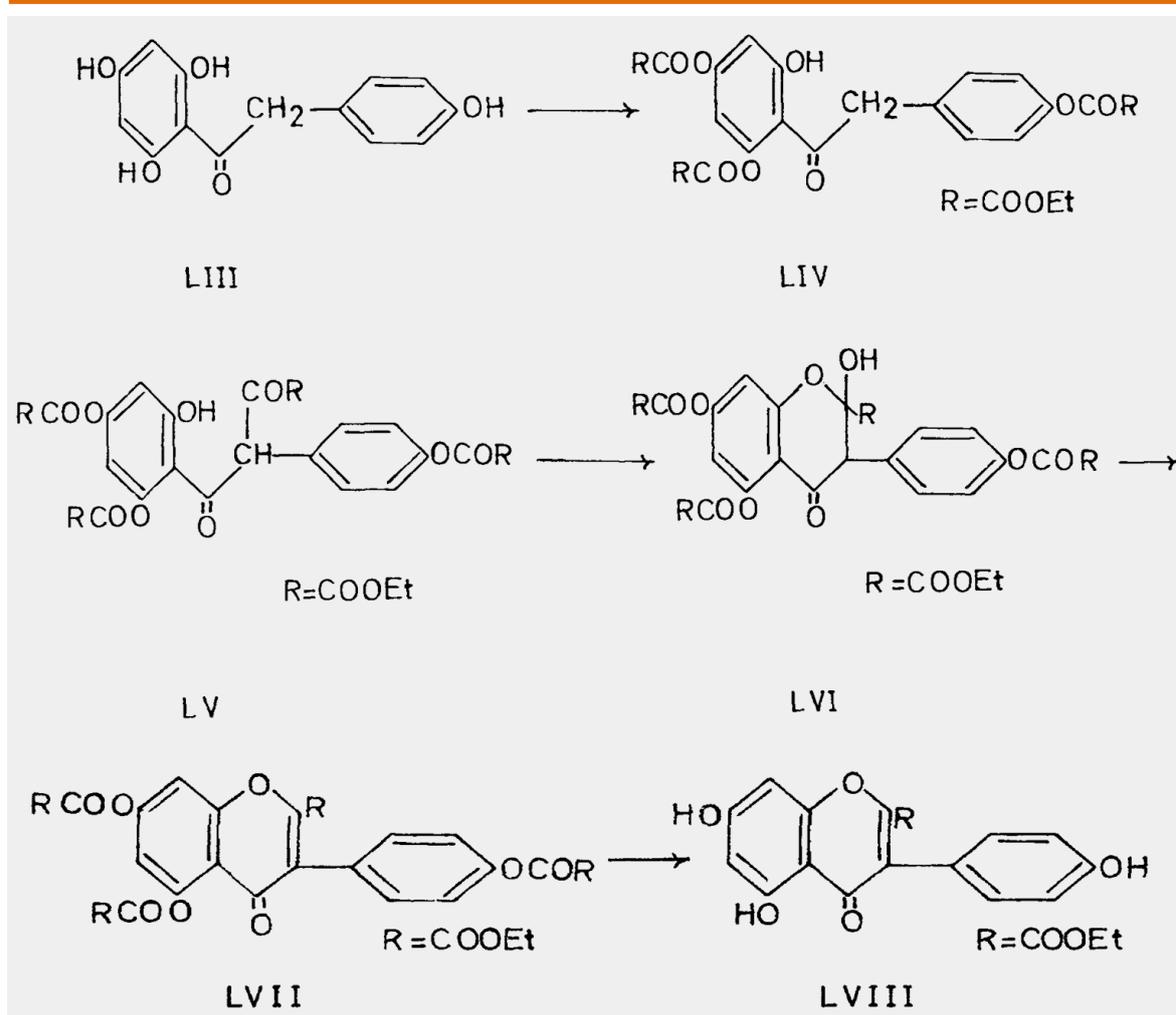
Another simpler and more convenient method for cyclising *o*-hydroxy deoxybenzoin to isoflavone is to heat them with ethyl orthoformate, pyridine and piperidine. This method was devised by Sathe and Venkataraman in 1949. It usually gives higher yields than the ethyl formate-sodium synthesis and the need for protection of hydroxyl group is also much less than that in the ethyl formate method. Deoxybenzoin derived from resorcinol and pyrogallol cyclise in good yields. The presence of a nitro group in 4'-position of the deoxybenzoin facilitates the cyclisation and gives still better yields, Prunetin (XXIII; R = Me) and muningin (LII) have been synthesised by the use of this reagent. Cyclisation to the corresponding isoflavones fails with 2, 4, 6 trihydroxy deoxybenzoin,



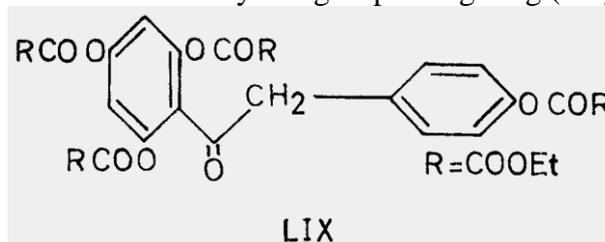
The severe limitation of ethyl formate-sodium and ethyl orthoformate syntheses is their failure with deoxybenzoin containing several free hydroxyl groups. In cases where several free hydroxyl groups are present in a deoxybenzoin, ethoxalyl chloride has been most successfully used. It was in 1949 when Baker et al. discovered that the 2-carbon atom could also be furnished by ethoxalyl chloride and that iso-flavone 2-carboxylic esters formed in good yields are readily converted into isoflavones by hydrolysis followed by decarboxylation. This has got the distinct advantage of the direct preparation of polyhydroxy and partially alkylated hydroxy isoflavones. Dealkylation, which is here avoided is sometimes accompanied by isomerisation from 5,7, 8- to 5,6,7-orientation of substituents. The value of the method was shown by the preparation, at the Middlesex Hospital, of, 120 g. of genistein from the corresponding deoxybenzoin in 50% yield. However, deoxybenzoin of the type derived from iretol when submitted to ethoxalyl chloride are reported to give isomeric mixture of difficultly separable isoflavones of 5, 6, 7- and 5, 7, 8-orientations. Though ethoxalyl chloride of deoxy-benzoin capable of furnishing two isomeric isoflavones has not been fully explored so far, this seems to be a limitation of this condensing agent.

The deoxybenzoin containing in all free phenolic hydroxyl groups is treated with $n + 1$ equivalents of ethoxalyl chloride in pyridine at 0° and left overnight at room temperature. The reaction mixture on work up gives ethyl isoflavone 2-carboxylate, which on hydrolysis with sodium carbonate and subsequent decarboxylation at a temperature little above the melting point yields the isoflavone. When the reaction was carried out in pyridine and boiling benzene the isoflavone esters were isolated but in very low yields.

Baker et al. suggested the following probable mechanisms (a) ethoxalyl chloride of all phenolic hydroxyl groups of the deoxybenzoin (LIII) except one ortho to the carbonyl group giving (LIV), (b) C-ethoxalyl chloride, of the reactive methylene group of (LIV) to give (LV) (c) cyclisation to the 2-carbomethoxy-2-hydroxy iso-flavanone (LVI) , (d) loss of a molecule of water to give the 2-carbomethoxy isoflavone (LVII) and (e) removal of ethoxalyl group by reaction with dilute acids giving (LVIII).



Gupta and Seshadri have suggested the formation of (LV) by another probable mechanism; (a) ethoxalylation of all the phenolic hydroxyl groups of the deoxybenzoin (LIII) to give (LIX) and (b) Baker - Venkataraman transformation in presence of base (pyridine) resulting in C-ethoxalyl of the reactive methylene group thus giving (LV).



However it is clear that C-ethoxalyl deoxy-benzoin (LV) are intermediates and they may be formed either by direct C-acylation or by a Baker-Venkata- raman transformation of the O-ethoxalyl/deoxybenzoin.

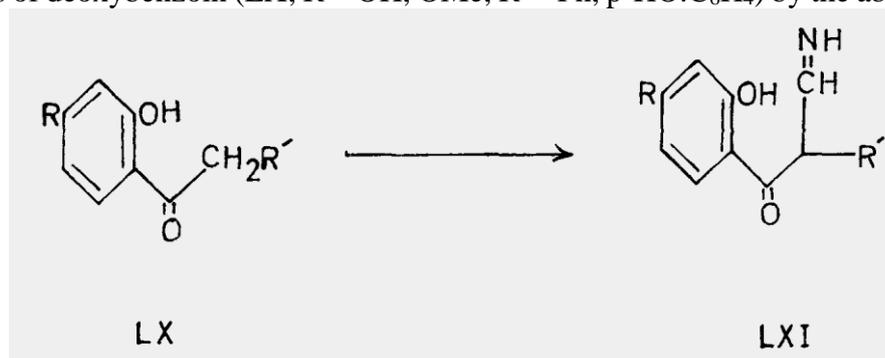
Baker et al. have however found that in the case of 2-hydroxy-4, 6-dimethoxy deoxybenzoin the primary product of ethoxalylation is 2-hydroxy-5, 7- dimethoxy isoflavanone which loses water when treated with acetic acid to give 5,7-dimethoxy isoflavone.

Methoxalyl chloride has also successfully, been used in some cases for the synthesis of iso-flavones but the scope and limitations have not been fully explored.

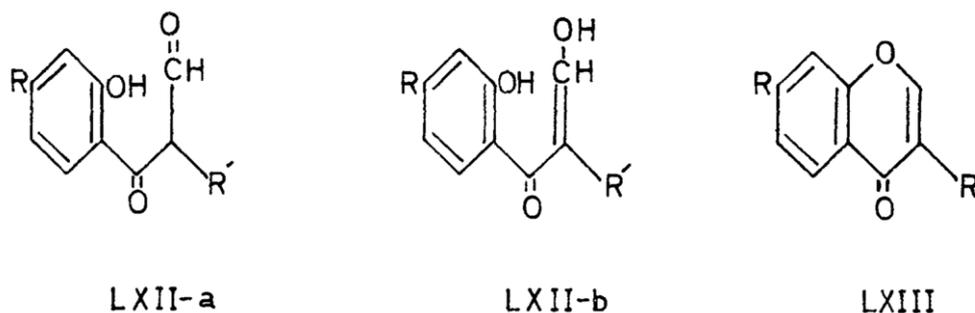
Various sources- of 2-carbon atom in isoflavones, which would permit their ready synthesis from 2-hydroxy deoxybenzoins have been investigated. It has now been found that formamide or formanilide can in some instances furnish the necessary 2-carbon atom with yields of isoflavone upto 6%. In this reaction the amide and the deoxybenzoin are heated together for about thirty minutes, normally the isolation of isoflavones presents little difficulty. Protection of hydroxyl groups except in 2-position is necessary. However this method has been found of limited applicability.

The possibility of a thermally induced Baker-Venkataraman transformation of o-acyloxyacetones into the corresponding o-hydroxy-1, 3-diketone or flavone has also been extended for the synthesis of isoflavones. It has been found that 2-acyloxy deoxybenzoins when heated to 250° give the corresponding 2-substituted isoflavones, in some instances in satisfactory yield. This reaction is parallel to the base catalysed Baker-Venkataraman transformation, which may also be brought about thermally.

Recently Farkas has described a method for isoflavone synthesis wherein he used what may be described as the Gattermann-Adams reagent, viz., zinc cyanide and dry hydrogen chloride. It has been shown that β -keto-aldimine of the type (LXI) are obtained from various derivatives of deoxybenzoin (LX; R = OH, OMe, R' = Ph, p-HO.C₆H₄) by the above reagent.



Hydrolysis of (LXI) affords compounds (LXII-a) and (LXII-b) respectively. Compounds of the type (LXII-b) undergo ring closure with loss of water and formation of the corresponding isoflavones (LXIII).



Later on, this method was used by Farkas et al. for the synthesis of 7-hydroxy-3', 4'-dimethoxy isoflavone, Ψ -baptigenin and formononetin and by McMurry et al. for the synthesis of afromosin (7-hydroxy-6, 4'-dimethoxy isoflavone).

Kawase et al. reported the formation of 3-formyl deoxybenzoins instead of isoflavones by this method. They used a mixture of zinc cyanide and aluminium chloride whereas Farkas et al. used only zinc cyanide.

Very recently Grover, Jain and Seshadri showed that in presence of zinc cyanide the methylene reactivity is adequate as compared -with that of the resorcylic nucleus for undergoing condensation to yield isoflavones as reported by Farkas et al. On the other hand a mixture of zinc cyanide and aluminium chloride (anhydrous) increases the nuclear activity thus giving the 3-formyl deoxybenzoin as found by Kavrase et al. This method of isoflavone synthesis works fairly satisfactorily with deoxy-benzoin derived from resorcinol or hydroxyquinol, whereas phloroglucinol derivatives undergo only nuclear formylation under all conditions.

A very recent observation has been made by 88 Chakravarti et al. that 2, 4-dihydroxy deoxybenzoin when allowed to react with methylene iodide in presence of sodium ethoxide solution affords 7-hydroxy isoflavanone which undergoes smooth oxidation with selenium dioxide to yield the corresponding isoflavone (LXIII; R = OH, R' = Ph). However, the general applicability of this method has yet to be examined.

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Impacts Of Gst On Retail Textile Business- A Case Study Of Shops In Calicut City

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Abstract

Goods and Services tax (GST) constitutes the last mile of a long journey of reforms of indirect taxes in India. GST will replace a number of central and state taxes. The important taxes that may be subsumed in GST are central excise and service tax at the central level and State VAT/sales tax, central sales tax, and entry tax at the state level along with a number of additional or special duties and cesses and surcharges. The final design of the GST and the related constitutional amendment are yet to be finalized. However, the impact of GST on the textile sector will be quite significant. GST will fundamentally change the way the textile sector is presently taxed in India. The Goods and Services Tax was launched on 1 July 2017 and was relevant throughout India which textiles and cloth industry is connected to the total growth of the Indian and the world economy. The study is about the impact of GST on retail textile sector. By the GST some textiles are satisfied and some are dissatisfied. The study based on both primary and secondary data. The study has been focused on GST affected in textiles. As well as the study also reveals the demographic and analytical features on the same topic.

Key Words: GST. CGST.SGST.IGST.UTGST. VAT. Tax. Retail

1. Introduction

India is the hub of taxes where people pay many taxes which Create confusion for them. Presently we pay two types of taxes i.e. Direct and Indirect in various sectors. Direct Tax paid directly to the government by the Taxpayer i.e. Income Tax, Wealth Tax, and Corporation Tax. Indirect Tax is a Tax levied on goods and services rather than on income or profits. It is not directly paid to government but collected from intermediaries (such as retail Stores) from the person who bears the ultimate economic burden of the tax (such as consumers). The intermediary later files a tax return and forwards the Tax proceeds to government with the return for example Sales Tax, VAT, Excise Duty, and Custom Duty and so on.

The implementation of Goods and Services Tax [GST] in India was a Historical move, as it marked a significant indirect tax reform in the country the Amalgamation of a large number of taxes (levied at a central and stock level) into a single tax is expected to have big advantages. The goods and services tax was launched at midnight on 1 July 2017 By the former president of India Pranab Mukharjee and prime minister of India Narendra Modi. The launch was marked by a historical midnight [30 June _1July] session of both the house of parliament convened at the Central Hall of The parliament. The goods and services tax [GST] is a vast concept that simplifies the giant tax structure by supporting and enhancing

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the economic Growth of the country. On bringing GST into practice, there would be Amalgamation of Central and State taxes into a single tax payment. It would Also enhance the position of India in both, domestic as well as international Market .At the consumer level, GST would reduce the overall tax burden, Which his currently estimated at 25-30%.

Statement Of The Problem

GST is a popular issue that is being discussed by people day to day. GST is deemed as one of the steps in making India as a country which has a high income tax system, comprehensive, efficient, transparent and business friendly. This research is entitled as “A Study on the Impact of Goods and Services Tax on retail Textile Sector in CALICUT CITY ” has made an attempt to identify and examine the impact of GST after the implementation. The present study will also give insight into the concept of GST and to know the impact on the implementation of GST. The problem of the study is Impacts of GST on retail textile business in CALICUT CITY

Objectives Of The Study

1. To enquire the impact of GST on retail textile sector.
2. To know the satisfaction level and opinion of owners of textiles for the implementation of GST
3. To know retailers awareness on GST.
4. To know the customer responses on GST.
5. To study about the concept of GST.

Scope Of The Study

The study helps to know about the Goods and services tax and to know its impact on retail textile business. The study on the impact of GST is most useful to know the concept of GST. That will help to know the impact of GST on retail textile business .It would analyze the satisfaction level and opinion of retailers after the implementation of GST and also help to find out the responses of consumer.

Research Methodology

The study is designed on a descriptive cum analytical study conducted in Calicut city based on both secondary and primary data. The retailers of textiles were selected as per random route sampling method. The data were collected through structured Questionnaire method.

Source Of Secondary Data

Secondary data are collected from;

- Published books
- Magazines
- Journals
- Articles
- Websites

Source Of Primary Data

The study is mainly based on primary data; the primary data for this study is collected from 50 textile retailers in Calicut through structured Questionnaire.

Sample Design And Sample Size

Primary data has been collected from different textile retailers from Calicut city. Random route sampling is used for selecting retailers. Data were collected from the respondents personally and the schedule explained in detail about the objectives of the survey.

Hypothesis

Ho= There is significant difference in satisfaction level among different type of textiles

H₁= There is no significant difference in satisfaction level among different type of textiles

Tools Used For Data Analysis

The following tools have been used to analyze and interpret the data.

- ANOVA
- Weighted Average
- Ranking
- Karl Pearson's Correlation Coefficient
- Percentage analysis

Limitations Of The Study

1. The study conducted on limited area only.
2. The reliability of the study depends on the accuracy of information revealed by respondent
3. At the time of data collection some customers are not provide accurate data
4. Cost for conducting the study is higher
5. Time was not sufficient for conducting an extensive study

2. Review Of Literature

Extensive literature survey is an integral part of every research work. Review of literature is necessary for the exact understanding of the topic under study. As the present topic is related to impact of GST after implementation, GST is the crucial form of Indirect Taxation which is said to be the indirect taxation reform ever since our Independence. The GST is said to bring about the economic integration said by our Union Finance Minister Arun Jaitley during the Budget speech at 2016. The Goods and Service Tax is levied on the manufacture, sale and consumption of the goods and services. Through the implementation of GST, all other taxes like Value Added Tax, Sales Tax will be removed and a uniform tax system on goods and services will be followed.

Dr. R. Vasanthagopal (2011) studied, "GST in India: A Big Leap in the Indirect Taxation System" and concluded that switching to flawless GST from current complicated indirect tax system in India will be a positive step in booming Indian economy. Success of GST will lead to its acceptance by more than 140 countries in world and a new preferred form of indirect tax system in Asia pacific region.

Nitin Kumar (2014) studied, "Goods and Service Tax- A Way Forward" and concluded that implementation of GST in India help in removing economic distortion by current indirect tax system and expected to encourage unbiased tax structure which is indifferent to geographical locations.

Pinki, Supriya Kamma and Richa Verma (July 2014) studied, "Goods and Service Tax- Panacea For Indirect Tax System in India" and concluded that the new NDA government in India is positive towards implementation of GST and it is beneficial for central government, state government and as well as for consumers in long run if its implementation is backed by strong IT infrastructure.

Akansha Khurana and Aastha Sharma(2016) studied, "Goods and services tax in India- A Positive reform for indirect test system" conclude from GST will provide relief to producer and consumer by providing wide and comprehensive coverage of input tax credit set –off, service tax set-off and subsuming the several taxes.

Kumar (2014) studied, "Goods and Service Tax - A way forward" and concluded that after implementation of GST in India many indirect tax system will be finished and there will be only one tax i.e. GST which is expected to encourage unbiased tax structure.

Shrawat and Dhanda (2015) studied, "GST in India: A Key Tax Reform" and concluded that due to dissilent environment of India economy, it is demand of time to implement GST. **Anushuya and Narwal** (2014) studied, "Application of CGE Models In GST" and concluded that both GST & CGE are very popular all over the world but GST is a powerful concept in the field of indirect taxes.

Chaurasia et al. (2016) Studied, "Role of Goods and Services Tax in the growth of Indian economy" and concluded that in overall GST will be helpful for the development of Indian economy and this will also help in improving the Gross Domestic Products of the country more than two percent.

Benedict, (2011) The author studies the law provisions dealing with financial services under the Australian GST law with the intention to verify whether the provisions have been construed correctly in light of the original purpose of the legislation and how the concerns identified may be rectified.

Bovenberg, (1992) The author uses a general equilibrium model to assess different instruments of indirect taxation in middle income countries. The author has specifically studied Thailand and concluded giving various methods to increase the effectiveness of indirect taxes.

Cnossen, (1992) VAT is operative in a number of countries and primarily in countries where federal government is not in existence. The author has studied the various VAT systems existing in the world and tried to arrive at an appropriate VAT for Central and East Europe countries. The author has laid down various requirements to ensure that the said VAT is completely effective like it should be destination based, the input credit mechanism should be seamless, the law should be easy to understand, cost of conformity should be low etc.

Emmanuel, (2013) The author has examined the link between VAT, the increase in VAT rates and the economic growth and tax revenue in Nigeria. For this study the author has set out 2 Null hypothesis which are post the research accepted. The author concludes that given the strong relation between the above, the Government and authorities should actively educate the public on the benefits of VAT so that they accept changes in VAT rates more easily.

Halakhandi, (2007) GST was supposed to be introduced in India way back in 2010. It has been getting postponed due to various reasons major one being getting to a consensus between the various states and the centre for compensation. The author in the paper has discussed the existing laws in India for indirect taxes, the VAT laws in various states with their advantages and disadvantages, the impact of the proposed GST, the compliances under the proposed GST etc. The author has also used various numerical examples to demonstrate how GST is cost effective.

Herekar, (2012) The Ministry of Finance had set up the Task Force with Mr. V. Kelkar as the chairman of the Task Force. The main task of the Task Force was to evaluate the impact of the proposed GST on the Indian economy. The author in the paper has studied the different parts of GST and their impact on the common man, the business and the economy. The author has concluded based on secondary data that if GST is introduced in India, it would have a positive impact on the overall economy.

Ilaboya, (2012) The authors have studied the relation between indirect tax and economic growth specifically in Nigeria and concluded that the relation is inverse and focus from indirect tax should be shifted in Nigeria. This is also because the study reveals that there is a direct relation between direct taxes and economic growth.

Stroe, (2011) the author has in the paper analyzed the various VAT systems existing and operative in various parts of the world. The author further states that VAT majorly impact the economies of every country specially developing countries, and hence is very important. The author then has compared the VAT tax system in USA and Europe and has concluded that VAT as a tax is a burden for the economy. The author further based on this study tries to create an ideal model of indirect taxes which could be adopted by countries.

2.1 Theoretical Frame Work

Tax.

The legal definition and the economical definition of taxes differ in that economists do not regard many transfers to governments as taxes. For example, some transfers to the public sector are comparable to prices. Examples include tuition at public universities and fees for utilities provided by local governments. Governments also obtain resources by "creating" money and coins (for example, by printing bills and by minting coins), through voluntary gifts (for example, contributions to public universities and museums), by imposing penalties (such as traffic fines), by borrowing, and by confiscating wealth. From the view of economists, a tax is a non-penal, yet compulsory transfer of resources from the private to the public sector levied on a basis of predetermined criteria and without reference to specific benefit received.

GST- Goods And Services Tax

Goods and Services Tax (GST) is an indirect tax levied in India on the sale of goods and services. Goods and services are divided into five tax slabs for collection of tax - 0%, 5%, 12%, 18% and 28%. Petroleum products and alcoholic drinks are taxed separately by the individual state governments. There is a special rate of 0.25% on rough precious and semi-precious stones and 3% on gold. In addition a cess of 22% or other rates on top of 28% GST applies on few items like aerated drinks, luxury cars and tobacco products. The tax came into effect from July 1, 2017 through the implementation of One Hundred and First Amendment of the Constitution of India by the Modi government. The tax replaced existing multiple cascading taxes levied by the central and state governments. The tax rates, rules and regulations are governed by the Goods and Services Tax Council which comprises finance ministers of centre and all the states. GST simplified a slew of indirect taxes with a unified tax and is therefore expected to dramatically reshape the country's 2 trillion dollar economy.

GST-Concept

GST is an indirect tax which will include almost all the indirect taxes of central government and states governments into a uniform or whole tax. As the name suggests it will be levied on both goods and services at all the stages of value addition. It has dual model including central goods and service tax (CGST) and states goods and service tax (SGST). CGST will subsume indirect taxes like central excise duty, central sales tax, service tax, special additional duty on customs; counter veiling duties whereas indirect taxes of state governments like State VAT, Purchase Tax, Luxury Tax, Octroi, Tax on lottery and gambling will be replaced by GST. Integrated goods and service tax (IGST) also called interstate goods and service tax is also a component of GST. It is not an additional tax but it is a system to examine the interstate transactions of goods and services and to further assure that the tax should be received by the importer state as GST is a destination based tax.

Main Features Of The GST Act

- ❖ All transactions and processes only through electronic mode – Non-intrusive administration

- ❖ PAN Based Registration
- ❖ Registration only if turnover more than Rs. 20 lakh
- ❖ Option of Voluntary Registration
- ❖ Deemed Registration in three working days
- ❖ Input Tax Credit available on taxes paid on all procurements (except few specified items)
- ❖ Credit available to recipient only if invoice is matched – Helps fight huge evasion of taxes
- ❖ Set of auto-populated Monthly returns and Annual Return
- ❖ Composition taxpayers to file Quarterly returns
- ❖ Automatic generation of returns
- ❖ GST Practitioners for assisting filing of returns
- ❖ GSTN and GST Suvidha Providers (GSPs) to provide technology based assistance
- ❖ Tax can be deposited by internet banking, NEFT / RTGS, Debit/ credit card and over the counter
- ❖ Refund to be granted within 60 days
- ❖ Provisional release of 90% refund to exporters within 7 days
- ❖ Interest payable if refund not sanctioned in time
- ❖ Refund to be directly credited to bank accounts
- ❖ Comprehensive transitional provisions for smooth transition of existing tax payers to GST regime
- ❖ Special procedures for job work
- ❖ System of GST Compliance Rating
- ❖ Anti-Profiteering provision

Benefits Of GST

- ❖ Reduction in Cascading of Taxes
- ❖ Overall Reduction in Prices
- ❖ Common National Market
- ❖ Benefits to Small Taxpayers
- ❖ Self-Regulating Tax System
- ❖ Non-Intrusive Electronic Tax System
- ❖ Simplified Tax Regime
- ❖ Reduction in Multiplicity of Taxes
- ❖ Consumption Based Tax
- ❖ Abolition of CST
- ❖ Exports to be Zero Rated
- ❖ Protection of Domestic Industry – IGST

Types Of GST In India

1. Central Goods & Services Tax (CGST)
2. State Goods & services Tax (SGST)
3. Integrated Goods & Services Tax (IGST)
4. Union Territory Goods & Services Tax (UTGST)

GST Impact On Textile Industry

Textile products are likely to become more expensive, with the government fixing a higher rate off them under the goods and services tax (GST), than the rates at which they are currently taxed. A section of industry is saying that differential treatment for cotton and synthetic fiber on GST rate is an opportunity lost for a uniform rate for textile sector.

GST LEVY ON TEXTILES

TABLE 2.1

SILK AND JUTE	0%
COTTON AND NATURAL FIBRE	5%
MANMADE FIBRE	18%
ALL CATOGORIES OF YARN	5%
MANMADE YARN	18%
FABRIC	5%
APPARELS PRICES ABOVE RS.1000	12%
APPARELS PRICED BELOW RS.1000	5%

Source: secondary data

3. Results And Discussion

TABLE 3.1: TYPE OF TEXTILES

TYPE	NO.OF RESPONDENTS	PERCENTAGE
Wedding Center	15	30%
Gents	18	36%
Ladies	13	26%
Kids	4	8%
Total	50	100%

Source: primary data

From the above table, there are 36 % Gents Shops in CALICUT CITY . And following 30% is Wedding Centers, 26% is Ladies Shops and the remaining 8 % is Kids Shops

TABLE 3.2: EXPERIENCE IN TEXTILE BUSINESS

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
Less Than 2 Years	9	18%
2 To 5 Years	15	30%
5 To 8 Years	13	26%
More Than 8 Years	13	26%
Total	50	100%

Source: primary data

According to the classification, the majority of textiles have 2 to 5 years of experience in textiles business and the least is less than 2 years experience.

TABLE 3.3: KNOWLEDGE ABOUT GST

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
Yes	50	100%
No	0	0%
Total	50	100%

Source: primary data

Table shows that the 100% of respondents knows about GST

TABLE 3.4: AWARENESS PROGRAMMES ON GST

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
Yes	20	40%
No	30	60%
Total	50	100%

Source: primary data

The table shows that most of the retailers didn't attend any awareness programs, seminars or workshops on GST

TABLE 3.5: RETAILER'S OPINION ABOUT IMPLEMENTATION OF GST IN TEXTILES

OPINION	NO.OF RESPONDENTS	PERCENTAGE
Excellent	0	0%
Good	15	30%
Average	22	44%
Poor	13	26%
Total	50	100%

Source: primary data

The study shows most of the retailers are saying that GST is an average (44%) and no one claim GST as a excellent tax structure

TABLE 3.6: RETAILER'S OPINION ABOUT GST EFFECT ON SELLING PRICE

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
Very well	13	26%
Well	15	30%
Affected	22	44%
Not Affected	0	0%
Total	50	100%

Source: primary data

Table shows 44%, respondents says GST has affected the selling prices of commodities they provide. And there is no opinion that "GST has not affected the selling prices"

TABLE 3.7: TABLE SHOWING, HOW AFFECTED ON SELLING PRICE

SELLING PRICE	NO.OF RESPONDENTS	PERCENTAGE
Highly increase	9	18%
Increase	30	60%
Decrease	11	22%
Highly decrease	0	0%
Total	50	100%

Source: primary data

Table showing, 60% of respondents say selling price is affected by implementation of GST. Others say that there is a high increase in selling prices (18%), decrease in selling price (22%).

TABLE 3.8: GST EFFECT ON SALES VOLUME

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
Very well	20	40%
Well	22	44%
Affected	8	16%
Not Affected	0	0%
Total	50	100%

Source: primary data

The study shows that 44% of respondents have changes in sales volume after implementing the GST. And 40% of them affected very well and 16% of them claim there is a change in sales volume due to GST

TABLE 3.9: TABLE SHOWING, HOW GST AFFECTED ON SALES VOLUME

SALES VOLUME	NO.OF RESPONDENTS	PERCENTAGE
Highly increase	0	0%
Increase	0	0%
Decrease	33	66%
Highly decrease	17	34%
Total	50	100%

Source: primary data

The study reveals that there is decrease in sales volume due to GST. 66% of them say there is decrease and remaining 34% of them say that there is a high decrease in sales volume

TABLE 3.10: CUSTOMER RESPONSES ABOUT GST

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
Supportive	0	0%
Non-Supportive	24	48%
Neutral	11	22%
No-Reaction	15	30%
Total	50	100%

Source: primary data

Study shows that customers have reluctance on implementation of GST. 48% customers are not supporting the GST. 22% customers were neutral about implementation of GST and 30% of customers' shows no reaction on GST implementation.

TABLE 3.11: SATISFACTION LEVEL OF RETAILERS

PARTICULARS	NO.OF RESPONDENTS	PERCENTAGE
Satisfied	15	30%
Dissatisfied	35	70%
Total	50	100%

Source: primary data

Table showing the satisfaction level of GST, 70% says they are dissatisfied about the GST and remaining were satisfied (30%) about GST

TABLE 3.12: RETAILER'S REASONS FOR SATISFACION

FACTORS	RANK GIVEN BY RESPONDENTS						SCORE	WEIGHTED AVERAGE	RANK
	1	2	3	4	5	6			
Avoid double Taxation	1	1	2	0	2	1	25	3.57	3
Reduce Complexity In Calculation	0	3	0	3	0	1	24	3.42	4
Reduce Tax Burden	3	0	2	0	1	1	20	2.85	5
Eliminate Cascading Effects	2	0	2	0	2	1	24	3.42	4
Input Tax Credit System	0	2	0	4	0	1	26	3.71	2
Transparency And Corruption Free	1	1	1	0	2	2	28	4	1

Source: primary data

The table shows that the reason for retailer's satisfaction is towards GST. Retailers are highly satisfied with the feature; GST is a transparent and corruption free tax system. But the retailers do not believe that GST would reduce their tax burden. Retailers shows high satisfaction towards Input Tax Credit System

TABLE 3.13: RETAILER'S REASON FOR DISSATISFACTION

FACTORS	RANK GIVEN BY RESPONDENTS						SCORE	WEIGHTED AVERAGE	RANK
	1	2	3	4	5	6			
Decrease sales volume	4	2	3	2	3	2	52	3.25	3
Increases tax liability	2	3	3	5	3	0	52	3.25	3
Difficult to adopt	2	1	5	3	2	3	59	3.69	2
Increased sales price	2	7	1	1	2	3	51	3.18	4
Increased operating cost	5	3	0	4	3	1	48	3	5
Works full on internet	1	0	4	1	3	7	74	4.62	1

Source: primary data

The table shows that the reason for retailer's dissatisfaction is towards GST, Retailers is dissatisfied about GST because, GST is a completely internet oriented and small retailers cannot afford such cost. The retailers believe that GST as a new tax structure is difficult to adopt. Retailers are dissatisfied about increased tax liability and decreased sales volume.

TABLE 3.14: RETAILER'S SATISFACTION LEVEL

(HS-HIGHLY SATISFIED, S-SATISFIED, N-NEUTRAL, DS-DISSATISFIED, HDS-HIGHLY DISSATISFIED)

FACTORS	HS (5)	S (4)	N (3)	DS (2)	HD S (1)	SCORE	WEIGHTED AVERAGE	RANK
Tax Rate	1	3	2	14	3	54	7.71	4
Tax Implement Style	0	4	2	5	12	44	6.28	5
Tax Implemented Time	0	2	1	5	15	36	5.14	6
Input Tax Credit System	2	13	6	2	0	84	12.01	2
Registration Method	15	4	0	3	1	98	14.02	1
Threshold Limit For Registration	3	12	4	2	2	83	11.87	3
Number Of Filing	8	6	3	4	2	83	11.87	3

Source: primary data

The study shows that most of the retailers are satisfied with the registration method and input tax credit system and they are less satisfied about the GST implemented time and style. The study show that retailers are not satisfied about tax rate imposed on textiles

TABLE 3.15: RETAILER’S OPINIONS ON GST (HA-HIGHLY AGREE, A-AGREE, N-NEUTRAL, DA-DISAGREE, HD-HIGHLY DISAGREE)

FACTORS	HA (5)	A (4)	N (3)	DA (2)	HD A (1)	SCORE	WEIGHTED AVERAGE	RANK
GST reduced complexity of tax calculation	0	7	2	6	8	54	7.71	6
GST increased sales volume	0	2	3	13	5	48	6.85	7
GST gave an new opportunity	2	7	6	6	2	74	10.58	4
GST increased the price	7	11	0	4	1	88	12.58	1
GST makes confusion	5	10	3	3	2	82	11.72	2
GST increase the tax liability	3	6	4	7	3	68	9.72	5
GST helps to find out unlicensed firms	8	5	3	5	2	81	11.57	3

Source: primary data

The above table shows the opinions of retail textiles businessmen about various statements about GST. Retailers say that GST increased the prices of cloths and say that GST makes confusion. Retailers claim that GST increased the complexity in tax calculation and reduced the sales volume.

Relationship Between Selling Price And The Changes In Customer Responses

Relationship between changes in selling prices and changes in customer responses can be tested by using Karl Pearson’s Coefficient Of Correlation

TABLE 3.16: SELLING PRICE AND CUSTOMER RESPONSES

SELLING PRICE CHANGES	NO.OF RESPONDENTS	CUSTOMER RESPONSES	NO.OF RESPONDENTS
VERY WELL	13	SUPPORTIVE	0
WELL	15	NON SUPPORTIVE	24
AFFECTED	22	NEUTRAL	11
NOT AFFECTED	0	NO REACTION	15
TOTAL	50	TOTAL	50

Source: primary data

$$r = \frac{n \sum xy - (\sum x \sum y)}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

TABLE 3.17: CORRELATION TABLE

X	Y	XY	X ²	Y ²
13	0	0	169	0
15	24	360	225	576
22	11	242	484	121
0	15	0	0	225
ΣX=50	ΣY=50	ΣXY=602	ΣX²=878	ΣY²=922

Correlation coefficient(r) = (-0.0828)

Interpretation

Since the correlation coefficient is (-0.0828), there is low negative correlation between changes in selling prices and responses from customers towards GST. It implies that as the selling prices increases, the customers' show reluctance towards GST implantation.

Analysis Of Satisfaction Level About Goods And Service Tax In Different Type Of Textiles

ONE WAY ANNOVA is conducted to check the significant difference;

Hypothesis

H₀= There is significant difference in satisfaction level among different type of textiles

H₁= There is no significant difference in satisfaction level among different type of textiles

TABLE 3.18: SATISFACTION LEVEL ABOUT GST AND DIFFERENT TYPE OF TEXTILES

SATISFACTION FACTORS	TYPE OF TEXTILES				TOTAL
	WEDDING CENTER	GENTS	LADIES	KIDS	
Tax Rate	3	2.62	2.66	2	10.28
Tax Implement Style	1.85	2.37	1.66	2	7.88
Tax Implemented Time	1.85	2.87	1.50	2.50	8.72
Input Tax Credit System	2.28	3.38	2.66	1.50	9.82
Registration Method	2	2.75	1.50	2.50	8.72
Threshold Limit For Registration	2.57	3.25	2.66	1	9.48
Number Of Filing	1.85	1.75	2.66	2.50	8.26
Total	15.4	18.99	14.8	14	63.1

Source: primary data

ANOVA Table

TABLE 3.20

Sources of variation	Sum of squares	Degree of freedom	Mean squares
Between samples	SSC= 2.39	K-1= 3	MSC= 0.796
Within samples	SSE= 3.20	N-K= 24	MSE= 0.133
Total	SST= 5.59	N-1= 27	

$$F = \frac{MSC}{MSE} \quad F = \frac{0.796}{0.133}$$

Calculated value = 5.98

The **TABLE VALUE** of F at 5% level of significance for (3, 24) degrees of freedom is **3.01**. The calculated value of F is more than the table value of F. Therefore null hypothesis is rejected.

Interpretation

Since calculated value (5.98) is greater than Table value (3.01), null hypothesis (Ho) is rejected and alternative hypothesis is (H1) is accepted. It implies that, satisfaction level about GST according to different type of textiles have no significant relationship between them.

5 .Findings And Suggestions

The major findings are;

- The study finds that 100% respondents know the concept of GST.
- The 26% respondent opinion about GST is poor, 44% says average, 0% says excellent.
- The study shows there is no difference in satisfaction level about GST according to the type of textiles.
- The study shows that there are an inverse negative relationship between selling prices and customer responses. As the prices increases, the customers don't support the implementation of GST.
- The study reveals 26% respondents says GST affected very well the selling price and 44% says GST affected the selling price and no respondents said that GST not affected the selling price.
- The study reveals that there is increase in selling prices due to GST than the expected decrease in prices.
- According to the study, the GST affected the sales volume and there is a decrease in sales volume.
- According to the study, the consumer response on GST is not supportive as the new tax policy increased the prices of commodities.
- The study reveals most of the retailers are not satisfied with implementation of GST (70%).
- Study reveals that the satisfied retailers believe that the GST would bring transparency and corruption free environment.
- According to the study the reason for dissatisfaction on GST is majorly happens due to internet based tax system, small retailers cannot afford the operating cost.
- The study shows, GST registration method is ranked first among various factors of satisfaction. Followed by input tax credit system in second rank, threshold limit for registration and no. of filing are ranked as third place.
- The study reveals that most of the respondents didn't attend any awareness programme, seminar, workshop on GST.
- According to my research wedding center 30%. Ladies 26%, Gents 34%, the kids shops are lower than those 3 types of shops that is 8 % only.
- 74% of textiles are located at town and 26% is located at village.
- According to this study majority of textiles have experience in retail textile business (between 2 to 5 year) and retailers with more than 8 years of experience is 26%.

Suggestions

Suggestions are as follow;

- Provide literacy and awareness about the GST.
- Reduce the tax rate.

- Make proper implementation of GST in textiles
- Provide literacy training to the accountant of textiles about GST.
- Clear the customers doubt about the new tax policy.
- Always mention the customers' needs.
- Follow the rules of the government for the payment of tax.

Conclusion

The introduction of GST has resulted in removal of concessions/exemptions for the textile industry which saw outrages and protests by various associations and players in the textile industry. Considering the intent of GST and peculiar manner of operation of textile industry, it may take slightly longer for textile industry to offset the initial hiccups of GST and grow at a competitive pace. The study focus on the "impact of GST on retail textile sector in CALICUT CITY ". The study has been conducted at CALICUT CITY to identify the impacts of GST on retail textile business. The study was conducted with a sample of 50 respondents. The detailed analysis is done and interpretations are made. The study shows the GST caused an increase in sales price and decrease in sales volume. By the GST 30% textiles are satisfied and 70% are dissatisfied. The customers are not supporting the implementation of GST, as it is increased the sales prices.

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Role of Government in Social and Financial Inclusion

Manoj Kumar*

Abstract

Social and financial inclusion is the delivery of financial services at affordable costs to the economically weaker and the lower-income segments of society. Prime Minister Jan Dhan Yojana schemes that strives to end financial untouchability and MUDRA Bank is provide microfinance to entrepreneurs in rural hinterland of India. A new Scheme 'Swachhta Udyami Yojana' on 2nd October, 2014 for financing viable community toilet projects and sanitation related vehicles to collect garbage. Presently, every district in the nation is mandated to have one ITI each for rudimentary skill development like plumbing, electricity, hardware. National University for Dalit Studies (N.U.D.S) – Centre of Excellence can be established for undertaking studies on different dimensions of empowerment.

Keywords

Social inclusion , financial inclusion ,different yojana of govt , development programme of govt.

Financial Inclusion

Financial inclusion is where individuals and businesses have access to useful and affordable financial products and services that meet their needs that are delivered in a responsible and sustainable way. Financial inclusion is defined as the availability and equality of opportunities to access financial services. Those that promote financial inclusion argue that financial services can be viewed as having significant positive externalities when more people and firms participate. One of its aims is to get the unbanked and underbanked to have better access to financial services. The availability of financial services that meet the specific needs of users without discrimination is a key objective of financial inclusion. For example, In the United States this condition represents a third of the Hispanic community born in America and half the foreign Hispanic community living in the United States remain unbanked. For this example, giving financial services is key in order to growth as a society.

Social Inclusion

Social inclusion is the process of improving the terms on which individuals and groups take part in society—improving the ability, opportunity, and dignity of those disadvantaged on the basis of their identity. social inclusion is defined as the process of improving the terms of participation in society for people who are disadvantaged on the basis of age, sex, disability, race, ethnicity, origin, religion, or economic or other status, through enhanced opportunities, access to resources, voice and respect for rights. Thus, social inclusion is both a process and a goal. In the present report, it is contended that promoting social inclusion requires tackling social exclusion by removing barriers to people's participation in society, as well as by taking active inclusionary steps to facilitate such participation. As a political response to the exclusion challenge, social inclusion is thus a more deliberate process of encompassing and welcoming all persons and embracing greater equality.

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Role of government in financial inclusion and social inclusion:-

- Prime Minister Jan Dhan Yojana. This is a very significant scheme that strives to end Financial Untouchability by ensuring that the economically weaker sections have access to bank accounts.
- Expansion of Social Security Net. This has been achieved through Pradhan Mantri Suraksha Bima Yojana (Accident Insurance), Atal Pension Yojana (Unorganized Sector) and Pradhan Mantri Jeevan Jyoti Yojana (Life Insurance), which provide social and economic security to the marginalised sections of the society.
- Institutional Support for Subaltern Entrepreneurship. This has been achieved through MUDRA Bank, to provide microfinance to entrepreneurs in rural hinterland of India.
- Venture Capital Fund for Scheduled Caste Entrepreneurs'. The objective of this Scheme is to promote entrepreneurship among the Scheduled Castes and to provide concessional finance to them. The scheme would be implemented by the Industrial Finance Corporation of India (IFCI) Limited for which Rs. 200 crores has been allotted.
- Credit Enhancement Guarantee Scheme for the Scheduled Castes: The objective of the Scheme is to promote entrepreneurship amongst the scheduled castes and to facilitate concessional finances to them. A budget of Rs. 200 crores has been allocated to IFCI Limited to facilitate the scheme.
- Swachhta Udyami Yojana: As an integral part of 'Swachh Bharat Abhiyan' launched by the Prime Minister on 2nd October, 2014, the National Safai Karamcharis Finance & Development Corporation(NSFDC) has launched a new Scheme 'Swachhta Udyami Yojana' on 2nd October, 2014 for financing viable community toilet projects and sanitation related vehicles to collect garbage.
- Green Business Scheme: The scheme has been Started by NSFDC, with the aim of promoting green businesses to support sustainable livelihoods of Scheduled Castes and Safai Karamcharis. Financial assistance would be provided for those economic activities that could address the challenges of climate change, e.g., E-rickshaw, solar pumps and other instruments working on solar energy etc.
- Sanitary Mart Scheme. Launched in 2014-15, under the scheme, loans are provided to up to Rs. 15 Lakhs to Safai Karamcharis for construction of toilets/bio-degradable toilets.

These schemes clearly highlight that the present government is committed to the cause of upliftment of Dalits and other disadvantaged sections of the population. As outlined, various

landmark initiatives have been initiated under the present regime to eliminate poverty and empower the weaker sections of the society. In addition to this, there are several specific pointers which the GoI could keep in mind while formulating policies towards achieving holistic empowerment of the socially, politically and economically weaker sections of the society in the days to come. Some of them are:

- Democratizing Skill Development. Opening of Industrial Training Institutions (ITI) at block level. Presently, every district in the nation is mandated to have one ITI each for rudimentary skill development like plumbing, electricity, hardware etc.
- Credit Accessibility for ITI trained workforce for encouraging start-ups.
- Market Accessibility for the first generation of ITI trained entrepreneurs by ensuring backward and forward linkages.
- Bharatiya Dalit Bank on the lines of Bharatiya Mahila Bank can be created to ensure hassle-free access to financial services. Funds from Scheduled Caste Sub-Plan can be annually earmarked for the functioning of BDB.
- National University for Dalit Studies (N.U.D.S) – Centre of Excellence can be established for undertaking studies on different dimensions of empowerment.
- National Legislation to prevent the illegal diversion of funds from the Scheduled Caste Sub-Plan like the one in Andhra Pradesh.

Conclusion:-

In conclusion we can say that financial inclusion or inclusive financing is the delivery of financial services at affordable costs to the economically weaker and the lower-income segments of society. True to this, GoI has taken several initiatives on the social sector front, all of which are potentially game-changers in the realm of social sector policy canvas.

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Role of Information and communication technology in management

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Abstract:- ICT is a broad subject and the concepts are evolving. It covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers, digital television, email, or robots). By automating business processes and giving employees ICT tools, your business can improve its individual and overall productivity. ICT solutions can help your organization reduce costs, increase revenue and improve profitability. Using videoconferencing to host meetings between members in different locations, for example, reduces travel costs.

Keywords:- ict , management , relationship of ict with management , benefits of ict in management.

Information and communications technology (ICT) is an extensional term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage, and audiovisual systems, that enable users to access, store, transmit, and manipulate information.

The term *ICT* is also used to refer to the convergence of audiovisual and telephone networks with computer networks through a single cabling or link system. There are large economic incentives (huge cost savings due to the elimination of the telephone network) to merge the telephone network with the computer network system using a single unified system of cabling, signal distribution, and management. ICT is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and network hardware, satellite systems and so on, as well as the various services and appliance with them such as video conferencing and distance learning

ICT is a broad subject and the concepts are evolving. It covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers, digital television, email, or robots). For clarity, Zuppo provided an ICT hierarchy where all levels of the hierarchy "contain some degree of commonality in that they are related to technologies that facilitate the transfer of information and various types of electronically mediated communications". Theoretical differences between interpersonal-communication technologies and mass-communication technologies have been identified by the philosopher Piyush Mathur. Skills Framework for the Information Age is one of many models for describing and managing competencies for ICT professionals for the 21st century.

ICT definition

ICT refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication medium.

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Relationship of ICT with management Better Decision-Making

ICT systems allow your business to store, process, analyze and share vast amounts of data. The information available from corporate data enables managers and employees to make decisions quickly and accurately so that they can manage operations effectively and respond rapidly to business opportunities or threats. Communication networks also enable decision-makers in different locations to work together easily when they need to take joint decisions.

Increased Manufacturing Productivity

By automating business processes and giving employees ICT tools, your business can improve its individual and overall productivity. On the production line, for example, solutions such as computer-aided design can help to reduce set-up times and improve manufacturing accuracy so that employees spend less time on reworking. Access to manufacturing data enables managers to plan production more effectively, making better use of resources and reducing lead times

Improved Customer Service

Quality of customer service is an important differentiator for businesses. Your company can use ICT solutions to offer faster response to and higher standards of service to its customers. If you run a call center, for example, your agents can access databases that provide comprehensive customer information, including purchase history and product preferences. The information helps them deal quickly and efficiently with inquiries, boosting customer satisfaction. Service personnel working in the field can access customer, service and product databases using smartphones with secure Internet connections. This enables them to fix problems quickly and effectively, again boosting customer satisfaction.

Greater and Virtual Collaboration

Communication networks enable your project teams to collaborate effectively. By using videoconferencing or web conferencing over the Internet, teams can hold virtual meetings that bring together members from different locations, or different organizations, such as suppliers or business partners. This helps to create stronger project teams and enables the teams to maintain progress on important projects, rather than waiting for members to meet in a single location. In a product development program, for example, teams can reduce overall project time and get new products to market faster, giving the company a strong competitive advantage.

Improved Financial Performance

ICT solutions can help your organization reduce costs, increase revenue and improve profitability. Using videoconferencing to host meetings between members in different locations, for example, reduces travel costs. Production data can help staff identify quality problems, reducing waste and reworking costs. Call center agents can use information available on their customer databases to increase revenue by identifying opportunities for selling additional products or services. Cost reductions and revenue gains make an important contribution to overall profitability.

For many companies, email is the principal means of communication between employees, suppliers and customers. Email was one of the early drivers of the Internet, providing a simple and inexpensive means to communicate. Over the years, a number of other communications tools have also evolved, allowing staff to communicate using live chat systems, online meeting tools and video-conferencing systems. Voice over internet protocol (VOIP) telephones and smart-phones offer even more high-tech ways for employees to communicate.

Inventory Management Systems

When it comes to managing inventory, organizations need to maintain enough stock to meet demand without investing in more than they require. Inventory management systems track the quantity of each item a company maintains, triggering an order of additional stock when the quantities fall below a pre-determined amount. These systems are best used when the inventory management system is connected to the point-of-sale (POS) system. The POS system ensures that each time an item is sold, one of that item is removed from the inventory count, creating a closed information loop between all departments.

Technology has important effects on business operations. No matter the size of your enterprise, technology has both tangible and intangible benefits that will help you make money and produce the results your customers demand. Technological infrastructure affects the culture, efficiency and relationships of a business. It also affects the security of confidential information and trade advantages.

COMMUNICATION WITH CUSTOMERS

First and foremost, technology affects a firm's ability to communicate with customers. In today's busy business environment, it is necessary for employees to interact with clients quickly and clearly. Websites allow customers to find answers to their questions after hours. Fast shipment options allow businesses to move products over a large geographic area. When customers use technology to interact with a business, the business benefits because better communication creates a stronger public image.

EFFICIENCY OF OPERATIONS

Technology also helps a business understand its cash flow needs and preserve precious resources such as time and physical space. Warehouse inventory technologies let business owners understand how best to manage the storage costs of holding a product. With proper technology in place, executives can save time and money by holding meetings over the Internet instead of at corporate headquarters.

BUSINESS CULTURE AND CLASS RELATIONS

Technology creates a team dynamic within a business because employees at different locations have better interactions. If factory managers can communicate with shipment coordinators at a different location, tensions and distrust are less likely to evolve. Cliques

and social tensions can become a nightmare for a business; technology often helps workers put their different backgrounds aside.

SECURITY

Most businesses of the modern era are subject to security threats and vandalism. Technology can be used to protect financial data, confidential executive decisions and other proprietary information that leads to competitive advantages. Simply put, technology helps businesses keep their ideas away from their competition. By having computers with passwords, a business can ensure none of its forthcoming projects will be copied by the competition.

RESEARCH CAPACITY

A business that has the technological capacity to research new opportunities will stay a step ahead of its competition. For a business to survive, it must grow and acquire new opportunities. The Internet allows a business to virtually travel into new markets without the cost of an executive jet or the risks of creating a factory abroad

Technology Is Necessary in Business

Over the years, technology has caused an explosion in commerce and trade. Because of technology, many traditional business models and concepts were revolutionized. Technology gave us the opportunity to see things from a new perspective, and to approach what we were already doing from a new perspective. Technology also gave us greater efficiency for conducting business

Advantages of ICT in management

Communication – with help of information technologies the instant messaging, emails, voice and video calls becomes quicker, cheaper and much efficient.

Globalization and cultural gap – by implementing information systems we can bring down the linguistic, geographical and some cultural boundaries. Sharing the information, knowledge, communication and relationships between different countries, languages and cultures becomes much easier.

Availability – information systems has made it possible for businesses to be open 24×7 all over the globe. This means that a business can be open anytime anywhere, making purchases from different countries easier and more convenient. It also means that you can have your goods delivered right to your doorstep with having to move a single muscle.

Creation of new types of jobs – one of the best advantages of information systems is the creation of new and interesting jobs. Computer programmers, Systems analyzers, Hardware and Software developers and Web designers are just some of the many new employment opportunities created with the help of IT.

Cost effectiveness and productivity – the IS application promotes more efficient operation of the company and also improves the supply of information to decision-makers; applying such systems can also play an important role in helping companies to put greater emphasis on information technology in order to gain a competitive advantage. IS has a positive impact on productivity, however there are some frustrations can be faced by systems users which are directly linked to lack of training and poor systems performance because of system spread

Conclusion:- In conclusion we can say that Over the years, technology has caused an explosion in management. Because of technology, many traditional business models and concepts were revolutionized. Technology gave us the opportunity to see things from a new perspective, and to approach what we were already doing from a new perspective. Technology also gave us greater efficiency for conducting business.

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Monjin: An Innovative Technological Start-up for Recruitment in Digital Era

Dr Meena Sharma*

Abstract

Monjin happens to be first of its kind 'An Innovative Digital Interviewing and Assessment Platform'. Monjin is world's first vetted professionals' as well as interviewers' video network. Monjin facilitates students to upload their video one-way interviews to Monjin's Portal. Corporate can screen the candidates' videos, interview them through the portal & so forth. Interview discussion can be auto scheduled, virtual events can be hold. Rejection and selection can be analysed or reneged. Process shortens the hiring time extensively.

As against traditional (status quo) recruitments, Monjin proposition enables Neutral Expert Assessment, reduces dependence on agencies/ vendors. Monjin provides granular search on assessment parameters for talent search through quick access. Monjin has on its portal 'indexing feature' for video interviews for which Monjin is awaiting patent registration. Monjin carries out virtual technical and functional interviews with credentials, has interviewers' network, has indexed and tagged videos with meta data, has cloud based scalable platform with enhance security and access control, has analytics and reporting, digital encryption on video and so on. Monjin simultaneously does technical, behavioural and skills assessment of each candidate, optimises viewing time, provides question bank for each JD and maintains database of vetted interviews. Undoubtedly Monjin is world's first interviewers' network.

Key words: Innovation, technology, recruitment .

Purpose of Research

This Paper is a Case Study of a Technological Initiative started in Pune, India two years before by the Name "Monjin" that stands for "My Online Job Interview". Just in a short span of time Monjin has its presences in more than 4 countries: Malta, USA, UK and India with hundreds of hardcore technical personnel with Masters in Business Administration to make Monjin reach where it is today.

Purpose of this paper is to bring to the notice of researchers, candidates, corporate and business houses the New Innovative Recruitment Platform: "Monjin" through "International Conference IC-IPSCMC-2019 "

Objectives of Research Paper

- To make the researchers know of use of technology in recruitment and selection.
- To make the candidates know about an innovative platform that is available in India
- To make recruiters know that there is such platform available that provides ease in recruiting and saves numerous resources.

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Research Methodology

The Paper is entirely based on the discussion and interview with the Innovator of "Monjin": Mr Abhijit Kashyape. Most of the information from the viewpoint of presentation in the paper is taken from Monjin's website www.monjin.com

Full Paper

Monjin: An Innovative Technological Start-up for Recruitment in Digital Era

Monjin: An Innovative Digital Interviewing and Assessment Platform. Monjin happens to be World's first vetted professional's video network and World's first Interviewers network. Through this world's first vetted platform of interviewing candidates, corporate can view, see, decide and hire quality talent. Through this platform of Monjin, following are the possibilities:

- Meet candidate live and record the discussion
- Screen candidates using asynchronous videos
- Index, rate and tag videos
- View video discussions across web, mobile and other media devices
- Auto schedule the interview discussions
- Hold virtual weekend and weekday events
- See the industry experts in action
- Analyze rejection, selection, or renege
- Contain costs across hiring pyramid – campus, Lateral & Executive
- Shorten time to hire

Difference between Traditional and Monjin Proposition:

- Traditional (Status quo) recruitment platforms Resume is scanned by a system/ software or recruiter phone screens against which with Monjin Neutral Expert assessment available at a click of a button
- In Traditional (Status quo) recruitment platforms Channel mix is skewed towards agency recruiting against which Monjin reduces dependence on Agencies / Vendors
- Traditional (Status quo) recruitment platforms involve higher logistic costs and time for in-person interviews against which Monjin has videos recorded those can be reused. The videos have indexing feature for which Monjin has patent pending
- In Traditional (Status quo) recruitment platforms productive time loss of hiring Managers in discovery process is a major disadvantage against which Monjin has facilitated quick access to talent through granular search on assessment parameters

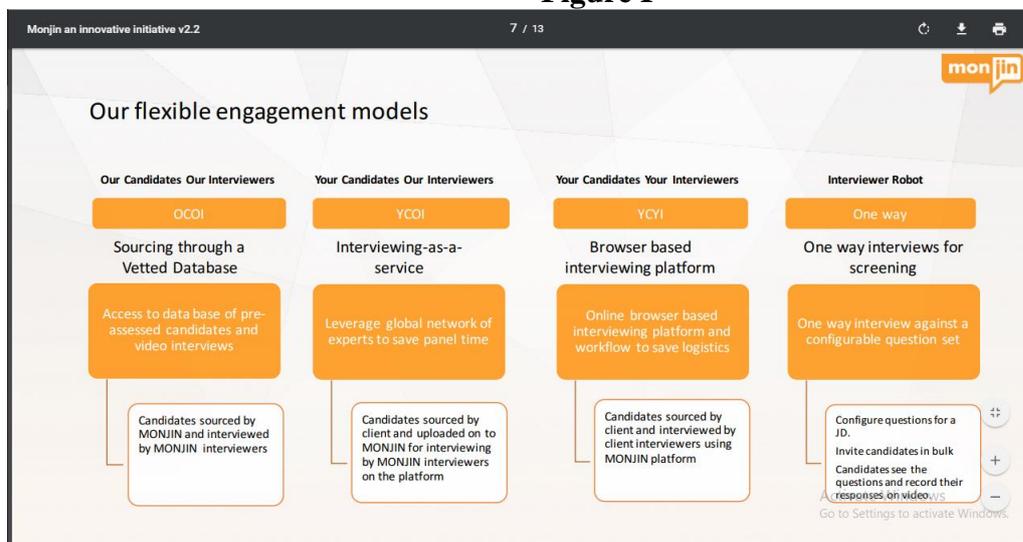
Monjin's Key Features:

- Monjin has recorded Virtual Technical, Functional Interviews with Interviewer credentials
- Monjin facilitates Recorded Live Interviews on demand, so also
- Background check of Candidates and Interviewers and Interviewers network /SME
- Evaluation and Flexible business models with interviewing services and Indexed is possible with Monjin
- Monjin has tagged videos with meta data
- Monjin has 'Monjin Recommends' feature
- Monjin can provide 2 way Interviewing with Interviewer network and
- Grooming for Candidates & Interviewers and Executive lounge
- Monjin has Cloud Based Scalable Platform with Enhanced Security and Access Controls

- Monjin facilitates Auto Scheduling of interviews
- Monjin provides rigorous Analytics and Reporting, Email Links , Share, Feedback Mechanism from clients
- Monjin provides Interviewer promotion, Bidding and Executive, Campus, Lateral specialized service, so also
- Digital Encryption on video and Pre-screened candidates
- Vetted candidates and Play/ Pause/ Skip Interviews and Take Opinions – 2nd , 3rd, 4th
- Monjin helps Invite independent reviewers and Multi-party interviews

Different Modes of Engagement available with Monjin:

Figure I



- I. OCOI: Our Candidates Our Interviews: Under this option, candidates can remain engaged with Monjin. This has sourcing through Vetted Database. Candidates are sourced by Monjin and interviewed by Monjin interviewers. Corporate can have access to the data base of pre-assessed candidates and through video interviews.
- II. YCOI: Your Candidates Our Interviews: Under this option, candidates can remain engaged with Monjin. This source provides interviewing as a service. In this option candidates are sourced by the client and uploaded onto Monjin's platform for interviewing by Monjin interviewers.
- III. YCYI: Your Candidates Your Interviews: Under this option, candidates can remain engaged with Monjin. This source has a browser based interviewing platform. This Online browser based interviewing platform and workflow saves logistics. In this option Candidates are sourced by client and interviewed by client interviewers using MONJIN platform.
- IV. Interviewer's Robot: Under this option, candidates can remain engaged with Monjin. This source has one way interviews for screening. Questions sets based on Job Descriptions are configured in this source. The candidates can be invited in bulk. Candidates can see the questions and record their responses on video.

Some UIs of Monjin

UIs of Monjin look as below (These UIs are just as examples; different engagement options have different UIs):

Figure II

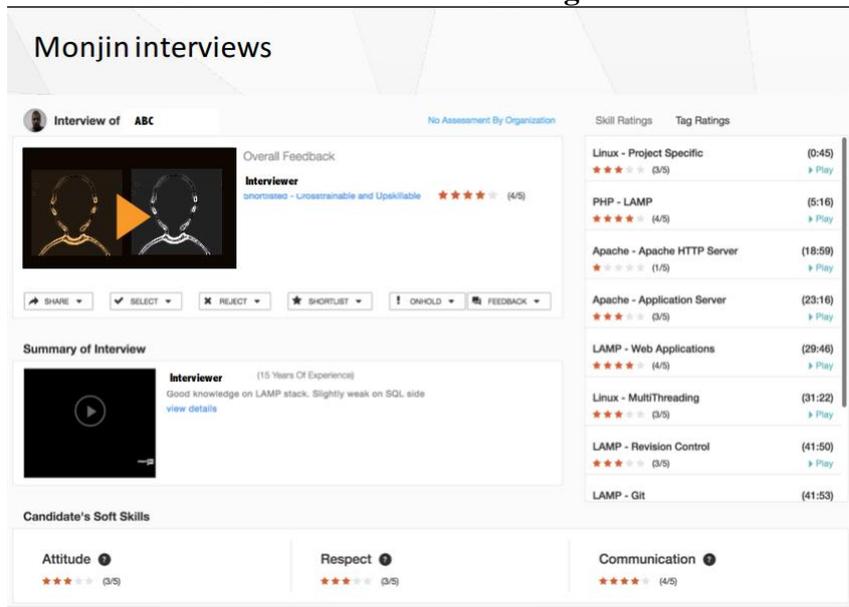
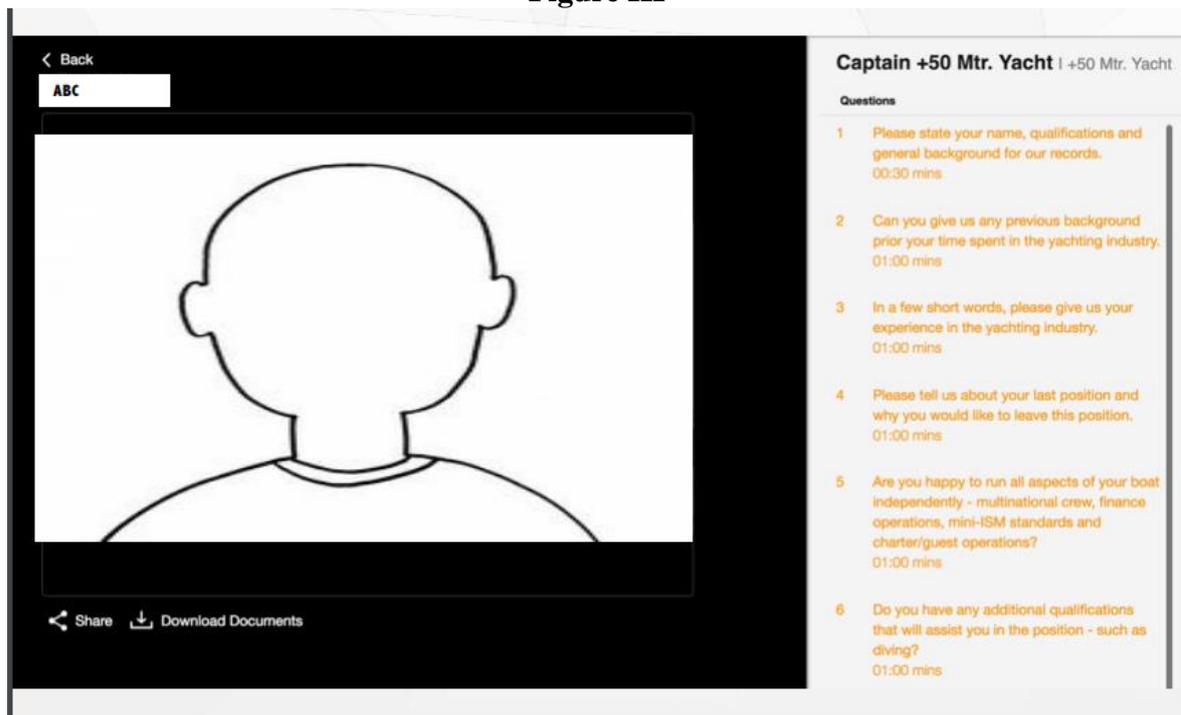


Figure III



Distinctiveness of Monjin

Following distinctions of Monjin makes it an unique Professional Platform:

- Monjin Platform is a Browser Based Two-way Video Platform
- Monjin Platform does the detailed technical and behavioral assessment of each candidate
- Videos are Indexed and tagged to optimize viewing time on Monjin Platform
- Monjin Platform provides 60 sec interview summary for quick overview of the candidate
- Monjin Platform provides skill/ sub skill level assessment
- Monjin Platform has Integrated Workflow to capture feedback and track approvals

- Monjin platform is an Asynchronous Video Interview platform
- Monjin gives randomized questions from question bank for each job description
- Monjin platform also bulk invites for each JD and then
- Candidates can
 - records videos as per convenience
 - view as per convenience, and
 - share within the organization and Integrated workflow
 - capture feedback and
 - track approvals

The list above is just illustrative. Monjin has many more reasons to be professional platform.

Advantages of Monjin for Corporate/ Recruiters

Using Monjin platform for Corporate/ Recruiters is advantageous in many ways. Following are the typical acquisition challenges for which Monjin has concrete proposition.

- Traditional acquisitions have following challenges:
 - High per hire costs due to vendor payouts, travel, and logistics costs
 - High employee turnover
 - Inconsistent talent acquisition processes across the business units/ locations/ functions
 - High hit ratios upwards of 10:1
 - Longer hiring cycles
 - Multiple hiring sources – vendors, internal recruitment team, walk-ins
- Against these traditional challenges, Monjin has following propositions:
 - Monjin platform can be integrated with corporate/ recruiters ATS/ HR systems for efficient talent acquisition process
 - Monjin skills taxonomy can be used and customized to suit the needs of corporate/ recruiters
 - Monjin platform can be used for One Way Interview for screening of field-force, junior resources and campus hires
 - Monjin platform can be used for Two Way Interview platform for lateral and experienced hires
 - Monjin platform can be used for interviewers as needed to supplement technical interviewers
 - Monjin platform can be Subscribed for Monjin database of vetted interviews to ease the sourcing process

Monjin value propositions listed above are illustrative and depend on the business needs and fitment of Monjin.

Benefits of using Monjin Platform (with some testimonials)

- **Reduced/ Shortened Time to Hire:** A large IT services firm was able to reduce time to hire from 12 weeks to 6 weeks by using Monjin's interviewing service (YCOI: Your Candidates Our Interviews) and subscription to the database (OCOI: Our Candidates Our Interviews).
- **Reduced Cost of Hire:** A large IT consulting firm was able to reduce average cost of hire from USD 1,200 to USD 700 by using Monjin's interviewing service (YCOI: Your Candidates Our Interviews) and subscription to the database (OCOI: Our Candidates Our Interviews).
- **Improved Candidate Experience:** A multi-national management consulting firm was able to significant improve candidate experience and reduce reneges by integrating Monjin

platform (YCYI: Your Candidates Your Interviews) with legacy systems, using Monjin auto scheduling system and creating seamless experience for candidate and interviewer alike.

- Monjin Platform can make it possible to have better utilization of internal recruitment team's time
- Increased focus on business can be possible with Monjin platform.
- Screening/ shortlisting of candidates can be done even offline during non-peak hours using Monjin platform
- Monjin ensures consistency in hiring decisions and
- Makes possible evidence retention (videos) for future decision making
- Monjin can reduce travel, logistics, administration and panel time costs
- Monjin can improved ability to conduct interviews on demand anywhere anytime

Some of the FAQs about Monjin:

- What is Monjin?
 - Monjin uses the secure Microsoft Azure Platform to record, manage, process and store the video interviews and related information.
 - Monjin is an end-to-end digital video platform with first-of-its kind capabilities to view, select, screen, assess and automate your talent-attraction and acquisition processes. Monjin provides pre-assessed database of candidates across skills, has a worldwide network of expert skill-interviewers for your assessment needs and enhances candidate screening process with the state-of-art Robotic interviews.
- What personal information is captured by Monjin?
 - Name, phone number, demographics, gender and email address
 - Depending on client configuration – skills, employment history
 - Video profile and video interview, which may include your bodily image and voice, as well as your surroundings
- Where these data are stored?
 - All of Monjin data is stored in European West cloud data centers of Microsoft Azure.
 - Monjin India team processes some of the Personal Information to support our client needs on a case to case basis.
- What does Monjin do to protect candidate's personal information?
 - Monjin uses secure cloud infrastructure platform of Microsoft Azure. Monjin itself is a ISO 27001: 2013 – information security certified company and Monjin only uses security certified companies to support in delivering services to our clients. Few specific controls that Monjin has implemented to protect candidate's Personal Information are:
 - Segregated client cloud instances reducing intrusion risks
 - Tenant data isolation
 - Encryption for sensitive data
 - Shared access signature
 - Row level security within the database
 - Role based access control
 - Microsoft Azure Active Directory
 - Continuous control monitoring (vulnerability assessment and penetration testing at each stage of SDLC)
- How does Monjin comply with privacy regulations?

- Governance and management -
 - Monjin has in place data transfer agreements, based on EU model clauses across its global entities that govern the data transfer, processing and control.
 - Monjin has appointed data privacy officer to oversee privacy framework, operations, compliance and monitoring.
 - Monjin's privacy policy is based on EU GDPR and other global regulations that govern Monjin's operations.
 - Further, Monjin has put in place a program to conduct risk assessment, identify and adhere to privacy requirements whenever it enters a new territory.
- Notice - Monjin displays adequate notices to users while accessing Monjin website and platform making them aware of what data is captured and where it is processed, how it is processed and what are the user's rights.
- Choice and consent - Monjin obtains explicit consent of users before capturing and processing their personal information. The people who avail services have options to leave the facilities provided by Monjin .
- Collection, use, retention and disposal - Monjin has adequate processes to ensure that Monjin only collects information relevant to Monjin and Monjin's client's business and use it only for that purpose. Monjin has appropriate data retention and disposal program in place.
- Access - The access to the user's personal information is restricted by role based access control on need to know basis. User has a portal access to modify, confirm and delete his profile information.
- Disclosure to third parties - User's personal information is disclosed only to those third parties that Monjin uses for processing of personal information and user is made aware of these third parties during the notice display.
- Security for privacy - Monjin is ISO27001 certified online establishment and has ample procedures and methods to prevent or detect data breach or misuse.
- Quality - Monjin always maintains current and accurate information of the users and every single user has an ability to access and modify his data as per his need.
- Monitoring and enforcement - Monjin data privacy officer continuously assesses the program effectiveness and on a periodic basis uses professional services organizations to assess compliance levels and takes corrective actions.
- Monjin can be reached out to Data Privacy Officer at privacy@monjin.com.

Few More UIs on www.monjin.com

Figure IV

The 'Mongenius' way of recognition

Platform which helps in interviews, evaluating people, appraising candidates and recruiting skilled candidates?

Connect with Monjin

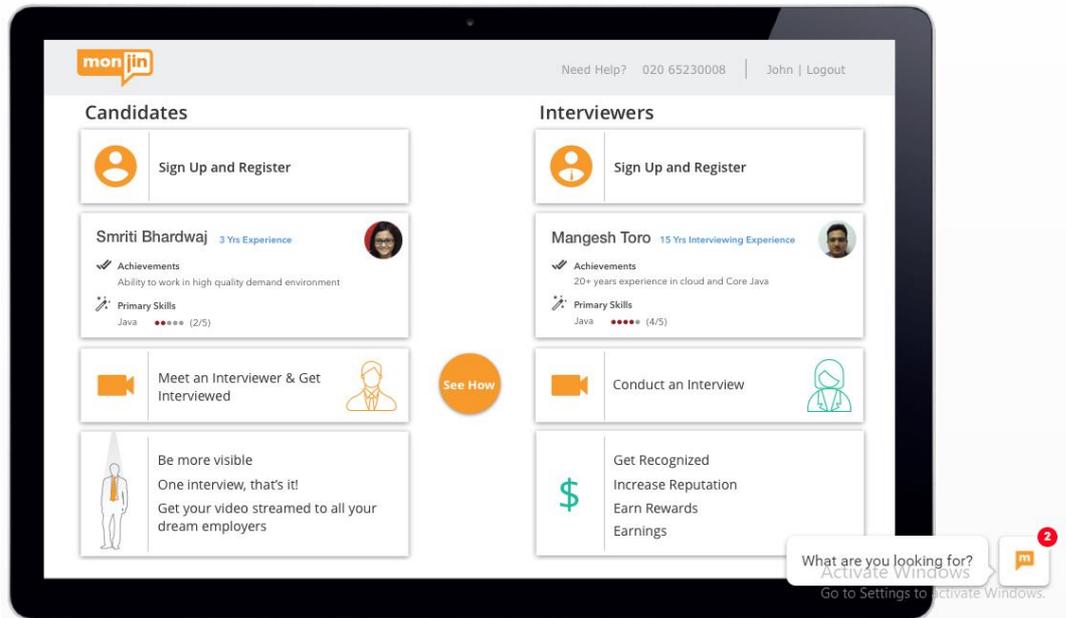


Figure V

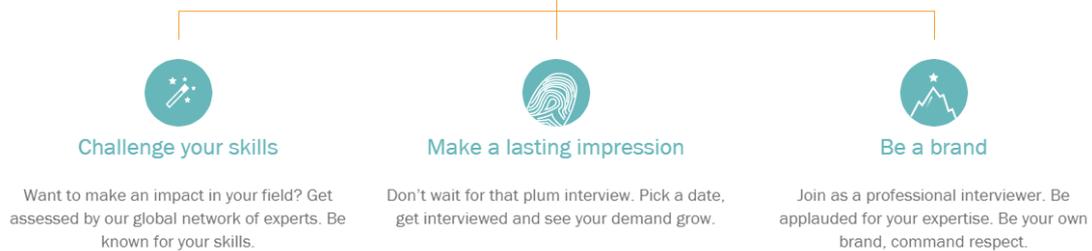


Figure VI

For Employers

Search for right candidate and assistance by trusted person
Hire right, don't fire fight.

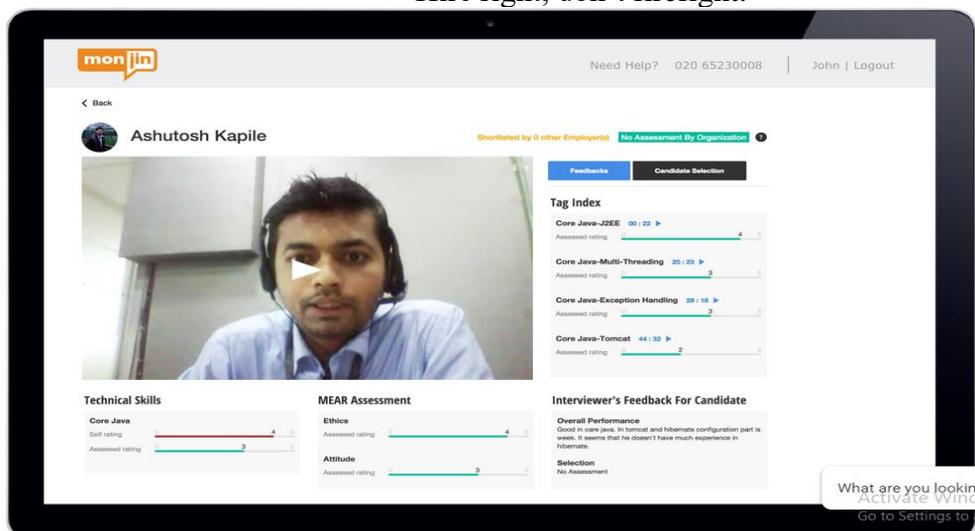
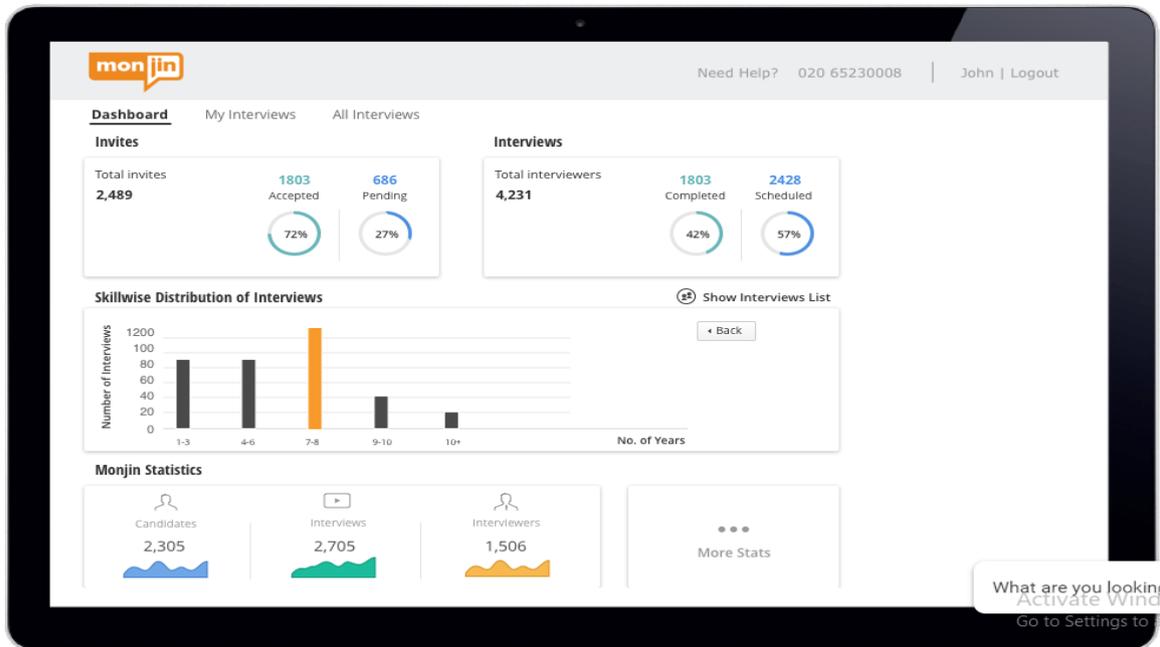


Figure VII



Concluding Remark

Monjin platform is an exclusive, one of its kinds uniquely thought over recruitment solutions which helps candidate to get exposed to recruiters across the globe. Corporate and Business Houses can save lot of money, resources, time through Monjin platform. Using technology, Monjin can prove to do wonders. For the details, Monjin's website www.monjin.com may be referred. Monjin has its Registered Office at Survey No. 286/1B/2, Pallod Farms 3, Baner, Pune 411045, India. It has branches in Malta, USA and UK, too.

Reference: www.monjin.com viewed on 29.12.2017 and from 19.02.2018 to 25.02.2018

RBI Vs. Central Government Of India

1. **Sonal Kumawat**- Scholar
2. **Priyanka**-Deputy Manager SBI Bank and scholar
3. **Neelam Kapoor**- Assistant Professor Delhi University
4. **CA Hemraj Kumawat**- Ex Assistant Professor at Shri Ram college of commerce Delhi and presently Finance officer at Govt of India Undertaking.
5. **Nishtha Rajoria**- Scholar

Abstract

In the monetary system of all countries, the central bank occupies a most important place. The Central Bank is an apex institution of the monetary system which regulates the functioning of the commercial banks of a country. The Central Bank of India is 'Reserve Bank of India'. The Central Bank of a country promotes economic growth and stability and controls inflation. RBI is an institution of national importance and the pillar of surging Indian economy. RBI is a member of IMF. Currently, the RBI regulates all payments and settlements in the economy.

In India, both the Government and the Central Bank, in their functioning, are guided by public interest and the requirements of the Indian economy. Both the Government and the Central Bank seeks to maintain financial stability in the country. The RBI is not statutorily independent, as the governor is appointed by the government. However, it has enjoyed broad autonomy in regulating the banking sector. The Reserve Bank, apart from it being a reasonable body, is answerable to the Central Government.

Historical Background of RBI

The concept of Reserve Bank of India was conceptually based on the strategies formulated by Dr. Ambedkar in his book named "The Problem of the Rupee – Its origin and its solution". This central banking institution was established based on the suggestions of "Royal Commission on Indian Currency & Finance" in 1926. This commission was also known as Hilton Young Commission. Under the Reserve Bank of India Act, 1934, the RBI was established on 1st April 1935. In 1949 the Reserve Bank of India was nationalized and is a member bank of the Asian Clearing Union. The Central Office of RBI was primarily established in Calcutta and then permanently moved to Mumbai in 1937.

Emblem and Logo of RBI was derived from East India Company Double Mohur. Emblem of Reserve Bank of India is a Panther and Palm tree. The logo of the Reserve Bank of India is fully owned by the Government of India.

Before inflation targeting was formally introduced in 2016, the RBI was doing multiple roles. They were responsible for growth by managing liquidity as well as interest rates. The RBI contributed in inflation management by adjusting liquidity and interest rates. The RBI also took care of the financial system's stability by supervising banks and NBFCs. The RBI borrowed money on behalf of the government to keep them functioning. A Nobel laureate Joseph Stiglitz made a statement that if RBI Governor was the governor of the US Fed then the sub-prime crisis would not have occurred.

Introduction

The RBI was established on April 1, 1935 in accordance with the provisions of the Reserve Bank of India Act, 1934. It was originally privately owned, but since nationalization in 1949, the Reserve Bank is fully owned by the Government of India. The RBI Act empowers the government to issue directions to the governor in public interest (Section 7 of the Act). RBI governor Urjit Patel's resignation makes it the second time since 1992 that a RBI governor did not serve out a full term. Shaktikanta Das is the 25th governor of the Reserve Bank of India from 11 December 2018. The public fight between the Reserve Bank of India and the government is the latest instance of an unprecedented crisis in key institutions of the country.

Research methodology: The present study is based on the secondary data collected from various newspapers, magazines, radio, T.V.etc.

Composition of RBI

The Reserve Bank of India is controlled by a central board of directors. The directors are appointed for a 4-year term by the Government of India in accordance with the Reserve Bank of India Act.

The Central Board consists of:

- Governor
- 4 Deputy Governors
- 2 Finance Ministry representatives
- 4 directors to represent local boards headquartered at Mumbai, Kolkata, Chennai and New Delhi
- The executive head of RBI is Governor.
- The Governor is accompanied by 4 deputy governors.
- The First Governor of RBI was Sir Osborne Smith and the First Indian Governor of RBI was CD Deshmukh.
- The First women deputy Governor of RBI was KJ Udeshi.
- The only Prime Minister who was the Governor of RBI was Manmohan Singh.

The RBI has four zonal offices at:

1. Chennai
2. Delhi
3. Kolkata
4. Mumbai

Further, it has 19 regional offices and 11 Sub-offices.

Major functions of RBI

The central bank issues and regulates currency notes. It keeps reserves with a view to secure monetary stability and is called banker to banks. The RBI plays a vital role in economic growth of the country and maintaining price stability.

1. **Monetary Policy:** The RBI has been tasked to have a monetary policy framework to meet the challenges of the economy and to maintain price stability. The core function of RBI is formulation and implementation of monetary policy with the objectives of maintaining price stability while keeping in mind the objective of growth and ensuring adequate flow of credit to productive sectors of the economy

2. **Regulation and supervision:** The RBI's regulatory and supervisory domain extends not only to the Indian banking system but also to the development financial institutions (DFIs), non-banking financial companies (NBFCs), primary dealers, credit information companies and selected segments of the financial markets. The RBI designs and implements the

regulatory policy framework with the aim of providing people access to the banking system, protecting depositor's interest, and maintaining the overall health of the financial system.

3. **Banker to Banks:** As Banker to Banks, the Reserve Bank focuses on:

- Enabling smooth, swift and seamless clearing and settlement of inter-bank obligations.
- Providing an efficient means of funds transfer for banks.
- Enabling banks to maintain their accounts with the Reserve Bank for statutory reserve requirements and maintenance of transaction balances.
- Acting as a lender of last resort.

4. **Banker to the government:** It performs various banking function such as to accept deposits, taxes and make payments on behalf of the government. It works as a representative of the government even at the international level.

5. **Foreign Exchange Reserve Management:** Foreign Exchange Management Act ("FEMA") envisages that RBI will have a key role in management of foreign exchange. The RBI focuses on maintaining market's confidence in monetary and exchange rate policies along with enhancing the Reserve Bank's intervention capacity to stabilize foreign exchange markets. The RBI aims at limiting external vulnerability by maintaining foreign currency liquidity.

Role of RBI in Economic Development

1. Development of banking system
2. Development of financial institutions
3. Development of backward areas
4. Economic stability
5. Economic growth
6. Proper interest rate structure

Role of RBI as banker and debt manager to Government

In 1935, Reserve Bank of India became the Banker and Debt Manager to the Government. As per the Reserve Bank of India Act 1934, the Central Government entrusts the Reserve Bank with all its money remittance, exchange and banking transactions in India and the management of its public debt. The Government also deposits its cash balances with the reserve bank. Central Government is required to maintain a minimum cash balance with the Reserve Bank. In case of state governments, the RBI works as their banker only when a particular state enters into such agreement with the RBI. Currently, the Reserve Bank acts as banker to all the State Governments in India, except Jammu & Kashmir and Sikkim.

The RBI used to handle banking of individual ministries in past. Currently, every ministry has been given a public sector bank to manage its operations. But still the RBI functions for the ministries for which it is nominated to do so. At present all the public sector banks and three private sector banks viz. ICICI Bank Ltd., HDFC Bank Ltd. and Axis Bank Ltd. act as RBI's agents. Only authorized branches of Agency banks can conduct Government Business in India.

The RBI works as Debt Manager of Government. The RBI helps both the central government and state governments to manage their public debt, float new loans, issue and retirement of rupee loans, interest payment on the loan and operational matters about debt certificates and their registration. The RBI's debt management policy aims at minimizing the cost of borrowing, reducing the roll-over risk, smoothening the maturity structure of debt, and improving depth and liquidity of Government securities markets by developing an active secondary market. However, whenever there is a temporary mismatch in the cash flow of

the receipts and payments of the State Governments, the RBI provides them Ways and Means Advances (WMA).

Relationship between the RBI and the Government

Government's Banker: The RBI acts as a banker agent and adviser to the government. It has an obligation to transact the banking business of Central Government as well as State Governments. Example, the RBI receives and makes all payments on behalf of the government, remits its funds, buys and sells foreign currencies for it and gives it advice on all the banking matters. The RBI helps the Government – both Central and state – to float new loans and manages public debt. On behalf of the central government, it sells treasury bills and thereby provides short-term finance.

Key appointments: Key appointments in the RBI consist of appointments Committee of the Cabinet headed by the Prime Minister .The Governor is appointed by appointments committee of the cabinet. The central bank is the primary arm of the government to ensure good monetary and regulatory policies for the welfare of the people of the country. As such, the central bank cannot be fully independent of the government, there has to be healthy, collaborative and mutually respectful relationship between the government and the central bank governor. The Central bank has to take into account the priorities of the government and the government has to recognize the dharma of the central bank.

Income Sources of RBI

The RBI was founded in 1934 and has been operating according to the Reserve Bank of India Act of 1934. Chapter 4, section 47 of the Act, titled “Allocation of Surplus funds” mandates for any profits made by the RBI from its operations to be sent to the Centre. Till 2014, a certain amount used to be allocated for the Contingency Reserve (CR) and the Asset Development Reserve (ADR).However, a committee chaired by YH Malegam in 2013-14 found the balances to be in excess of the required buffer. It recommended the RBI to discontinue the transfer of funds to the CR and the ADR. The majority of the income comes from the returns it earns on its foreign currency assets, which are either in the form of bonds and treasury bills of other Central Banks like Federal Reserve of USA. The Foreign Exchange Reserves are around \$ 400 billion and majority of them are in Foreign Currency Assets. The RBI also invests in top-rated securities across the World. It also earns money by lending to banks for very short tenures, such as overnight repo. It also claims a Management Commission on handling the borrowings of the State Governments and the Central Government. It also earns money through Open Market Operations, which it undertakes regularly to manage liquidity.

RBI's income and surplus growth cannot be measured in commercial terms

The RBI's income and surplus growth cannot be measured in commercial terms since a large part of it comes from statutory functions it has to perform as a regulator. The central bank is not like a corporate enterprise, nor can the government compare itself with a company shareholder. Though there is nothing wrong in a shareholder demanding an interim dividend pay-out, the fact is that the Centre is advancing a receipt from the next fiscal to bail itself out in the current one. If the RBI decide not to repeat this practice, the government's revenues will suffer because as much as Rs. 82,911 crore has been budgeted on this count for the next fiscal.

RBI-Government Tussle

The deputy governor of Reserve Bank of India in a public speech warned against government interference in Reserve Bank's working. The Ministry of Finance started consultation with

RBI governor on issues such as easing the PCA (Prompt Corrective Action) framework and providing more credit to small units. This is prior to issuing the directions to RBI under Section 7 of RBI Act of 1934, such directives under this section has never been issued in past since 1934. The fuse that lit this tension is said to be Section 7 of the Reserve Bank of India Act or RBI Act, which empowers the government to issue directions to the "lender of last resort.

Issues between RBI and Government

- 1) **Easing Norms of Prompt Corrective Action:** The PCA framework is applicable only to commercial banks. The government has asked the RBI to give exemption to power companies under the PCA framework. The government wants RBI to ease lending rules under the PCA, as it could help reduce pressure on MSME through credit availability. The RBI uses the PCA framework based on three parameters as an early-warning tool to check danger signs in the health of lenders. The RBI has said that such move will jeopardize all efforts of dealing with country's Non-Performing Asset (NPA) Crisis
- 2) **Fund Flow to NBFCs:** The government wants the RBI to help ease the liquidity squeeze that has been gripping non-banking finance companies (NBFCs), whose operations have been hit by the IL&FS crisis but the RBI is of the view that the cash crunch has already been eased.
- 3) **Section 7 of the RBI Act of 1934:** The government invoked the unused Section 7 of the RBI Act to open consultations with RBI on several issues of current importance. Experts are of the opinion that this would curb RBI's autonomy. Section 7(1) of the RBI Act says: "The Central Government may from time to time give such directions to the Bank as it may, after consultation with the Governor of the Bank, consider necessary in the public interest." Further, Section 7(2) gives the government powers to entrust the running of the RBI to its board of directors. The government which is a stakeholder in 21 public sector bank issues the direction to RBI, the regulator of banks.
- 4) **Dividends to the Government:** The RBI gives some of the profit it earns from interest on its bonds to the government but the government may want more "in public interest". According to the latest weekly data released by the RBI, the RBI holds Rs. 28,724 billion in reserves, which includes foreign currency assets, gold and sovereign debt receipts.
- 5) **Handling of weak public sector banks:** There are also apparent differences between the RBI and the Government over tight liquidity and setting up of an independent payments regulator. The Differences between the government and the RBI have cropped up over various issues, including the central bank's handling of weak public sector banks under the PCA framework and ways to resolve bad loans in the power sector.
- 6) **Easing loans to small and medium enterprises (SMES):** The government has sought for removal of some constraints on banks for loans to small and medium enterprises or SMEs. The government has asked the central bank, reportedly using the Section 7 of the RBI Act, to ease its hold on the reserves for providing liquidity to the market.
- 7) **Central bank's independence a western concept:** Matters took a political turn after the RSS-affiliated Swadeshi Jagran Manch's leader said that "the Reserve Bank of India governor should work in sync with the government or otherwise resign." He said, "This entire talk of central bank's independence is a Western concept. India is a developing country and our main priority is employment and growth of small-scale industries. The RBI should stand with government on these issues."

- 8) **Role of board:** The RBI management believes that monetary policy and financial sector regulation should be left to the experts. However, the government wants the decision making to be done by the Board as the RBI's top officials have been largely unresponsive to Centre's demands.
- 9) **RBI Surpluses:** The RBI is called the "lender of last resort" for a reason that it may need its reserves to step in if a crisis threatens to bring down the entire financial system. Every year the RBI earns interests from the domestic and foreign bonds it holds. This income is used in running the operation of the RBI and rest is accrued as surplus. Out of this surplus, the RBI holds some amount to itself as equity capital to maintain its creditworthiness and pays the rest to the government. In 2015 the RBI's risk analysis showed that its equity position of around Rs 10 lakh crore was adequate, the Bank decided to transfer its entire surplus to the government (around Rs 65,876 crore for 2015-16). The government is of the opinion that the RBI should pay more dividend reasons being that the building up of buffers such as the Contingency Fund and Asset Reserve by the RBI has been far in excess of what is required to maintain creditworthiness. The RBI, on the other hand, says that increasing the dividend payment to the government can prove to be inflationary as there will be more money in the market and may harm the RBI's major task of macroeconomic stability. The surplus is also meant to cover a situation where the rupee appreciates against one or more of the currencies or if there is a decline in the rupee value of gold.

Major Concerns

For RBI

1. **Autonomy:** If the autonomy of the RBI is jeopardized, it may have an adverse effect on the independent monetary policy and overall financial stability of the economy. Since, Centre is the spender and the RBI is the creator of money, and there should be a natural separation between the two, else there shall be an erosion of RBI's operational independence.
2. **Independence:** The Central Bank's ability to act without interference is essential for the confidence on Indian economy at international forum. Recently, Turkish President Erdogan allegedly tried to undermine the independence of Turkish Central Bank which consequently led to fall in value of Lira.

For Government

1. **Recapitalization:** In India, the government that owns a large number of banks is itself struggling to recapitalize
2. **Inability to meet fiscal targets:** The govt. is under fiscal strain to meet fiscal targets and to spend adequately on infrastructure and on social welfare schemes.

Autonomy of RBI

- In 2013, a financial sector monitoring body, called Financial Stability Development Council was established which was to be chaired by the Finance Minister.
- According to a paper published in the International Journal of Central Banking in 2014, the RBI was listed as the least independent among 89 central banks considered under the study.
- During the previous government, a Financial Sector Legislative Reforms Commission was formed which made various recommendations to cut down RBI's powers.

- After the adoption of inflation targeting in February 2015 and the formation of Monetary policy committee in October 2016, the RBI's rank improved among 89 central banks considered under the study.
- However, there are vacancies in RBI's board which raises questions about transparency of decisions taken. These vacancies are to be filled by the Government and the government is reluctant to fill them.
- The RBI Act 1934 does not empower RBI absolute autonomy. However, it does enjoy some independence when it performs its regulatory and monetary functions

The RBI Governor Urjit Patel

Urjit patel was 24th governor of the RBI and his term has been marked by landmark events. He took major tasks such as consensus building in monetary policy committee, tackling bad loans, maintaining rupee stability, etc. The resignation of Urjit Patel as the RBI governor raised questions on transparency in appointing, removing and resignations of financial sector regulator heads.

Conclusion

India is one of the fastest growing economies in the world, with a population over 1.2 Billion and behind the success of Indian economy, the RBI is one of the oldest institution. The RBI is the backbone of Indian economy due to which growth in Exports, foreign exchange, Capital Markets and other sectors of the economy are taking place. It plays an important role in strengthening, developing and diversifying the country's economic and financial structure.

The difference between the government and the RBI is neither unique nor new to the Indian economy. The government should appreciate the RBI's expertise and its ability of handling earlier crises while refraining from interfering in the policymaking. And the RBI should pursue greater transparency and implement a robust communication policies to restore government's confidence. The RBI have to manage issues like inflation, growth, rupee and financial system stability. As per International monetary fund (IMF), operational independence of central banks is important for carrying out their responsibilities. Therefore there should be mutual cooperation and coordination between the RBI and the Government in large at public interests for an efficient and sustainable economy. An appropriate and structured forum to strike a balance between unrestrained autonomy and a clear political intervention is the need of an hour. It is responsibility of the RBI to ensure that Indian financial system does not collapse.

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“A Study on Human Errors with reference to HFACS Model”

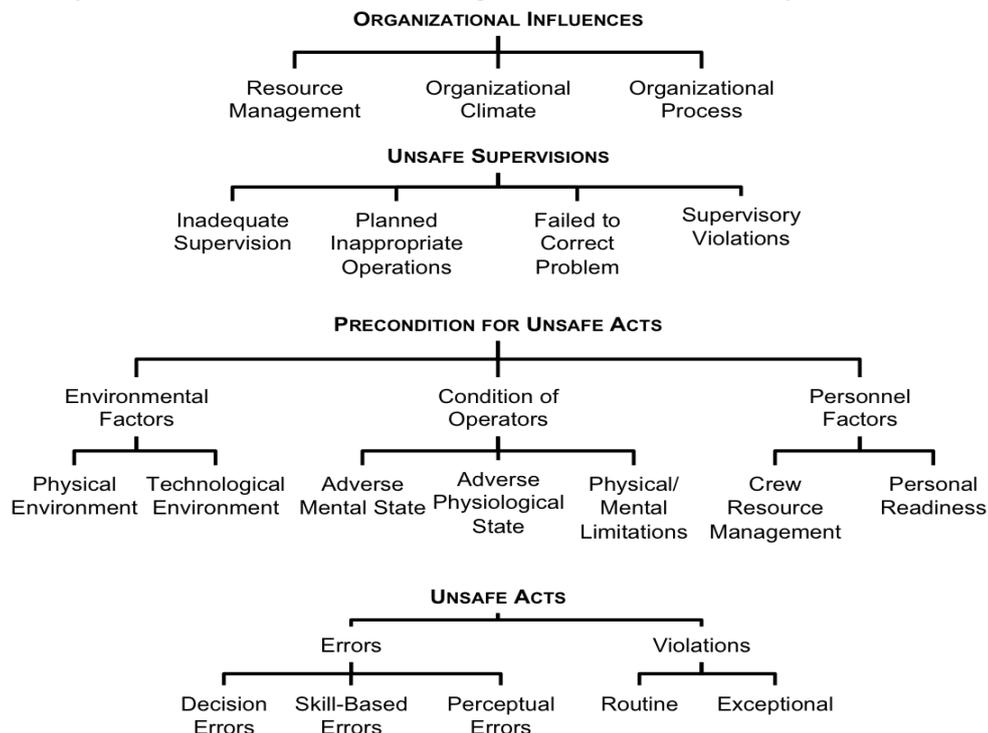
Dr. S Praveenkumar*

1. Introduction

Human error has been cited as a cause or contributing factor in disasters and accidents in industries as diverse as nuclear power, aviation space exploration, and medicine. It is also important to stress that "human error" mechanisms are the same as "human performance" mechanisms; performance later categorized as 'error' is done so in hindsight; therefore actions later termed "human error" are actually part of the ordinary spectrum of human behavior.

2. Model of Human Factors Analysis and Classification System(HFACS)

The **Human Factors Analysis and Classification System (HFACS)** identifies the human causes of an accident and provides a tool to assist in the investigation process and target training and prevention efforts. It was developed by Dr Scott Shappell and Dr Doug Wiegmann, of Civil Aviation Medical Institute and University of Illinois at Urbana-Campaign, USA, respectively, in response to a trend that showed some form of human error was a primary causal factor in 80% of all flight accidents in the Navy and Marine Corps



3. Research Methodology

A. Statement Of Problem

Apparels Pvt.Ltd is an apparel industry that manufactures the apparels and export them to many other countries like USA, Europe, Asia pacific division.

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It is always observed that Less defects will lead to high quality of products. Increased quality will lead to acceptance of product, as a result of which the profit and customer satisfaction level will increase. In case of more number of defects, they will lead to decreased quality of products. Decreased quality will lead to rejection of product, as a result of which the profit and customer satisfaction level will be decreased. One of the major factors contributing to number of defects is human errors.

In the competitive business environment the management has to identify & reduce the human errors. Therefore the study on Human errors in context to Human Factor Analysis and Classification system (HFACS) model is conducted at Apparels Pvt.Ltd

Objectives Of Study

1. To study the Human Factor Analysis and Classification system (HFACS) model of Human errors in connect to Apparels Pvt.Ltd.
2. To find out the factors leading to human errors.
3. To study the impact of human errors in Apparels Pvt.Ltd

Research Design

The type of research adopted is descriptive research. as this research includes survey and fact-finding enquiries to identify the various types of human errors at Apparel Pvt.Ltd. The major purpose of Descriptive research is description of the state of affairs, as it exists at present.

Sample Design

➤ **Population**

The Population for the study includes the entire employees working in textile industry across the world.

➤ **Sample Frame**

The sample frame for the purpose of study includes entire employees of Apparel Pvt Ltd

➤ **Sample Size**

Employees sample size: 65

Justification

Selection of 65 Employees:

The total number of employees in Apparels Pvt. Ltd(unit-2) is 650. Out of which 10% of employees are taken as samples for the study.

i.e., 10% of 650 = 65

➤ **Sample Method**

The sampling method for research is random sampling. The reason for selecting Random sampling is because a small sample constitutes and represents the large number of employees. As all of them cannot be taken to do the survey, out of all, a few employees are randomly taken and questionnaire is been filled by them.

F. Methods Of Data Collection

The data is collected through the following sources:

Primary data

Primary Data was collected regarding the human error from the company, the employees, and senior officials. And also primary data was collected through observation and discussions with departmental heads, employees, and also through structured questionnaires.

Secondary data:

The secondary data those which have been already been collected by someone else and which have already been passed through statistical process. In this study, the secondary data are collected through company journals, brochures, Reports etc.

G. Tools Used For Data Analysis

The collected data is Tabulated and analyzed by setting hypothesis and testing hypothesis.

Using a statistical tools like-

- Correlation
- Anova

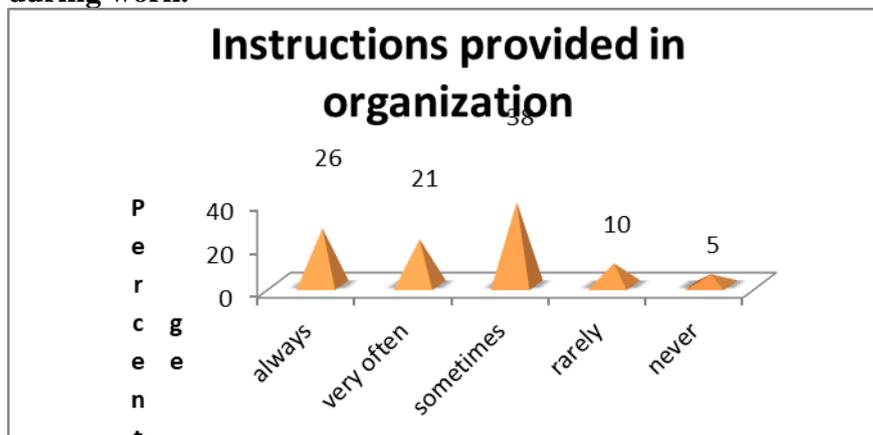
The calculation is done using MS Excel.

H. Limitations Of Study

- The study was confined to Apparels Pvt.Ltd.
- Findings of study are based on the assumption that respondents have disclosed correct information.
- Due to the size and time constraint and hectic work of employees, the survey was limited to 100 employees.
- The study is limited to company's policies, rules and regulations.
- The attitude of the worker changes from time to time. Hence the result of the project may be applicable only at present.
- We cannot get exact information because some of the employees are reluctant to share the information

4. Results & Discussions

a. Chart 01: Showing responses on level of instructions provided by organization during work.



From the above table, it can be interpreted that 26% of respondents always, likewise 21% of respondents felt that very often, 38% of respondents sometimes, 10% of respondents rarely, and 5% of respondents never agree that they provide the proper instructions in the organization. Therefore, from the above graph, it can be inferred that organization have to provide proper instruction during work

b. Table 01: Showing responses on number of errors commit/supervise per day.

Number of Errors	Number of respondents
Below 10	40
10 - 20 times	62
20 - 30 times	23
30 - 40 times	18
40 - 50 times	10

From the above table, it can be interpreted that 40 respondents are below 10, likewise 62 respondents 10-20, 23 respondents 20-30, 18 respondents 30-40 and 10 respondents 40-50 commit / supervise errors in a day. Therefore, from the above graph, it can be inferred that many number of errors they commit/supervise per day.

c. The following hypothesis is formulated to determine the objective: " **To identify the various types of human errors at Apparels Pvt.Ltd** "(objective 2 of the study)

Null Hypothesis (H₀): $\mu_1 = \mu_2$ (There is no significance difference in errors committed at all designations)

Alternative Hypothesis (H₁): $\mu_1 \neq \mu_2$ (There is a significance difference in errors committed at all designations)

Table 02 showing data for calculation of ANOVA using MS-Excel.

Buttoning Ironing Numbering Tailor Helper Cutting Staff Finishing

Organizational Influence	4	3	3	6	4	2	5	3
Unsafe Supervision	4	5	3	2	4	2	1	3
Precondition unsafe acts	2	1	1	2	3	2	1	2
Unsafe acts	4	2	4	6	5	1	2	2

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	18.875	7	2.696429	1.3769	0.259985	2.422629
Within Groups	47	24	1.958333			
Total	65.875	31				

The calculated value of F (1.3769) is lowest than the critical value of F (2.422629) indicating the hypothesis stating the variances same across the group can be accepted. However since P value(0.259985) is greater than 0.1 the result is statically not high significant. With elevated sample size significant value may be improved.

d. The following hypothesis is formulated to determine the objective: "**To find out the factors leading to human errors.**"(Objective 2 of the study)

Hypothesis statement: To test whether there is a significance association between supervisor gives inadequate instruction during the work and commitment of errors per day.

To test the above, following responses are considered:

x: Employee responses on the statement “the supervisor does not give during the works clear instructions ”.

y: Employee responses on the statement “Number of errors i commit/supervise per day”.

Table : Showing Calculation of Correlation.

	Inadequate Supervision	No of Errors
No of Errors	1	
Inadequate Supervision	0.92575007	1

Calculated Value of Karl Pearson’s coefficient of correlation by MS-Excel is: **0.92575007**. There is a fairly high degree of positive correlation between supervisor gives inadequate instruction during the work and commitment of errors per day. Therefore it can be concluded that if supervisor gives clear instructions during the work will lead to decrease in the number of errors.

Inference: The testing of hypothesis clearly shows that there is a positive relation existing between the supervisor gives inadequate instruction during the work and commitment of errors per day which shows errors occur due to inadequate supervision during the work.

e. To determine the objective: "To study the impact of human errors in Apparel Pvt.Ltd"(Objective 03 of study)

Graph 01 : Graph showing responses on commitment of errors.



From the above table it can be interpreted that 30% of respondents agree to error committed by reprocessing, likewise 39% of respondents by re-stitching, 27% of respondents by rejection, 45% of respondents by wastage and 23% of respondents by redesigning. From the above graph it can be inferred that the various reasons behind employees commitment of error.

Findings

- Most of the respondents consider that lot of technical errors are due to lot of procedures.
- Most of the employees feel bored so they tend to make lot of mistakes in their job.
- Some of the employees failed to concentrate on the job about half the time due to personal problems.
- Employees are mostly agree that they lack willingness to learn and work due to routine of job.

- All most all the respondents commit errors during wrong stitching.
- More number of employees commit error during wastage and re-stitching

Suggestions

- The company has to use automated machinery and IT solutions as they are key in such a scenario to be competitive and improve business results. 'Today the garment industry will not survive without the right technology'.
- Management has to hire experienced workers so as to reduce the human errors.
- Organization has to provide sufficient tools and equipments for doing the job.
- Employees should be properly trained to reduce the errors.
- Supervisors need to be serious towards the work and supervision.
- The organization has to provide the proper instructions during the work to reduce the errors.
- Advisors have to be properly trained, and their skills has to be up graded through imparting on the job training programmers.

7. Conclusion

Every organization in the apparel industry do face certain errors in their products. These errors though seems to be very small will result in large distractions. they are mainly caused due to lack of concentration, over working hours, age factors, every personal problems and negligence in work also causes the errors in the company. these are all most common problems and proper action and organized work will reduce these types of errors. So there must be always be a good communication between the managers and his teams, their problems have to be understood and sorted out in a proper manner. good machinery should be provided to employees which reduces technical errors. thus the Apparels Pvt.Ltd will result in error profits and success in the coming years.

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A Study On Organizational Effectiveness Through Employee Commitment

Dr. V. Vidya Chellam*

Introduction

Historically, organizational effectiveness has focused on how well organization compete, how quickly they bring products to market, their status in the community, their attractiveness to potential employees, and their profitability. In other words, organizational effectiveness considers how well an organization performs business.

Organizational Commitment

One of the job attitudes is organizational commitment. It is defined as a state in which an employee identifies with a particular organization and its goals. High job involvement means identifying with high organizational commitment to the employer organization.

Organizational commitment has an important place in the study of organizational behavior. This is in part due to the vast number of works that have found relationship between organizational commitment and attitudes and behaviors in the work place.

Bateman and Strasser state that the reasons for studying organizational commitment are related to:

- Employee behaviors and performance effectiveness,
- Attitudinal, affective, and cognitive constructs such as job satisfaction,
- Characteristics of the employees job and role, such as responsibility and
- Personal characteristics of the employee, such as age, job tenure.

Organizational commitment has been studied in the public, private, and non-private sector, and more recently internationally. Early research focused on defining the concept and current research continues to examine organizational commitment through two popular approaches, commitment related to attitude and commitment related behaviors.

Definition of Commitment

Bateman and Strasser states that organizational commitment has been operationally defined as “multidimensional in nature, involving an employee’s loyalty to the organization, willingness to exert effort on behalf of the organization”.

According to Buchanan (1974), most scholars define commitment as being a bond between an individual (the employee) and the organization (the employer), though his own definition of commitment.

Throughout the workplace employees must be given numerous opportunities to feel committed to the organization. Only then employees will have a good relationship with their immediate work group with higher levels of commitment.

So the organizational commitment should be studied in all sectors, public, private, and non-private both domestically and internationally.

Literature Review

The Early Era: The Side-Bet Approach according to Becker’s theory the relationship between an employee and the organization is founded on behaviors bounded by a “contract”

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of economic gains. Employees are committed to the organization because they have some hidden vested investments or side-bets. These side-bets are valued by the individual because of the accrual of certain costs that render disengagement difficult. In fact Becker's theory identifies organizational commitment as a major predictor of voluntary turnover. Even though the side-bet theory was abandoned as a leading proponent of organizational commitment concept, yet the influence of this approach is very evident in Meyer and Allen's Scale (1991), better acknowledged as continuance commitment.

The Middle Era: The Psychological Attachment Approach in the Middle Affective Dependence period brought a shift in the focus from tangible side-bets to psychological connection developed towards the organization. This school of thought attempted to describe commitment as a combination of attitude and interest in economic gains from associating with the company. Employee retention was attributed not only to economic gains, but more so to affective influence. Porter and his followers hence define commitment as "the relative strength of an individual's identification with and involvement in a particular organization" (Mowday, Steers and Porter 1979; p.226).

Organizational Commitment, therefore, comprises of three components, namely, Strong Acceptance, Participation and Loyalty. It was even proposed that commitment was sometimes a better alternative construct to predict turnover intentions as opposed to job satisfaction. It is characterized by a belief in and strong acceptance of the company's values, norms and goals, the willingness to exert substantial effort for the well being and prosperity of the organization, and a resilient aspiration to serve the organization with loyalty and commitment (Mowday et al., 1979). Porter et al. concept of organizational commitment is grounded on the basic assumption of Becker's theory, i.e., commitment and employee turnover are highly correlated. Based on Porter, Steers, Mowday and Boulian's approach to Organizational Commitment (OC), a tool in the form of an organizational commitment questionnaire was developed that captured not only the attitudinal notion of commitment, but also encapsulated the consequences of commitment. Due to the inherent limitations of the Organizational Commitment Questionnaire, Meyer and Allen (1984), O'Reilly and Chatman (1986) proposed the multi-dimension model.

Methodology Of The Study

Objectives

1. To identify the relationship between work environment and employee commitment at the organization.
2. To know the job commitment level of employees.
3. To suggest the strategies for improving employee commitment at selected garments manufacturing firms in Chennai

Statement of Hypothesis

1. To test whether there is a significant association between employee participation and organization culture.
2. To identify the relationship between work environment and employee commitment at the organization.
3. To know the job commitment level of employees.

Research design

The research design used for data collection was descriptive research. As data was collected through structured questionnaire. The data collection had specified sample size, and also it is limited only to select garments manufacturing firm in Chennai.

Sample Design

Population: The population for the purpose of the study includes 10% of employees at Bombay Rayon Fashions Limited.

Sample Size: The sample size is 160 respondents.

Justification: The total number of employees at select garment manufacturing firm in Chennai is 1600, including 1000 lower level working class and 600 higher level employees. As the employee commitment is counted for whole of the organization the sample size represents 10% from both the category which is 100 from lower level employees and 60 from higher level

I.e. $1000 * 10/100$

$600 * 10/100$

Sampling method: The reason for selecting random sampling is to constitute small sample that represents the large number of employees, as all of them cannot be taken to do survey. A few employees are randomly picked by clicking on the names which was been entered by the company in MS Excel format.

Data collection method: The data is collected through the following sources.

Primary data collection:

The primary data was collected from the respondents by administering structured questionnaire.

Secondary data collection:

Apart from primary data, the secondary data was being collected through text books, records of selected garment manufacturing firms in Chennai, journals from library, and internet used for the study,

Data Analysis:

The collected data is tabulated and analyzed by setting hypothesis and testing hypothesis using statistical tools like:

- ANNOVA
- Correlation analysis

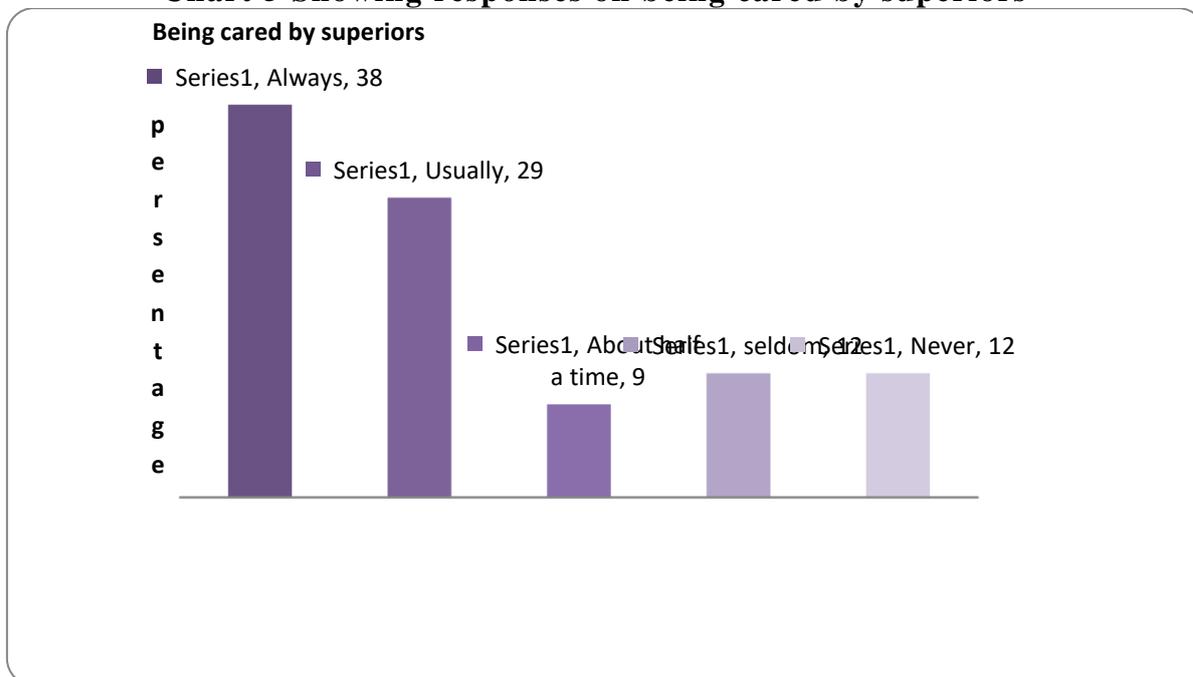
Results & Discussions

Table 3 Showing responses on work load at organization.

Particulars	Number of respondents	percentage of respondents
Almost average	80	50
To a considerable degree	45	29
Occasionally	20	12
Seldom	15	9
Total	160	100

Interpretation: From the above table it is interpreted that 50% of respondents feel the work load given to them is almost average, 29% as to a considerable degree, 12% occasionally and 9% as seldom.

Chart 5 Showing responses on being cared by superiors



Interpretation: From the above table we can interpret that 38% of them say always, 29% of them as usually, 9% as about half a time, 12% of them say as seldom and rest 12% as never.

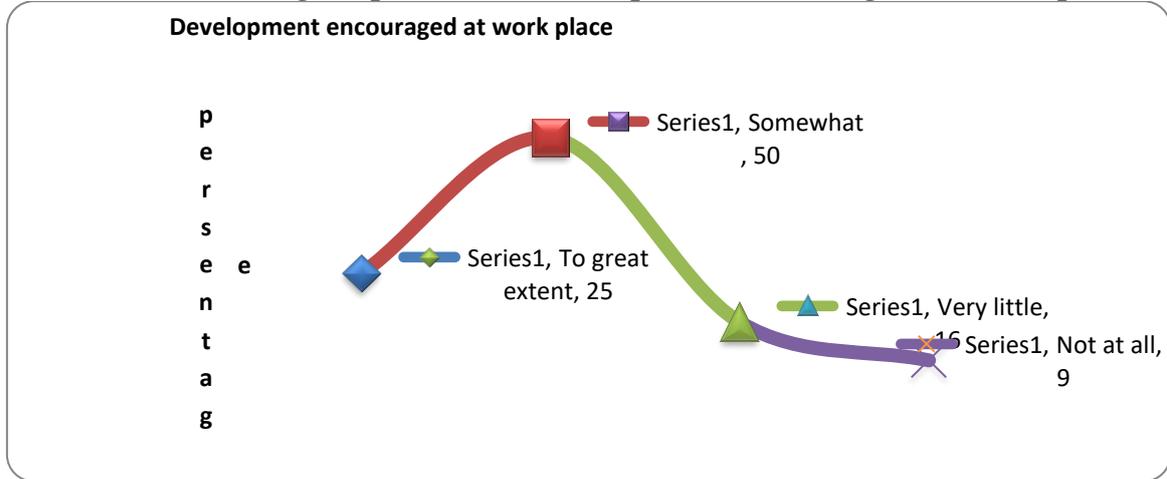
Table 6 Showing responses on companies offering safety measures

Particulars	Number of respondents	percentage of respondents
Often	60	38
Sometimes	45	29
Seldom	25	15
Never	30	18
Total	160	100

Interpretation: From above table we can interpret that 38% of respondents say often, 29% as sometimes, 15% as seldom and 18% of them as never.

Inference: Therefore we can infer that companies provide safety measures often at work place.

Chart 7 Showing responses on development encouraged at work place



Interpretation: From the above table we can interpret that 25% of them say they are encouraged at work place to some extent, 50% say somewhat, 16% as very little and 9% as not at all.

Inference: Therefore, the above graph infers that the employees are encouraged at work place somewhat only.

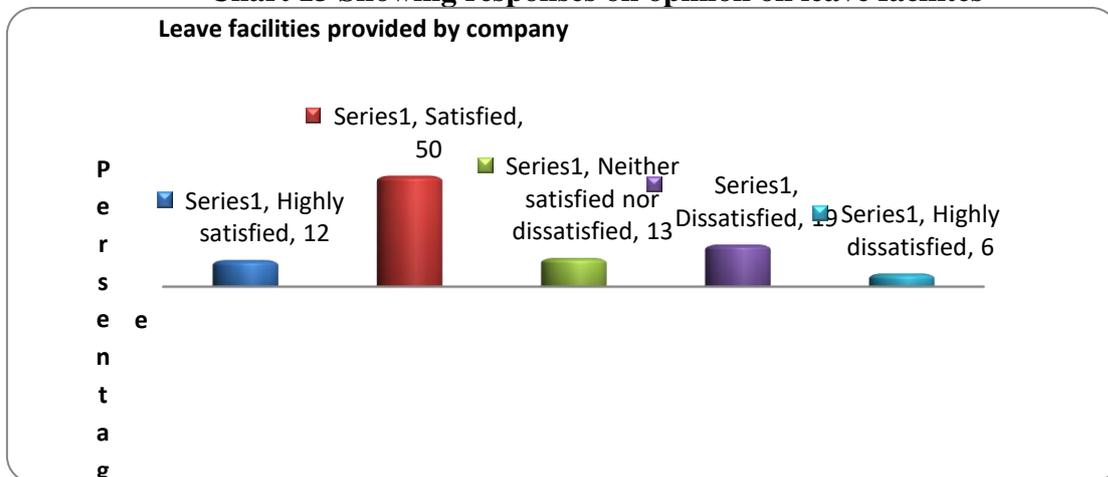
Table 10 showing responses on opportunities available to use skill, talent and knowledge

Particulars	Number of respondents	percentage of respondents
Always	45	28
Sometimes	75	47
Rarely	25	16
Not at all	15	9
Total	160	100

Interpretation: From the above graph we can interpret that opportunity to utilize skill, talent and knowledge of employees is 28% always, 47% sometimes, 16% rarely and 9% not at all.

Inference: Therefore from above graph we can infer that skill, talent and knowledge are utilized sometimes by the company.

Chart 13 Showing responses on opinion on leave facilities



Interpretation: From the above table we can interpret that leave facilities provided is highly satisfied by 12% of respondents, 50% are satisfied, 13% of them are neither satisfied nor dissatisfied, 19% are dissatisfied and 6% of them highly dissatisfied.

Inference: Therefore by the above graph we can infer that the company provides adequate leave facilities which satisfy most of the employees.

Table 16 Showing responses on training and development at work place

Particulars	Number of respondents	percentage of respondents
Always	40	25
Very often	65	41
Sometimes	25	16
Rarely	20	12
Never	10	6
Total	160	100

Interpretation: From the above table we can interpret that adequate training and development is provided by the company where 25% of the respondents says always, 41% of them says very often, 16% as sometimes, 12% rarely-used and 6% never.

Inference: Therefore from the above graph we can infer that adequate training and development is provided by the company.

Hypothesis statement: To test whether there is a significance association between employee participation and organization culture.

To test the above, following responses are considered:

X: Employee response on the Statement “The Companies regularly exchanges ideas with employees”

Y: Employee response on statement: “How do you feel about the culture at organization?”

Table: 01 Showing Calculation of Correlation.

	<i>Employee participation</i>	<i>Organization culture</i>
Employee participation	1	
Organization culture	0.949167	1

Calculated Value of Karl Pearson’s coefficient of correlation by MS-Excel is: 0.949167. There is a fairly high degree of positive correlation between employee participation and organization culture. Therefore it can be concluded the employee has positive attitude towards the job.

Inference: The testing of hypothesis clearly shows that there is a positive relation existing between the employee participation and organization culture which shows there is a positive attitude of the employees towards the organization.

Hypothesis statement: To test whether there is a significant association between work load and organization environment.

To find the present level of satisfactory level of employees towards the work environment. The response of the employee statement:

X: Employee response on the Statement “Do you feel the work load given is more?”

Y: Employee response on statement: “Is the physical environment of the organization is satisfactory?”

Table: 02 Showing Calculation of Correlation.

	<i>Work load</i>	<i>Organization environment</i>
Work load	1	
Organization environment	0.8692	1

Calculated Value of Karl Pearson’s coefficient of correlation by MS-Excel is: 0.8692. There is a fairly high degree of positive correlation between work load and organization environment. Therefore it can be concluded the employees are satisfied towards the work environment of the organization.

Inference: The testing of hypothesis clearly shows there is a positive correlation between the employee work load and organization environment. It shows the organization is providing a healthy atmosphere for the employees to work which has made the employees not feel “ the work load provided is high”.

Suggestion

The summary of the study reveals the employees are actively committed which is helpful for wellbeing of the organization. Flexibility and good working atmosphere will leave a positive impact and motivation on employees.

The organisation commitment can be improved much better by providing transportation facilities

Revising the salary structure of the employees would position the organisation competitive and increase employee satisfaction.

Incremental changes such as improvising the quality of canteen and creche facilities which is existing in the organization can bring about huge changes in employee commitment as they feel valued and recognized.

Conclusion

Every organisation need to value its employees not just as a source of revenue generation but as a sustainable resource by collaborating and creating a connection with them by paying attention to their needs and ideas. Sharing the organisational goals and progress and involving employees in decisions increases their commitment and loyalty and a sense of ownership towards the organisation.

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The Relationship between Working Capital Management and Profitability of Steel Companies

CMA (Dr.) Rajni Bala*

Abstract

Working capital is the lifeblood of a business. An optimum working capital management is expected to contribute positively to the creation of firm's value. Working capital is of crucial importance in case of capacity utilization and consumption of steels. After some investigation, Steel Industry has been singled out for research in the present study. This is definitely the backbone of economic growth in any industrial country. A thick relationship has been found between the level of economic growth and the quantum of steel consumption in developed as well as developing countries. After LPG it was considered as an important that a sound steel production programme must be formulated. Working capital is accountable for poor capacity, underutilization and poor consumption. The working capital management is directly associated with short term liquidity of a company so that we can judge the performance whether that is reasonable or require improvement. The per capita steel consumption in India is about 30 kg, which is very low compared to the other countries like; China where per capita consumption has already exceeded 180 kg whereas world average is over 400 kg in the developed countries. For relationship with the different parameters Pearson's correlation has been used. Predict the ROCE by the regression model with the help of control variable (sales) and independent variables plus the control variables to see that there is significant impact on profitability and to see whether there is multi collinearity between the variables. Pearson's correlation is employed to describe the association amid liquidity and profitability indicators. Correlation between independent variable causing multicollinearity. It has been studied that the correlation exists between the independent variable. The appendix indicate that CR and QR are strongly correlate to each other as the value is 98%. Data is time series then using for the predication with help of Simple and multiple panel regression models (random and fixed effect based on Hausman test) and also check the heteroskedasticity. Two panel models have been made. All statistical tests were seen at two-tailed level of significance ($p \leq 0.01$ and $p \leq 0.05$). The fixed effect model is best and rejecting the null hypothesis that there is a significant impact on profitability. Therefore, the manager needs to spotlight on core business theory to maximize shareholders wealth. Also managers can raise its profitability level by not adopting the aggressive financial policy.

Keywords: Inventory, Payables, Profitability and Liquidity

Introduction

Working capital is the lifeblood of a business. Good working capital management can take a business towards success whereas inefficient working capital management can move the business to downfall. An optimum working capital management is expected to contribute positively to the creation of firm's value. Working capital is of crucial importance in case of capacity utilization and consumption of steels Working capital is the cash available for day to day operations of a business and meet its obligations. Good working capital management

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will secure a company's financial stature and help build its business. It is necessary for increasing earnings and makes it easier to get business loans and attract potential investors.

Literature Review

To propose and defend the research work, a number of research papers are analyzed. Following are the excerpts from the different research work performed by number of academicians and researchers.

Desai Hiral et al (2015) studied that one can only survive with efficient working capital. It is the life blood of any business. It is the challenging aspect of the financial management. The rationale behind the study was to investigate the impact of working capital management on profitability, liquidity & risk on the Dabur India & Maric. Various statistical tools like average, Spearman's coefficient of correlation and accounting techniques such as ratios were used. Further it revealed that there was a negative relationship between liquidity and profitability and a positive relationship between profitability and risk. .

Mayank (2014) in a study of single automobile company Mahindra and Mahindra Ltd. found positive and negative correlation between different variables of Working Capital Management and Return on Assets (ROA). She has also found that working capital turnover ratio and inventory turnover has a positive impact on ROA whereas receivables turnover has a negative impact on ROA. Other current asset turnover ratio has a very negligible relationship.

Sitalani and Bhatia (2012) in their paper have examined the impact of working capital on the profitability of the firm with an example of Ranbaxy Laboratories Ltd. They have concluded that working capital practices of Ranbaxy Ltd has exhibited relationship on both dimensions, positively as well as negatively

Amalendu Bhunia and Islam Uddin Khan (2011) have examined the liquidity management efficiency of Indian steel companies. Association between the liquidity management and profitability of 230 Indian private sector steel companies were analysed over a period from 2002 to 2010. Linear regression model in multiple correlation and regression analysis were applied. A descriptive statistics disclosed that liquidity and solvency position were very satisfactory and relatively efficient liquidity management was found. Multiple regression tests confirmed a lower degree of association between liquidity management and profitability.

Dănulețiu Adina Elena (2010), the principle of this study was to analyze the efficiency of working capital management of companies from Alba County. The conclusion to the study was that there was a weak linear correlation between working capital management indicators and profitability rates.

Amalendu Bhuria (2007) imdertook a study on the various aspects of liquidity management of Sponge Iron Ltd (SIIL). This study was based on the secondary data collected from the annual reports for the period from 1991-92 to 2002-03. The result revealed that excess liquidity was observed when compared to the industrial average and more variation in liquidity position was found which was not desirable for the company.

Raheman Abdul et al (2007) affirmed the effect of Working Capital Management on liquidity as well on profitability of the firm. They had taken a sample of 94 Pakistani firms which were listed on Karachi Stock Exchange for 6 years of period from 1999 – 2004, they had taken into consideration various variables of working capital management like the Average collection period, Inventory turnover in days, Average payment period, Cash conversion cycle and Current ratio on the Net operating profitability of Pakistani firms.

Pearson's correlation and regression analysis were used for analysis. The results revealed that there was a study negative relationship between variables of the working capital management and profitability of the firm. They initiate that there was a significant negative relationship between liquidity and profitability. They also found that there was a positive relationship between size of the firm and its profitability. There was also a significant negative relationship between debt used by the firm and its profitability.

Lazaridis and Tryfonidis (2006) A cross-sectional study using a sample of 131 firms listed on the Athens Stock Exchange for the period of 2001–2004 was conducted by who explores a statistically significant negative relationship between profitability measured through gross operating profit and independent variables like CCC and financial debt using correlation and regression tests. They suggest that managers can create profits for their companies by correctly handling the CCC and by keeping each component of the conversion cycle at an optimum level.

Garcia-Teruel and Martinez-Salano, (2004) investigated the effect of WCM on profitability using a sample of 8872 small and medium size Spanish firms and found that a shorter Cash Conversion Cycle can improve the firms' profitability.

Deloof (2003) is of the opinion that most firms had a large amount of cash invested in working capital and it is expected that the way in which working capital is administered will have a significant impact on profitability of those firms. He established a noteworthy negative relationship between gross operating income and the number of days accounts receivable, inventories and accounts payable of Belgian firms with the help of correlation and regression analysis. The findings of the study suggested that managers could create value for their shareholders by reducing the number of days' accounts receivable and inventories to a reasonable minimum. The negative relationship between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills.

Research Gap

Although a lot of studies has been carried out in the area of WCM. Moreover no comprehensive indices were formed to examine the financing pattern of steel units. It also reveals that the past researches in India related to old period. In past studies, researchers have used popularly two measure of financial performance i.e. Return on Assets (ROA) and Return on Equity (ROE). I had used ROCE as dependent variable for their study. Hence the present study is an attempt to contribute to the existing literature.

In past studies, most of the researchers had taken financial data of short period of time. In context of India most of the researchers covered the period of less than 6 years. As far as the present study is concerned, longer period of time will give more reliable result. To know the trend of financial result longer period is much more suitable than the shorter period of time. If the study period will be long, result of study can be generalized strongly. Suppose due to any specific factor, profitability of a firm grows year by year for a longer period of time say 10 years or 15 years or 20 years and so on, and then we can confidently say that the particular factor really affects the profitability of this firm. But on the basis of 2 or 3 years analysis, it will be very early to conclude the fact. Short time period used by the past researchers may be one of the reasons for inconsistent result among study to study.

Objectives Of The Study

The study has been conducted to achieve the following objectives:

1. To examine and evaluate pattern of financing working capital of selected steel units and

its components.

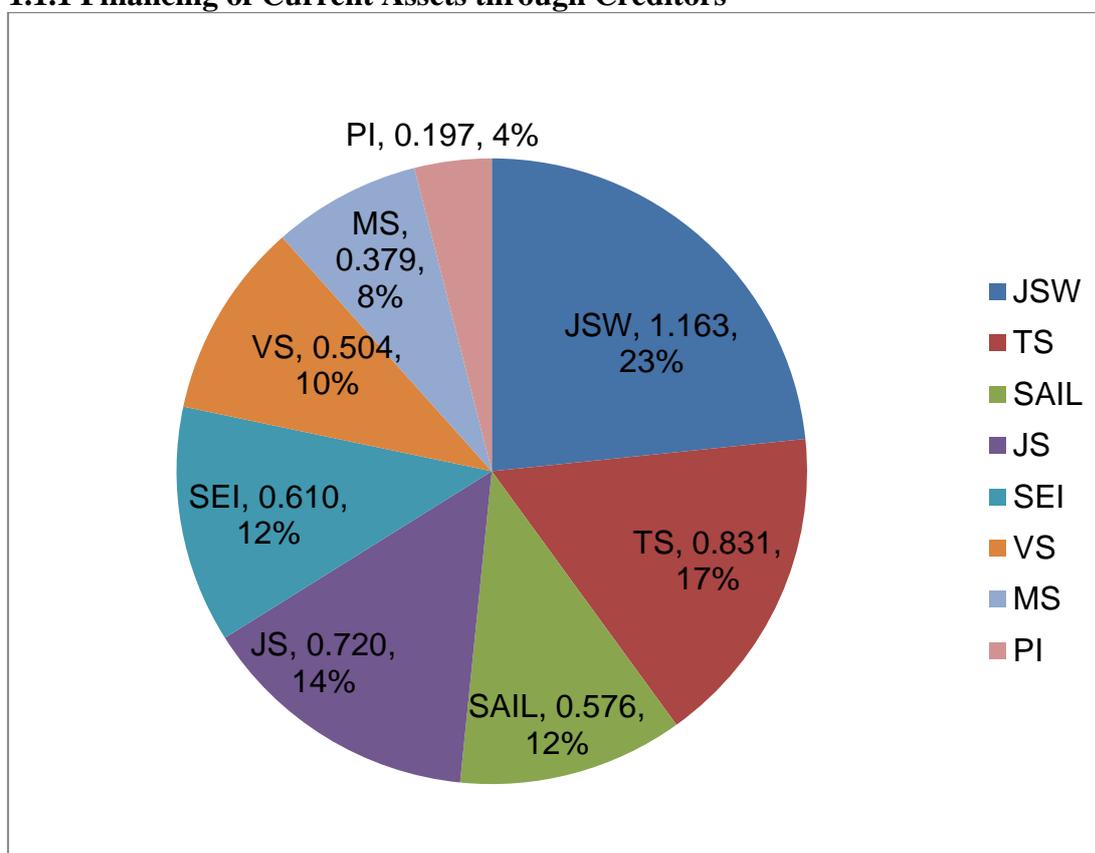
2. To study the relationship between the profitability and liquidity of selected steel units.

3.7 Study Period And Data Collection

To study the performance of the companies, a longer period is required to find out the consistency and stability over a period of time. So the period of study shall be taken for Ten years i.e. financial year 2007-2008 to 2015-2016. This study is completely based on secondary data. It is a quantitative analysis of the financial data of selected steel companies. Research purely based on secondary data, the sources of secondary data are official website of BSE & NSE and steel company's annual reports.

1.1 Analysis Of Currentassets Financing Ratios

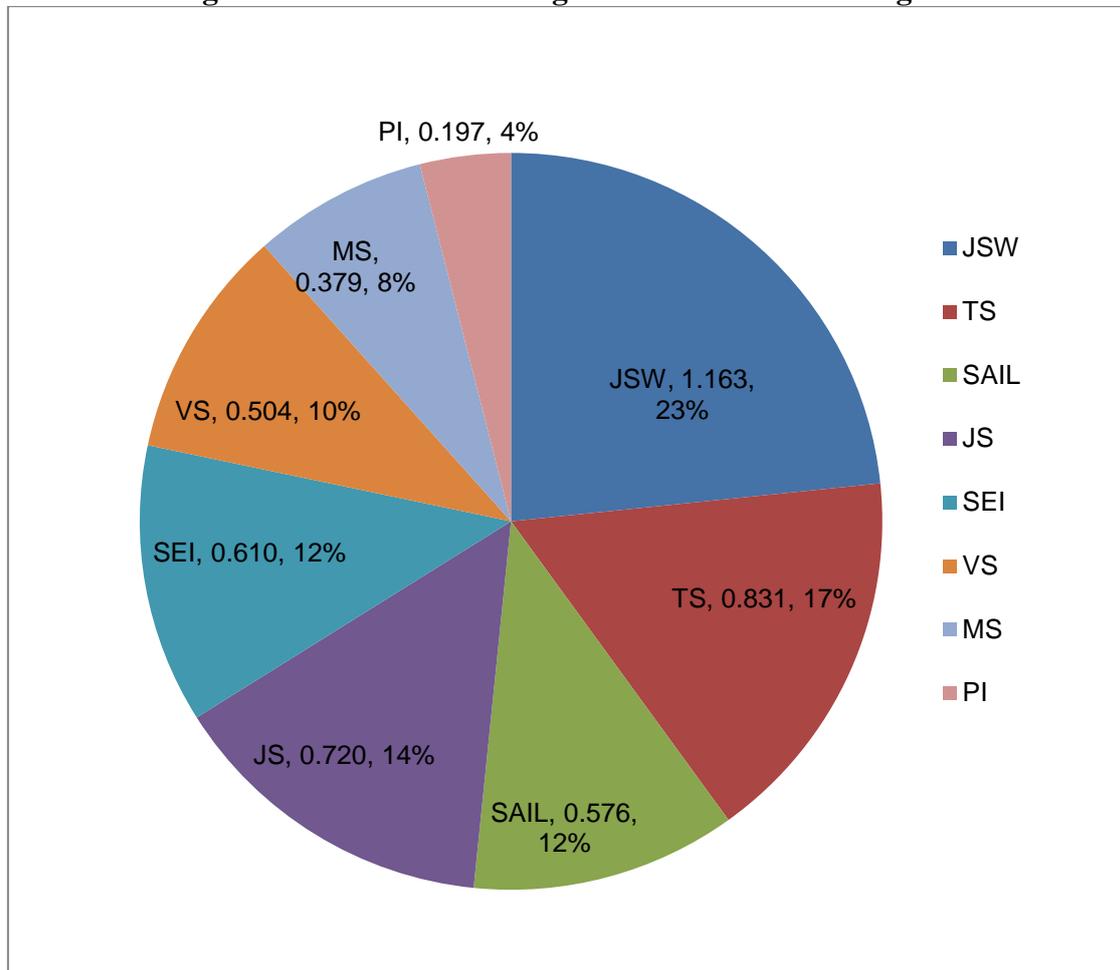
1.1.1 Financing of Current Assets through Creditors



The sundry creditors to current assets ratio of JSW (0.39) ,Tata Steel (0.30) , SAIL (0.12), Jindal Steel (0.31) ,Steel Exchange of India (0.43) , Visa Steel is (0.45) , Manaksia Steel (0.29) , and in Pact Industries (0.17)overtheentireperiod.

Whilegrowthrateindicatesthatfinancingthroughcreditors isdecreasedin some of the companies and also increased in some companiesall theselectedcompanies JSW, Tata Steel Limited, SAIL, Jindal Stainless Limited, SEI, Visa Steel, Manaksia Steel, Pact Industries whichis respectively280.95% , -47.82%,63.63%, 57.69%, 23.07%, -2.04%, -75% and -90.69%.

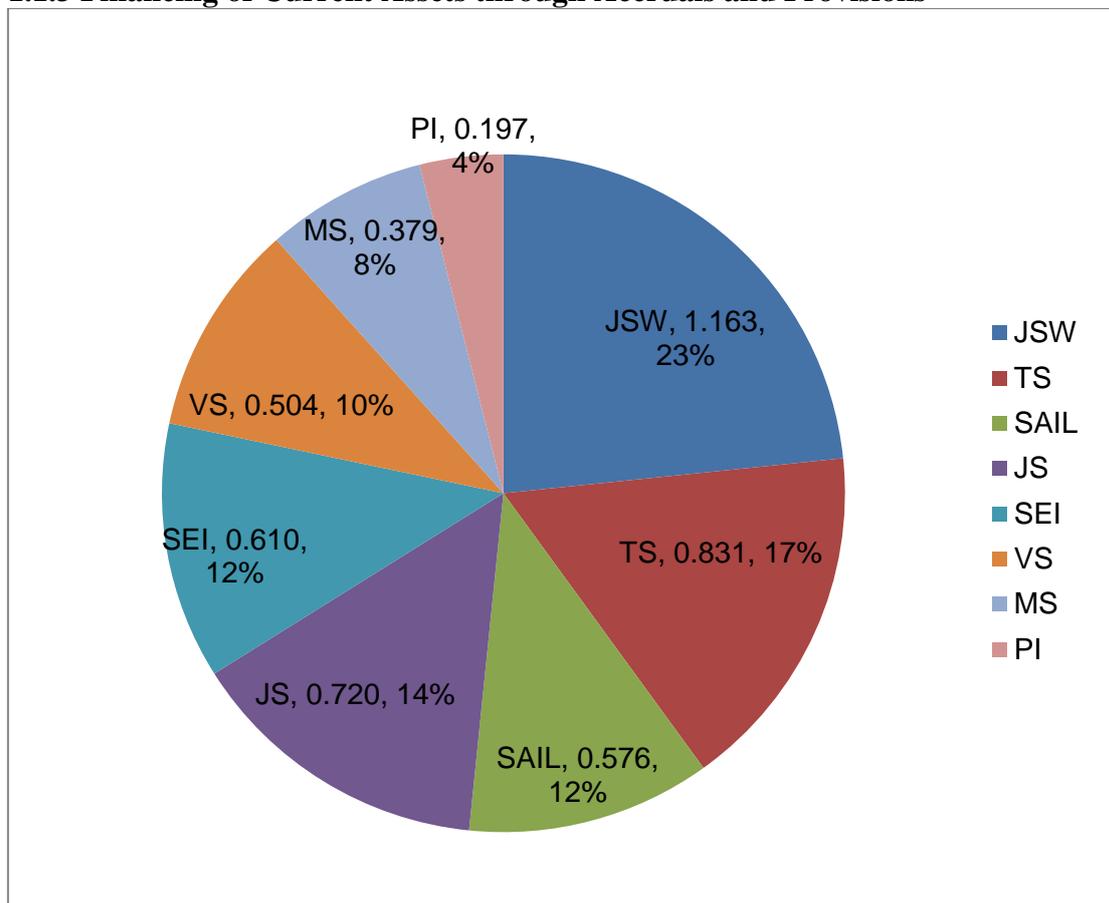
1.1.2 Financing of Current Assets through Short Term Borrowings



The bank borrowings can take the form of cash credit, rupee loan from banks, foreign currency loans from banks, term loan from banks, commercial papers, working capital borrowing from banks, fixed deposits from public, inter corporate deposits etc. shows that the MEAN incase of JSW (0.67), Tata Steel (0.14), SAIL (0.27), Jindal Steel (0.40), Steel Exchange of India (0.27), Visa Steel is (0.40), Manaksia Steel (0.19), and in Pact Industries (0.45) over the entire period.

While growth rate of financing of current assets through short-term bank borrowings in selected company is JSW (-88.63%), Tata Steels Limited (-93.33%), Jindal Stainless Limited (-36.54%), Steel Exchange of India (-15.63%), indicates that except SAIL (1650%), Visa Steel (48%) and Manaksia Steel (325%), Pact Industries (88.89%). All the selected companies decreases its financing amount of current assets through this sources.

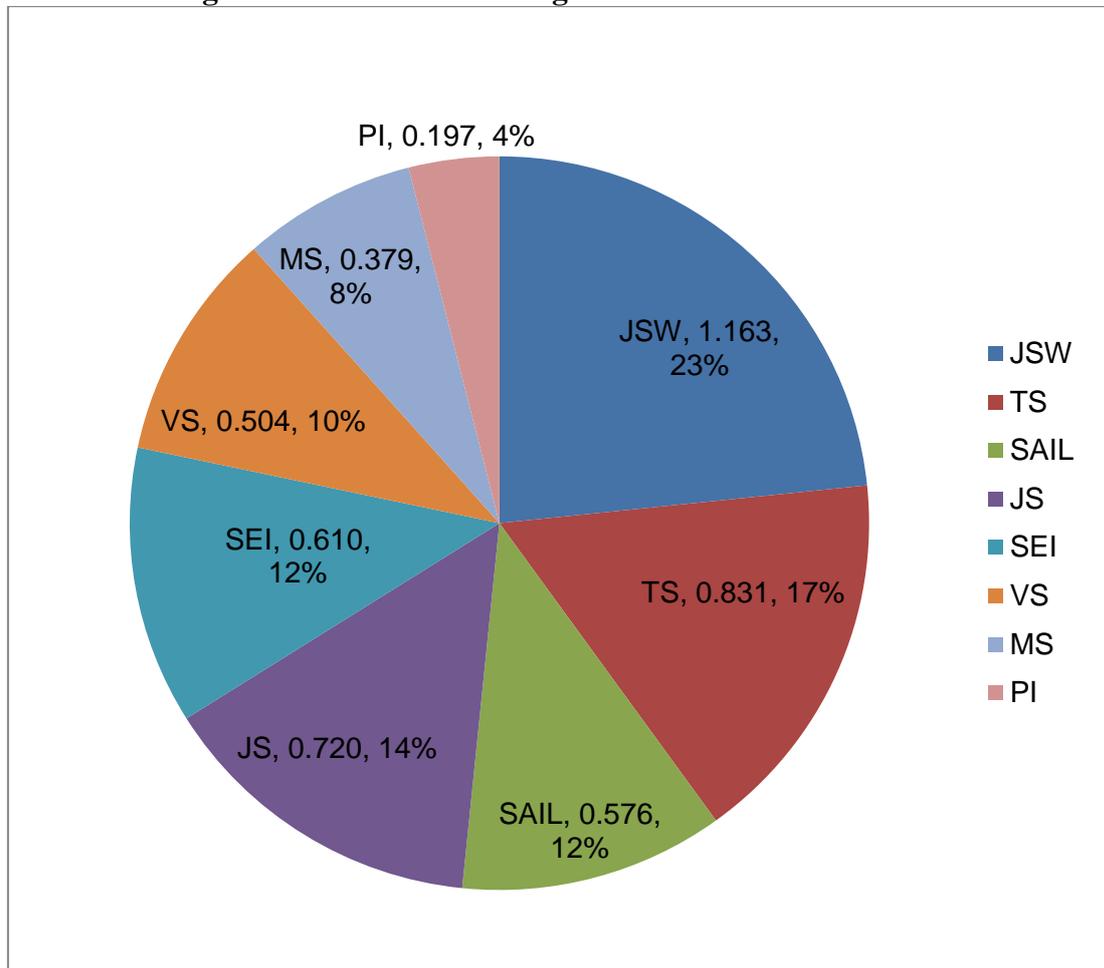
1.1.3 Financing of Current Assets through Accruals and Provisions



Accruals and provisions are considered spontaneous source of financing. This is because of the fact that accruals and provisions increase with expansion of business activities and decrease with a contraction in business activities. Since these source respond automatically to the level of business activity, they are called spontaneous source of financing. The MEAN, in case of JSW (0.06) ,Tata Steel (0.16) , SAIL (0.16), Jindal Steel (0.17) ,Steel Exchange of India (0.02) , Visa Steel (0.06) , Manaksia Steel (0.02) , and in Pact Industries (0.02) over the entire period.

Growth rate in case of Tata Steel (0.71%), Jindal Steel (0.93%), Steel Exchange of India (7.14%), and Pact Industries (720%) is positive while in case of JSW (-33.33), SAIL (-54.28%) is negative.

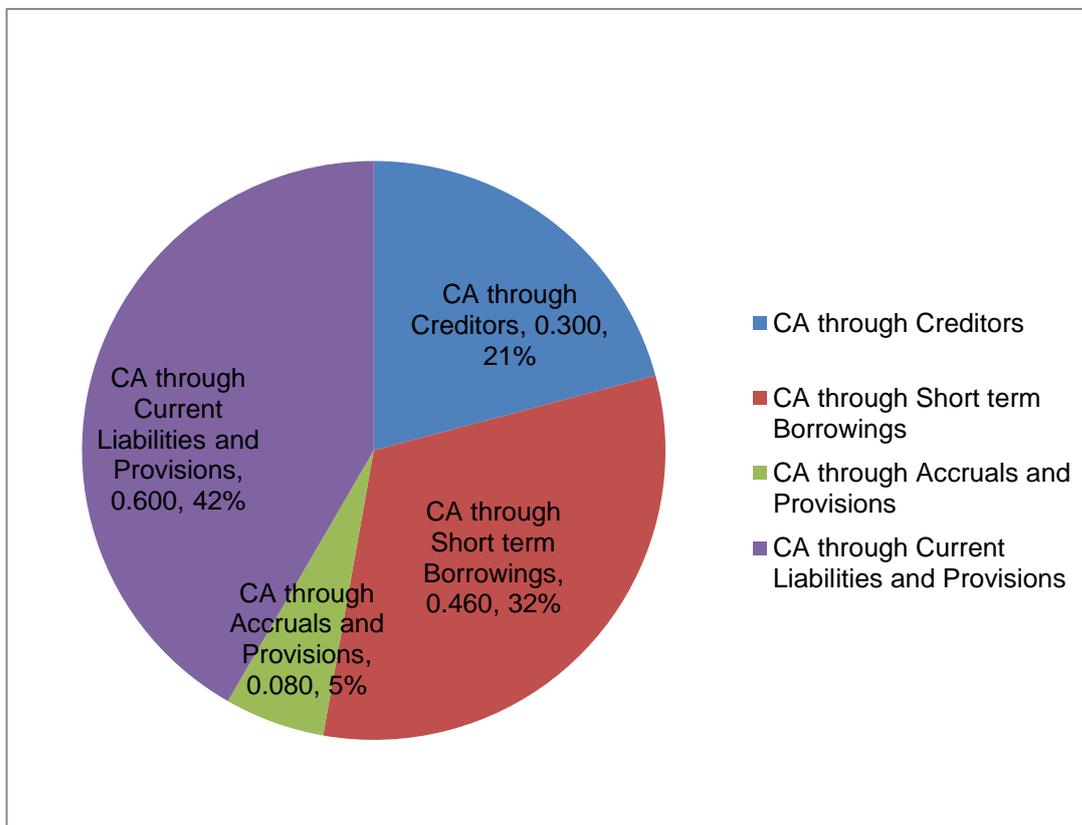
1.1.4 Financing of Current Assets through Current Liabilities & Provisions



This shows the Mean Value for Pact Industries and Manaksia steel the average for the entire period is (0.20) and (0.38) the ratio is very low over a study period. While the mean value in case of JSW (1.16) , Tata Steel (0.83) ,SAIL (0.58) , Jindal Stainless (0.72) ,Steel Exchange of India (0.61) , Visa Steel (0.50) .

Growth Rate is positive in all the Steel Corporations i.e. JSW (22%) , Tata Steel (15%) ,SAIL (11%) ,Jindal Stainless (13%) ,Steel Exchange of India (11%) , Visa Steel (9%) , Manaksia Steel (7%) , & Pact Industries (4%).

1.1.5 Current Assets Financing Ratios of Steel Corporations



Mean value of financing through creditors indicates SAIL (0.12), Manaksia Steel (0.29), Pact Industry (0.17) have been financed lower amount from this source as Compared to with Steel Company average (0.30), On the other aspect these companies Jindal Steel (0.31), JSW (0.39) Steel Exchange of India (0.43); VISA Steel (0.45) financed higher as compared with the company average and TATA Steel (0.30) goes in the same line of financing of Current Assets through Creditors.

Mean value of Financed through short term borrowings indicates that TATA Steel (0.14) SAIL (0.27), Manaksia Steel (0.19) , Steel Exchange of India (0.27) have been financed lower amount from this source as compared with the industry average of (0.46) . On the other aspect these Companies JSW (0.67), Jindal Stainless (0.40) , VISA Steel (0.40) Pact Industries (0.45) financed higher as compared with the Industry average .

While Mean value if financing through Accruals & Provisions is less in case of JSW (0.06) , Steel Exchange of India (0.02), VISA Steel (0.06) , Manaksia Steel (0.02) , Pact Industries (0.023) As Compared with the industry Average (0.08) and in case of these companies i.e. TATA Steel (0.16) , SAIL (0.16) , Jindal Steel (0.17) is higher than the Industry average .

Mean Value Indicates that financed through Current Liabilities & Provisions of SAIL (0.58), VISA steel (0.51) , Manaksia Steel (0.38) , Bhushan Steel (0.43) , Pact company (0.20) is less from the Steel Industry Average (0.60) while JSW (1.16) , Tata Steel (0.83) , Jindal Steel (0.72) and Steel Exchange of India (0.61) is above the Steel Corporations Aggregate . To Study the relationship Between Liquidity and Profitable indicators

Table: 2.1 -Descriptive statistics results for all variables tested for all companies over the ten year period.

Statistics	CR	QR	CPR	DER	ICR	ITR	DTR	CTR	ROCE	LOG of Sales
	Ratio	Ratio	Ratio	Ratio	Ratio	Days	Days	Days	Ratio	
N	80	80	80	80	80	80	80	80	80	80
Mean	1.86	1.33	0.14	1.79	4.46	81.71	35.06	81.43	7.41	3.41
Median	1.17	0.61	0.07	1.13	1.83	76.50	30.50	74.00	6.73	3.46
Std. Deviation	3.35	3.35	0.22	2.99	7.87	32.29	21.57	47.96	10.27	1.13
Minimum	0.14	0.16	0.00	-7.49	-1.90	34.00	5.00	15.00	-31.65	-0.19
Maximum	26.12	26.08	1.06	22.59	46.39	161.00	85.00	269.00	32.37	4.70

Mean value given for ROCE as observed in the above Table is **7.40 %**, and it deviates **10.26** percent on both side of the mean value, suggestive of a difference in return on capital employed athwart the Steel Corporations in India in ten years. The table also presents that the minimum value of the firms is **(31.65)** while the maximum value of the selected sample firms is **32.37**. Similarly, all the data related to the other competence measures of WCM including existing quotient, quick ratio, Cash Position Ratio, Debt Equity Ratio, Interest Coverage Ratio, day's inventories turnover, day's debtor's turnover and day's creditor's turnover are also presented in the same table.

Current ratio and Quick ratio has overall mean of **1.86** and **1.33** with a maximum of **26.12** and **26.08** and minimum of **0.14** and **0.16**. This implies that the average companies always maintain sufficient existing resources to compensate their existing liabilities.

The average value of days inventories turnover is used is **81.71** days. It means that, firms required **81.71** days on average to sell their inventories. From the table, it is also indicates that the standard deviation of inventory holding period is **32.29**. While for the selected firms the holding period of inventories lying between **34** and **161** days as mentioned as minimum day's inventories turnover and maximum day's inventory turnover respectively.

Day's debtors turnover is used is a measure for the collection policy for the selected firms. The average number of day's debtor's turnover is **35.06** days for the selected companies of the sample. Its means that the companies included in the sample will wait on average for **35.06** days to collect their debtors. The debtor's collection duration varying by **21.56 %** to each sides of the mean value. The minimum value and maximum values for day's debtor's turnover for the selected firms are **5** and **85** days respectively.

The average value of day's creditor's turnover is used as a proxy for payment policy for the selected firms. The mean value for the day's creditor's turnover over is **81.42** days. Which mean that the selected firms are paying their payable after on average 81.42 days. From the table it is also indicated that the standard deviation for the day's creditor's turnover for the selected films is **47.96 %**. While the day's creditor turnover period ranges between **15** days and **269** days.

Table: 2.2 – Correlation Matrix of ROCE and dependent variables

Correlations		ROCE (Ratio)	CR (Ratio)	QR (Ratio)	CPR (Ratio)	DER (Ratio)	ICR (Ratio)	ITR (Days)	DTR (Days)	CTR (Days)	LOG OF SAL ES
ROCE (Ratio)	Pearson Correlation	1	.327**	.265*	.404**	-.222*	.569**	-.408*	-.527*	-.421*	.254*
	p-value		0.003	0.018	0	0.048	0	0	0	0	0.023
CR (Ratio)	Pearson Correlation		1	.982**	0.205	-0.153	.290**	-.295*	-0.074	-0.162	-0.031
	p-value			0	0.069	0.175	0.009	0.008	0.512	0.151	0.782
QR (Ratio)	Pearson Correlation			1	0.137	-0.113	.239*	-.264*	-0.022	-0.127	-0.029
	p-value				0.224	0.319	0.033	0.018	0.845	0.262	0.801
CPR (Ratio)	Pearson Correlation				1	-0.142	.284*	-0.143	-.228*	-0.176	-0.047
	p-value					0.21	0.011	0.205	0.042	0.118	0.676
DER (Ratio)	Pearson Correlation					1	-.226*	0.106	.373*	.357*	-0.141
	p-value						0.044	0.35	0.001	0.001	0.213
ICR (Ratio)	Pearson Correlation						1	-.255*	-.367*	-.231*	.349**
	p-value							0.022	0.001	0.04	0.002
ITR (Days)	Pearson Correlation							1	.505*	.225*	.274*
	p-value								0	0.045	0.014
DTR (Days)	Pearson Correlation								1	.352*	-0.176
	p-value									0.001	0.118
CTR (Days)	Pearson Correlation									1	-0.147
	p-value										0.193
LOG OF SAL ES	Pearson Correlation										1
	p-value										
**. Correlation is valued at the 0.01 level (2-tailed).											
*. Correlation is valued at the 0.05 level (2-tailed).											

Table 2.2 presents the matrix of the correlation of the different dependent and independent variables used for the study. It shows positive correlation between ROCE and CR **0.327** significant at **1%** level, positive correlation between ROCE and QR **0.265** significant at **5%** level, positive correlation between ROCE and CPR **0.404** significant at **1%** level. In the same way, the correlation between ROCE and ICR is positive i.e. 0.569 which shows value at **1%** level of significance. This appendix shows the positive correlation between ROCE and log of sales **0.254** which shows significant at **5%** level of significance.

The above table also showcases the relationship among other independent variables have significant negative relationship with DER (**0.22**) with p value as **0.48** thus showing value at **1%** level of significance. The ROCE has significant negative relationship with DTR (**-0.527**) with p-value = **0.000** and CTR (**0.421**) with value of p = **0.000** showing value at **1%** level of significance.

Table: 2.3 – Multiple Regression Statistics

Model	Non-standardized Coefficients		Standardized Coefficients	t-value	p-value	95.0% Confidence Interval for B		Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF			
1	(Constant)	-0.471	3.580		-0.132	0.896	-7.599	6.656		
	LOG OF SALES	2.312	0.998	0.254	2.317	.023*	0.325	4.298	1	1
2	(Constant)	8.470	3.809		2.223	.029*	0.872	16.068		
	LOG OF SALES	1.631	0.893	0.179	1.827	0.072	-0.149	3.411	0.634	1.576
	CR (Ratio)	1.746	1.440	0.569	1.213	0.229	-1.125	4.617	0.028	36.167
	QR (Ratio)	-1.349	1.404	-0.440	-0.961	0.34	-4.148	1.451	0.029	34.48
	CPR (Ratio)	9.058	4.118	0.193	2.199	.031*	0.843	17.272	0.79	1.267
	DER (Ratio)	0.294	0.306	0.086	0.960	0.34	-0.316	0.904	0.765	1.307
	ICR (Ratio)	0.324	0.128	0.248	2.522	.014*	0.068	0.58	0.63	1.588
	ITR (Days)	-0.056	0.035	-0.178	-1.628	0.108	-0.126	0.013	0.511	1.956
	DTR (Days)	-0.098	0.052	-0.205	-1.875	0.065	-0.201	0.006	0.509	1.965
	CTR (Days)	-0.040	0.019	-0.185	-2.102	.039*	-0.077	0.002	0.785	1.274

Table 2.3 showcasing **Statistics of Multiple Regression**

Multiple regressions as applied to research the relationship between liquidity and profitable indicators. Two models have been used in this study:

The regression models used in this analysis are:

$$ROCE_{it} = \alpha + \beta_1 LOS_{it} + \epsilon_{it} \dots 1$$

$$ROCE_{it} = \alpha + \beta_1 CR_{it} + \beta_2 QR_{it} + \beta_3 CPR_{it} + \beta_4 DER_{it} + \beta_5 ICR_{it} + \beta_6 ITR_{it} + \beta_7 DTR_{it} + \beta_8 CTR_{it} + \beta_9 LOS_{it} + \epsilon_{it} \dots 2$$

α is a constant, $\beta_1 \dots \beta_6$ are the coefficients of a particular variables whilst i and t are firm explicit and point in time respectively. ϵ_{it} is represented as error term.

The first model represents stepwise regressions have been done. The observation afore-seen is an escalation in Log of Sales by a single unit, the ROCE will be augmented by 2.312 units those are significant in terms of statistics.

In the second model, stepwise regressions have been done. The following was observed as an increase in Log of Sales by a single unit, thus ROCE will be augmented by 1.631 units those are insignificant in terms of statistics. Further was also observed that an escalation in CR by a single unit, the ROCE will be augmented by 1.746 units those are insignificant in terms of statistics. However, an escalation in QR by a single unit, thus ROCE will be depreciated by 1.349 units those are insignificant in terms of statistics. Again three units CPR, DER and ICR increased by a single unit, thus ROCE is augmented by 9.058, 0.294 and 0.324 units respectively. Again three units ITR, DTR and CTR increased by a single unit, thus ROCE is depreciated by 0.056, 0.098 and 0.040 units respectively. The value of Variance Influence Factor (VIF) must be less than but in the case of CR and QR that is more than 10 and the tolerance value must be above 0.10 in case of CR and QR that is less than 0.10, so this is a case of **multicollinearity**. If few or entire of the free variables are correlated, called multicollinearity.

Table: 2.4 Model Summary of Sales and ROCE and Sales +Dependent Variables and ROCE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin - Watson
					R Square Change	F Change	df 1	df 2	Sig. F Change	
1	0.254	0.064	0.052	9.99375	0.064	5.367	1	78	0.023	
2	0.757	0.574	0.519	7.12048	0.509	10.456	8	70	0	1.92

Table 2.4 The coefficient of determination (R^2) for the first model shows that the control variable effects on dependent variable is 64 %. The overall significance of the model is explained by F-statistic. It also enlightens the importance of the association of dependent variables and independent variables (**Anderson et al., 2007**).The F-Statistics shows that the model is significant at **1% and 5 % (Prob>F=0.023)**. The coefficient of determination (R^2) for the model 2 shows that the control variable + independent variables effects on dependent variable is 57.4 %.The F-Statistics shows that the model is significant at **1% and 5 % (Prob>F=0.000)**.The value of Durbin Watson is 1.920 the value must lie between (2 to 4) means that there is no autocorrelation.

Table: 2.5 - Heteroskedasticity

Heteroskedasticity	
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Chi-Square	10.95
p-value	.0009**

Table 2.5 Heteroskedasticity: ‘Hetero’ means different and “skedastic” means variance, it means that there is difference variance in the data set. This may mean that the variance of errors in subgroup of the sample may not remain the same. To examine the existence of Heteroskedasticity in the proposed model used for regression, we conducted Breusch-Pagan test with null hypothesis H0 is that the error is homoscedastic means error that has a constant variance. We concluded from the test that the p value is 0.0009, that there is enough evidence for the existence of Heteroskedasticity and found the result as significant, means there is HSK exist. As a remedial measure we used robust standard errors in our regression model with the help of statistical tool STATA to solve the problem of HSK.

Table: 2.6 Fixed effects (Within regression) with CR

R-Square within	0.553
R-Square between	0.293
R-Square overall	0.415
F-value	9.91
p-value	.0001**

Table 2.6 The methodology of Panel data has been in use to accomplish the purpose of the research. The afore-said methodology engages the cross-sectional pooling of the units of interpretation over quite a few dimension of time and estimates those are more forceful rather employing cross-sectional or time-series assessment method only (Baltagi, 2005). In order to avoid the problem of multicollinearity two models has been framed and both the models showing the fixed and random effects has been tested with Hausman test. There was a problem of multicollinearity between CR and QR so in model 1 only CR has been taken.
 $ROCE_{it} = \alpha + \beta_1 CR_{it} + \beta_2 CPR_{it} + \beta_3 DER_{it} + \beta_4 ICR_{it} + \beta_5 ITR_{it} + \beta_6 DTR_{it} + \beta_7 CTR_{it} + \beta_8 LOS_{it} + \epsilon_{it}$1

The fixed effect model shows the relationship between liquidity and profitability indicators. The coefficient of CR is 0.543 with t value 2.960 having value of p as 0.021 that is significant in terms of statistics **at 1% and 5 %**. The above table also shows as ROCE having positive and numerically significant relationship amid CR. The coefficient of CPR is 3.782 with t value 1.080 having p value 0.318 .This shows that ROCE has a positive but statistically insignificant relationship between CPR. The coefficient of DER and ICR is 0.433 and 0.443 with t value 3.720 and 5.560 having p value 0.007 and 0.001. This shows that ROCE has a positive relationship between DER and ICR and also significant in terms of statistics at 1% and 5 % level. The coefficient of ITR and DTR is (0.039) and (0.165) with t value (1.880) and (1.720) having p value 0.102 and 0.129. This shows that ROCE has a negative relationship between ITR and DTR and also statistically insignificant at 1% and 5 % level. The coefficient of CTR is 0.038 with t value 1.480 having p value 0.182 .This shows that ROCE has a positive but statistically insignificant relationship between CTR. On the other hand, sales log shows a coefficient of 0.779 with t value 1.040 having p value 0.334 shows a positive but statistically insignificant relationship between ROCE. The linear regression explains 41.5 % of the variance in the model. The F statistics value of 9.91 with p value 0.001 which shows that all the independent variables affect profitability.

Table: 2.7 – Random effects (Within regression) with CR

R-Square within	0.446
R-Square between	0.684
R-Square overall	0.568
wald Chi-Square	93.48
p-value	.0001**

The random effect model shows the relationship between liquidity and profitability indicators. The coefficient of CR is 0.387 having z value 1.99 that is statistically significant at 1% and 5 %. This table shows as ROCE having positive and statistically significant relationship between CR. The coefficient of CPR is 10.10 with z value 1.85 having p value 0.065. This shows that ROCE has a positive but insignificant relationship in terms of statistics amid CPR. The coefficient of DER and ICR is 0.268 and 0.342 with z value 2.82 and 3.94 having p value 0.005 and 0. This shows that ROCE has a positive relationship between DER and ICR and also numerically significant at 1% and 5 % level. The coefficient of ITR and DTR is (0.056) and (0.103) with z value (2.68) and (1.48) having p value 0.007 and 0.14. This shows that ROCE has a negative relationship between ITR and DTR and also statistically insignificant at 1% and 5 % level in case of DTR. The coefficient of CTR is (0.04) with z value (2.48) having p value 0.013. This shows that ROCE has a negative but statistically significant relationship between CTR. On the other hand, sales log shows a coefficient of 1.544 with z value 1.98 having p value 0.048 shows a positive and statistically significant relationship between ROCE. The linear regression explains 56.8 % of the variance in the model. The wald chi square statistics value of 93.48 with p value 0.001 which shows that all the independent variables affect profitability

Table: 2.8 – Hausman Test

Chi-square	46.68
p-value	.0001**

Table 2.8 Hausman test: For conducting Hausman test we run regression with fixed effect model (Table 6.7) and also with random effect model (Table 6.8) and then run Hausman test with the help of Statistical software STATA with null hypothesis H0 is that difference in coefficients is not systematic. As we concluded from the result that the value of p in the test for the model which is 0.001 is statistically significant and will conclude that there is significance evidence for the existence of fixed effect or that the difference in coefficient is systematic and as an outcome we will use **Model of Fixed Effect** for our regression analysis.

Table: 2.9 – Fixed effects (Within regression) with QR

R-Square within	0.5377
R-Square between	0.2912
R-Square overall	0.4066
F-value	9.31
p-value	.0001**

Table 2.9 Panel data methodology has been employed to achieve the objective of the study. In order to avoid the problem of multicollinearity another models has been framed and this model again showing the fixed and random effects and that has been tested with Hausman test. There was a problem of multicollinearity between CR and QR so in model 1 only CR has been taken and in this model QR has been taken:

$$ROCE_{it} = \alpha + \beta_1 QR_{it} + \beta_2 CPR_{it} + \beta_3 DER_{it} + \beta_4 ICR_{it} + \beta_5 ITR_{it} + \beta_6 DTR_{it} + \beta_7 CTR_{it} + \beta_8 LOS_{it} + \epsilon_{it} \dots \dots \dots 1$$

The fixed effect model shows the relationship between liquidity and profitability indicators. The coefficient of QR is 0.412 with t value 4.030 having value of p 0.005 that is numerically significant **at 1% and 5 %**. The table showcases that ROCE has a positive and statistically significant relationship with QR. The coefficient of CPR is 4.722 with t value 1.340 having p value 0.223. This shows that ROCE has a positive but statistically insignificant relationship between CPR. The coefficient of DER and ICR is 0.423 and 0.461 with t value 3.580 and 5.670 having p value 0.009 and 0.001. This shows that ROCE has a positive relationship between DER and ICR and also numerically significant at 1% and 5 % level. The coefficient of ITR and DTR is (0.043) and (0.154) with t value (2.090) and (1.520) having p value 0.173 and 0.181. This shows that ROCE has a negative relationship between ITR and DTR and also statistically insignificant at 1% and 5 % level. The coefficient of CTR is 0.039 with t value 1.490 having p value 0.181. This shows that ROCE has a positive but statistically insignificant relationship between CTR. On the other hand, sales log shows a coefficient of 0.815 with t value 1.090 having p value 0.311 shows a positive but statistically insignificant relationship between ROCE. The linear regression explains 40.6 % of the variance in the model. The F statistics value of 9.31 with p value 0.001 which shows that all the independent variables affect profitability.

Table: 2.10 – Random effects (Within regression) with QR

R-Square within	0.4331
R-Square between	0.6902
R-Square overall	0.565
wald Chi-Square	92.22
p-value	.0001**

The random effect model shows the relationship between liquidity and profitability indicators. The coefficient of QR is 0.324 having z value 2.640 that is statistically significant **at 1% and 5 %**. This table shows as ROCE having positive and numerically significant relationship amid QR. The coefficient of CPR is 10.46 with z value 1.91 having p value 0.056. This shows as ROCE having positive and numerically significant relationship amid CPR. The coefficient of DER and ICR is 0.253 and 0.352 with z value 2.740 and 4.050 having p value 0.006 and 0.000. This shows that ROCE has a positive relationship between DER and ICR and also numerically significant at 1% and 5 % level. The coefficient of ITR and DTR is (0.058) and (0.102) with z value (2.730) and (1.480) having p value 0.006 and 0.139. This shows that ROCE has a negative relationship between ITR and DTR and also statistically insignificant at 1% and 5 % level in case of DTR. The coefficient of CTR is (0.04) with z value (2.570) having p value 0.010. This shows that ROCE has a negative but statistically significant relationship between CTR. On the other hand, sales log shows a coefficient of 1.525 with z value 1.940 having p value 0.052 shows a positive and statistically

significant relationship between ROCE. The linear regression explains 56.5 % of the variance in the model. The wald chi square statistics value of 92.22 with p value 0.001 which shows that all the independent variables affect profitability.

Table :2.11– Hausman Test

Chi-square	40.02
p-value	.0001**

Table 2.11 Hausman test: For conducting Hausman test we run regression with fixed effect model (**Table 2.10**) and also with random effect model (**Table 2.11**) and then run Hausman test with the help of Statistical software STATA with null hypothesis H0 is that difference in coefficients is not systematic. As we concluded from the result that the value of p in the test for the model which is 0.001 is statistically significant and will conclude that there is significance evidence for the existence of fixed effect or that the difference in coefficient is systematic and as an outcome we will use **Model of Fixed Effect** for regression analysis.

Connection Existing Amid Liquidity And Productivity Pointers

To assess the effect of operational resources on productivity correlation analysis, regression analysis, stepwise regression analysis and then panel methodology has been used to study the relationship between profitability and liquidators. Correlation analysis is carried out first followed by regression analysis and then panel data methodology. The results are discussed below:

- The outcome showcases the positive but numerically irrelevant connection existing amid ROCE and sales. According to Chatterjee (2010) this result indicates that steel corporations in India will to a great deal enhance their productivity provided they escalate their sales. Thus, in favour of above points, managers must improve the quality of their merchandise and venture upon effectual publicity so that sale is escalated.
- This research shows the positive but numerically irrelevant connection existing amid CPR and ROCE. Managers of the company has to be focused on cash position at any specified time period; while outside users supervise flow of the cash statements planned every month or quarter of the year so as to escalate the productivity of a business entity. A fixed cash position comprehends that the business entity can effortlessly meet up its existing liabilities with the cash or ready liquid assets. Existing liabilities are amount overdue with sum due within the coming year.
- This study reveals that there is a positive and statistically significant relationship between DER and ROCE. The sign DER positively showcases the amount of liability in businesses play imperative functions in complete profit earned and boost in utilization of arrear funds that considerably augment the net earnings of the organizations.
- This study reveals that there is a negative but statistically insignificant relationship between ITR and ROCE. This indicates the productivity can be enhanced by falling the Inventory Turnover in Days or by maintaining inventory for a least time period can enhance the productivity of a business entity. Much research results as an important negative effect of Inventory Turnover in Days on the productivity of business entities. An important point to on the whole functional incompetence that could be enhanced upon is inventory administration. Good inventory administration is effectual mode of enhancing the financial working of a business. Good supervision, administration and synchronization of ordering inventory can considerably enhance a business cash flow

and existing operational resources. These permit the business to save more assets in the business regularly, which assures it to augment and enhance its market base.

- This research shows the negative but numerically irrelevant connection existing amid DTR and ROCE. This research outcome indicates that steel corporations in India will enormously boost their productivity if they decrease their standard period of collection. This research outcome is constant with preceding researches with that of Dong and Su (2010) and Gill et al (2010). They laid importance on the significance of diminishing the company collection period so as to increase the average productivity.
- This model shows that CTR has positive but numerically irrelevant connection with the return on the employment of the resources. This indicates the account payables are good for explanation of the economic success of steel corporations in India; it is a insignificant factor to consider whilst the decision is taken to enhance productivity. It comprehends that business entity in making payments to credit suppliers needs time, the greater is the level of WC it reserves and utilize to enhance productivity. This perception is given by Gill et al (2010). They further researched that no numerically important relationship amid productivity and CTR of a few chosen listed US Firms.

For relationship with the different parameters Pearson's correlation has been used. Predict the ROCE by the regression model with the help of control variable (sales) and independent variables plus the control variables to see that there is significant impact on profitability and to see whether there is multi collinearity between the variables. Pearson's correlation is employed to describe the association amid liquidity and profitability indicators. It has been found that there is positive correlation between Return on capital employed (ROCE) and CR (0.327) significant at 5% level, QR (0.265) at 1% significant level, CPR (0.404) at 5% significant level, ICR (0.569) significance at 5% level, and log of sales (0.265) at 1% significant level. While there is a negative correlation noted between the ROCE and DER (-0.222) at 1% significant level, ITR (-0.408) at 5 % significant level, DTR (-0.527) at 5% level of significance, CTR (-0.2421) significant at 5% of level of significance. Correlation between independent variable causing multicollinearity. It has been studied that the correlation exists between the independent variable. The appendix indicate that CR and QR are strongly correlate to each other as the value is 98%. Data is time series then using for the predication with help of Simple and multiple panel regression models (random and fixed effect based on Hausman test) and also check the heteroskedasticity. Two panel models have been made. All statistical tests were seen at two-tailed level of significance ($p \leq 0.01$ and $p \leq 0.05$). The fixed effect model is best **and rejecting the null hypothesis that there is a significant impact on profitability.**

Limitations Of The Study

The following are the limitations of the present research:

1. The research comprises of the data of ten years that may not be adequate to form relationship in a noteworthy manner.
2. The sample size of 10 corporations relating to the large steel manufacturing corporations may be insufficient to signify the business entity.
3. The research takes into consideration only secondary detailing but not the primary (i.e., communication with the executives in economics sector might shut picture and administration style etc is not taken into consideration.

4. Price rise cannot be considered in the existing research as it becomes impossible to change the applicable fiscal data into their existing values due to thenon accessibility of sufficient details vital for the research.

Conclusion: The operational resources administration has been going on accurate lines and there has been close assistance economical, industrial and additional supervisory and there is unswerving contribution for generating superior outcomes to accomplish accord in the functioning milieu of the corporation. Following the scrutiny of a variety of facts, allied to preferred steel corporations in India that operational capital mechanisms, the foremost constituent we had found the reduced liquidity position in case of **Jindal Steel ,Manaksia Steel, Visa Steel and JSW**. Corporations can elevate its productivity by supplying more of hard cash (liquid resources) in the company or asset is requisite to be inserted in the shape of liquid resource for considerable diminution in the saddle of existing liabilities so that it can improve liquidity position. **Inventory Turnover Ratios** signify the promotional competence of the steel company. Inept inventory management is witnessed in case of **JINDAL, Visa Steel ,SAIL , JSW and SEI** . Inventory management is necessary to be enhanced explicitly for **these corporations** and it could be accomplished by the appropriate use of inventory management system, such as, EOQ, JIT, ABC analysis, etc. and enhancement of their sales management to diminish stock piling of refined goods or by holding less inventory stratum in the stock. Tata Steelselling position is finest in contrast to other corporations. So, the corporation should uphold this echelon and subsequent best is JSW Steel. To discover an answer to the quandary of receivables management, in particular for **JINDAL, SEI, Visa Steel, Pact Industry, SAIL and Manaksia Steel it is good to** recover its debtors' position in the path of transformation in collection policy,an effectual proficient synchronization amid sales, manufacturing and finance sector is required. Timely bill, apt reminders to default clientele, appropriate concession policy and instantaneous remedial measures should be guaranteed for improving the collection policy. The investment in loans and advances should be lessened to the possible degree. **Creditors' turnover ratio Visa Steel, JINDAL, SEI and Tata Steel Ltd**, is not agreeable in these corporations. In an answer to the crisis of allocated management, hindrance in expense supplication or by improving crediting policy can be made. Furthermore, themeanvaluealsoillustratesthatfinancing blueprint ofexistingassetsthrough all these sources,presentliabilities&suppliesacquiretheprimarypositiontrailedbyshorttermbankborrowing,creditors and accruals &requirementsandcorrespondingly and functioning capital marker shows considerable impact on productivity. Hence, the executive wants to highlight on interior trade theory to capitalize on shareholders assets. It is apparent that functioning capital and productivity more or less rests upon the improved use of resources, interrupted operating cost and excellence of organizational function in the products, customer services and to manpower and benevolence and market share. Managers can escalate its productivity by not approving to insistent operational capital policy.

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Securitization In Life Insurance Sector An Empirical Study Of India

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Abstract

The insurance industry worldwide has been seen to follow the banking sector and use securitization as an integral part of managing the business. Securitization offers insurers an alternative source of financing in an industry where traditional financing mechanisms are limited due to regulations.

This paper aims to present an empirical study of implementing of Life Insurance Securitization in India by studying the perception of life insurance companies. The paper begins with an overview of the process and structure of securitization. This is followed by a general discussion of life insurance securitization as a potential source of funding in the insurance industry. At the end the results of the empirical study are presented and reasons of the application of Life Insurance Securitization in India are presented using factor analysis. Further the potential benefits of LIS to insurers, investors and the likely problems of implementing LIS in India are discussed.

Keywords: Alternative Risk Transfer, Insurance Linked Securities, Life Insurance Securitization, Securitization,

Introduction

Regulatory pressures, demutualization, natural disasters, and some creative thinking in the insurance has created a wave of excitement among insurers, bankers, lawyers and investors in developed countries in recent years. As a result a new generation of securitization in the life insurance industry has evolved. Securitization offers insurers the opportunity to unlock the embedded profits in blocks of insurance presently carried on balance sheet and to provide an alternative source of financing. As the name suggests securitization implies creation of securities. Broadly "Securitization" implies every such process, which converts a financial relation into a transaction (Prabhakar, K). Securitization is the process of converting the existing assets or future cash flows into marketable securities. Securitization deals with the conversion of assets, which are not marketable into marketable ones. The conversion of existing assets into marketable securities is known as asset-backed securitization and the conversion of future cash flows into marketable securities is known as future-flows securitization. Some of the assets that are securitized are loans like car loans, housing loans, etc and future cash flows like ticket sales, credit card payments, car rentals or any other form of future receivables like insurance premium.

1. Review Of Literature

The review of research already done in this field includes Doherty (1997), Froot (2001), Lane and Beckwith (2002), Cummins, Lalonde, and Phillips, (2004) who discussed the securitization of catastrophic property risk. Gorvett (2003) provides an introduction to the insurance securitization process and its products. International Association of insurance supervisors (2003) focused on the overview of life insurance securitization, benefits,

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obstacles, forms and future of life securitization. Zhan and Cox, (2006) investigated factors that determine the insurers' decisions to securitize their surplus notes and what are the underlying rationales of surplus notes securitization. These studies concluded about incentives of securitization by insurers and other financial institutes in different countries. Also few studies in India are present in this field Shimpi (1995), Sankarreddy (2004), Godbole (2004) Guria (2004), Mathew (2005). But no study empirically analyzes the likely motives of securitization by life insurers in India. The present study has tried to fill this gap. Considering the successful application and usefulness of LIS in other parts of the globe, the present study is an attempt to empirically investigate if securitization of life Insurance risk can be applied in India.

2. Need Of The Study

The limited availability and increasing cost of certain types of traditional reinsurance, together with concerns about exposure to reinsurer credit risk, have led some life insurers to consider securitization as an alternative solution. The reasons for the use of securitization by life insurance companies all over world include:

- financing the cash strain associated with writing new business
- Monetization of the embedded value of a defined block of business
- funding regulatory capital requirements
- reducing exposure to a block of business with a low or volatile ROE
- Transfer of catastrophe risk.

3. Problem Statement

Securitization has not been applied in the Insurance sector as yet in the Indian Markets. But In the light of the developments in the field of Securitization in India, expanding insurance industry, capital markets becoming more mature and stable, changing the saving and investment scene with the big investors looking for new options for diversifying, it is expected that insurers in India may find Securitization an important capital and risk management solution for life insurers in the coming years.

4. Objectives

The present study is with the objective to empirically investigate the use of securitization tool in life Insurance sector in India by identifying the factors and the extent of their relevance for promotion of securitization of life insurance risk in India.

5. Research Methodology

As the area of this study is a new area in India with very less knowledge and research already available so an extensive cross boarder review of literature of LIS and its uses has been done. Based on this available literature, the reasons of development in developed countries were seen and then a survey of Top Management Team of Insurers in India was done to know the motivating factors for the application of LIS in India through undisguised pretested modified structured questionnaire. Responses were received from 65 respondents. However, after the scrutiny and excluding the questionnaire that were found not suitable and relevant, the analysis has been conducted for 45 responses.

To conclude the results of the study factor analysis and other statistical tools were used for the analysis of the data collected. Principal Axis method of Factor analysis is used for extraction of the factors and subsequently rotated using Kesar Varimax Normalized Rotation technique for getting better interpretable results.

Further Percentage and Average Weighted Score for responses given by the respondents is calculated for the purpose of ranking the benefits, problems and suggestions etc of implementing LIS.

6. Concept And Process Of Securitization

In its simplest form, under the generic structure of securitization the revenue stream on a pool of receivables or other income producing (mostly financial) assets owned by an original lender or commercial enterprise (originator) is sold to a specially incorporated, off balance sheet company or trust, known as a special-purpose vehicle (SPV). In return, the SPV will generally pay a purchase amount equal to the (par or net present) value of the receivables. The SPV will fund the purchase of the receivables through the issue of debt securities to investors, which will be secured on the receivables by virtue of a security interest granted to a security trustee acting for the investors and other creditors. Various forms of credit and liquidity enhancement will be used and structured into the transaction cash flow to ensure that payments on the debt securities issued to the investors are made in full and on a timely basis. A credit rating (usually higher than that of the originator) on the debt securities can be obtained by reason of the quality of the receivables which helps in better placement of the security with the investors. The figure 1 given below shows a simple securitization process (Basu, 2005).

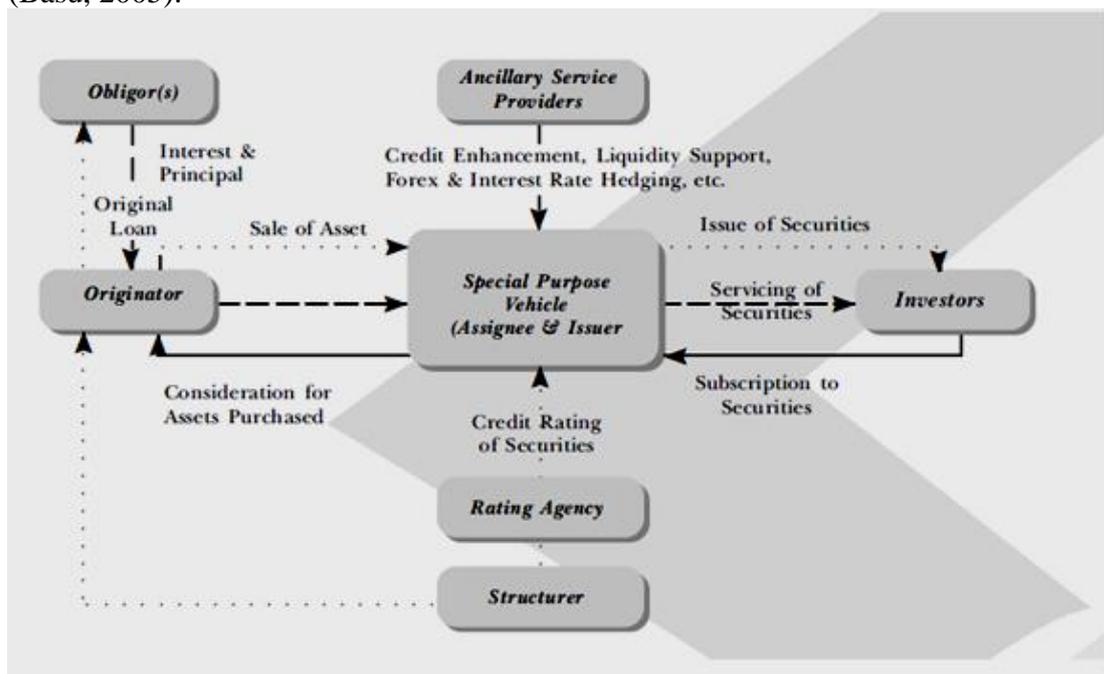


Figure 1: Generic Deal Diagram

Source: Report of the In House Working Group on Asset Securitization, Reserve Bank of India. Mumbai, 1999

7. Life Insurance Securitization

Insurance securitization is another interesting concept of securitization. Insurance securitization is the transfer of insurable risk to the capital markets via tradable financial securities, which we will refer to as “insurance-linked securities”. Causality Actuarial Society, CAS (2002). It involves the process of transfer of property and casualty risks from one party who has assumed property and casualty risks (the issuer) to another party (the investors) with the issuance of a security (e.g. debt or preferred stock) the ultimate return on

which is dependent on the occurrence of catastrophic events and the performance of reference index or the experience of reference portfolio of insurance or re-insurance company.

Debt issuance whose source for the payment of P&I is the future profits of a designated block of insurance policies is Life Insurance Securitization. It raises debt against the cash flows arising from a defined block of life insurance business. The cash flows are used to service and repay the debt. Investors bear the risk that the cash flows will be insufficient to fund the debt payments. This type of debt is referred to as “non-recourse” because investors do not have any recourse to the general assets of the issuing company if the cash flows fail to fund the debt payments.

8.Results And Discussions

This empirical study is different from the earlier studies as it tends to analyze the perception on Indian Life Insurers which is the first ever effort in this regard. The survey was initiated by taking the awareness on general securitization types like MBS, ABS etc. All respondents were aware of the securitization concept. 95% of them were aware about MBS and ABS. 68% respondents were also aware of securitization of Infrastructural Receivables. as shown in the Table 1. When asked about any other form they are aware of 5% of them were aware of securitization of trade receivables, fee receivables, rental receipts and telecom companies receipts.

Types	Yes (%)	No (%)
Mortgaged Back Securities	95	5
Asset Backed Securities	95	5
Securitization of Infrastructure receivables	68	32
Securitization of credit card receivables	14	86
Securitization of trade receivables, fee receivables	5	95
Securitization of rental and telecom companies receipts	5	95

Strongly Agree	4.55
Agree	22.73
Neutral	22.73
Disagree	36.36
Strongly disagree	0.00
Unknown	13.64
WS	2.55

Expert	0.00
Very Good	9.09
Fairly Good	31.82
Basic	45.45
Inadequate	13.60
WS	2.40

9.1 Benefits of Life Insurance Securitization to insurer.

As far as the benefits of securitization process in Life Insurance are concerned the respondents were asked to give their views regarding the different benefits drafted by researcher from the literature reviewed on a five point scale. The likely benefits of LIS to insurers that will be most significant that insurer perceived (as ranked on the basis of AWS) are

- Providing capital to meet regulatory capital requirements (AWS- 3.91)
- Liquidating the illiquid assets (AWS- 3.64)
- Potential to lower funding cost (AWS- 3.59)
- Providing Insurers with alternative source of funding (AWS- 3.59)
- Providing Economic alternative to higher priced reinsurance (AWS- 3.55).

Although meeting regulatory requirement is a significant factor with maximum t-value of 5.7 (as shown in the last column of table 4) still 63% respondents agreed to the fact that it will help in liquidating the illiquid assets and lower the funding cost and 59% respondents viewed that it will be helpful in meeting regulatory requirements. The other benefits like providing better asset liability management, monetization of embedded value, alternative risk transfer strategy (50% agreed) although they believe will come out of the process but will not be significant in motivating them to apply securitization. Majority of the respondents are neutral as to other benefits like transferring of longevity and mortality risk and improving financial indicators as shown in Table 4.

Benefits of Life insurance securitization to insurers	Strongly agree	Agree	Neutral	Disagree	strongly Disagree	Unknown	WS(SD)	Ranks
Replacement of illiquid assets with liquid assets thereby improving the liquidity position. (% of responses)	4.60	63.64	27.27	0.00	4.55	0.00	3.64(0.79)	2
Has a potential to lower funding cost.(% of responses)	20.91	63.64	13.64	9.09	0.00	4.55	3.59(1.10)	3.5
It provides insurers with Alternative Funding Source.(% of responses)	13.64	63.64	9.09	4.55	0.00	9.09	3.59(1.33)	3.5
Provides saving on capital that may assist the insurers in meeting regulatory capital requirements.(% of responses)	18.18	59.09	18.18	4.55	0.00	0.00	3.91(0.75)	1
Financing the cash strain associated with writing new business. (% of responses)	13.64	40.91	27.27	9.09	4.55	4.55	3.36(1.26)	8

Helps in Improving Financial indicators like return on assets, return on equity.(% of responses)	18.18	31.82	31.82	0.00	0.00	18.18	3.10(1.67)	10
Provides with better Asset Liability Management.(% of responses)	9.09	50.00	27.27	4.55	4.55	4.55	3.41(1.18)	7
Monetization of the embedded value of a defined block of business.(% of responses)	13.64	50.00	22.73	4.55	0.00	9.09	3.45(1.34)	6
Economic alternative to higher priced reinsurance.(% of responses)	4.55	63.60	22.70	4.55	0.00	4.55	3.55(1.01)	5
Alternative Risk transfer, management and Hedging Strategy.(% of responses)	4.55	50.00	31.82	4.55	4.55	4.55	3.32(1.13)	9
Helps in managing extreme mortality and longevity risk.(% of responses)	4.55	27.27	40.91	18.18	0.00	9.09	2.91(1.23)	11
Provides insurers with necessary funding required for tapping rural markets.(% of responses)	4.55	27.27	36.36	13.64	0.00	18.18	2.68(1.49)	12
Help insurers in providing world class products and services.(% of responses)	0.00	22.73	40.91	13.64	4.55	18.18	2.45(1.41)	14
Provides funds for infrastructure growth in the country indirectly.(% of responses)	4.55	31.82	27.27	9.09	0.00	27.27	2.50(1.71)	13

9.2 Benefits of Life insurance securitization to investors.

Respondents were asked to give their responses on various benefits of securitization to investors on a five point scale. The significant benefits of Life Insurance Securitization as perceived by the Insurer is that it will be an additional investment avenue for the investor and around 55% agreed to it also 27% strongly agreed to this benefit. The second significant benefit will be diversification benefits to investors by investing in securitized securities and a majority 55% agreed to it. Market related yield and enhancing portfolio risk-reward profile are non significant benefits and majority is agreeing to this as shown in Table 5.

Table: 5 Benefits of Life insurance securitization to Investor

Benefits of Life insurance securitization to investor	Strongly agree	Agree	Neutral	Disagree	strongly Disagree	Unknown	WS(SD)	Ranks
Provides an additional investment avenue for the investors. (% of responses)	27.27	54.55	9.09	4.55	4.55	0	4(1)	1
Provides investors with market related yields without the need to sacrifice credit quality. (% of responses)	4.55	40.91	27.27	18.18	4.55	4.55	3.1(1.19)	3
Provides diversification benefits to investors. (% of responses)	18.18	54.55	18.18	4.55	4.55	0	3.8(0.97)	2
Enhances a portfolio's risk-reward profile as insurance events have usually low correlation with an investor's portfolio of other assets. (% of responses)	9.09	18.18	50	13.63	4.54	4.54	3(1.15)	4
Improving Transparency. (% of responses)	13.636	4.54	31.82	18.18	22.72	9.09	2.4(0.32)	5

9.3 Motives of Life Insurance securitization in India

The respondents from the management team of Life insurance companies in India were asked to give their responses on the likely motives of applying LIS in India by them. As can be seen from Table 6 majority of respondents around 54% see assisting insurers in meeting regulatory capital and 45% see economic alternative to higher priced reinsurance and 40% see providing necessary funding required for future growth can be important motives of implementing LIS in India as shown in Table 6.

Table 6: Motives of Life Insurance securitization in India.

Motives of Life Insurance securitization in India.	Very Important	Important	Somewhat Important	Unimportant	Very unimportant	Unknown	WS	SD	t value
Meeting regulatory capital requirements.(% of responses)	22.73	31.82	27.3	4.55	0	13.6	3.3	1.59	0.89
Economic alternative to higher priced reinsurance.(% of responses)	0	45.45	27.3	9.09	4.55	13.6	2.9	1.42	0.33
Provides with necessary funding required for future growth.(% of responses)	4.55	40.91	36.4	4.55	0	13.6	3.05	1.40	0.17
An additional investment avenue for the investors.(% of responses)	4.55	27.27	36.4	22.73	0	9.09	2.86	1.25	0.53

9.4 Problems of implementing Life Insurance Securitization in India

The Life Insurers have perceived all the mentioned problems in implementing the LIS except the transaction costs as shown by t-values. 86% agree that lack of regulatory environment is

the major impediment in implementing LIS as shown by the highest t-value. 86% are agreeing to slow acceptance by the investor as the next significant problem whereas around 71% agree that the lack of awareness as the next significant problem and 90% agree that it is a complicated process and so is significant problem. All the other impediments like adequate laws as to rights and liabilities of parties are also important and needs to be tackled as shown in Table 7.

Table: 7 Problems of implementing Life Insurance Securitization in India.

Problems of implementing Life Insurance Securitization in India.	Strongly agree	Agree	Neutral	Disagree	strongly Disagree	Unknown	WS(SD)	Ranks
It is initially a complicated and time consuming process.(% of responses)	40.91	50	4.55	0	0	4.55	4.20(1.10)	2
Lack of adequate and friendly Legal, Regulatory and accounting policy framework in the country regarding securitization.(% of responses)	59.09	27.27	9.09	4.55	0	0	4.4(0.85)	1
Lack of awareness regarding the benefits and uses amongst participants of the process.(% of responses)	31.82	40.91	22.73	4.55	0	0	4.00(.96)	4
Lack of adequate laws governing the rights and liabilities of the parties involved.(% of responses)	40.91	27.27	18.18	4.55	0	9.09	3.8(1.51)	6
Investors may be slow in accepting these securities because of lack of awareness.(% of responses)	27.27	59.09	9.09	4.54	0	0	4.10(0.75)	3
Existing laws on Securitization not recognizing insurance companies for undertaking insurance securitization.(% of responses)	31.82	40.91	18.182	4.54	0	4.54	3.9(1.21)	5
Transaction costs, including the fees to external auditors, lawyers, credit rating agencies as well as the cost of credit enhancements, transfer fees and stamp duty are high as seen in other forms of securitizations.(% of responses)	22.73	31.82	22.73	4.54	4.54	13.64	3.2(1.66)	7

9.6 Factors affecting life insurance securitization in India.

Further, for the purpose of identification of factors the factor analysis has been applied on data collected regarding the perception of various top management personnel of various life insurance companies in India on LIS. The results of factor analysis after varimax rotation are reported in the Table 9 below.

Table 9: Rotated Factor Loadings and Communalities using Varimax Rotation

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Communality
Replacement of illiquid assets with liquid assets thereby improving the liquidity position.	0.093	0.114	0.895	0.147	0.135	0.020	0.863
Has a potential to lower funding cost.	0.097	0.144	0.077	0.137	0.731	0.171	0.618
It provides insurers with Alternative Funding Source.	0.798	0.206	0.133	0.103	0.454	0.049	0.916
Provides saving on capital that may assist the insurers in meeting regulatory capital requirements.	0.103	0.121	0.299	0.238	0.655	0.124	0.615
Financing the cash strain associated with writing new business.	0.808	0.083	0.151	0.005	0.013	0.285	0.764
Helps in Improving Financial indicators like return on assets, return on equity.	0.762	0.088	0.234	0.046	0.136	0.317	0.763
Provides with better Asset Liability Management.	0.096	0.129	0.195	0.020	0.726	0.053	0.594
Monetization of the embedded value of a defined block of business.	0.658	0.294	0.101	0.287	0.182	0.069	0.650
Economic alternative to higher priced reinsurance.	0.654	0.180	0.595	0.218	0.102	0.019	0.872
Alternative Risk transfer, management and Hedging Strategy.	0.480	0.039	0.776	0.031	0.107	0.088	0.855
Helps in managing extreme mortality and longevity risk.	0.837	0.089	0.047	0.127	0.012	0.397	0.885
Provides insurers with necessary funding required for tapping rural markets.	0.761	0.288	0.287	0.030	0.248	0.182	0.840
Help insurers in providing world class products and services.	0.688	0.039	0.024	0.194	0.289	0.185	0.632
Provides funds for infrastructure growth in the country indirectly.	0.120	0.557	0.245	0.013	0.096	0.682	0.859
Provides an additional investment avenue for the investors.	0.066	0.863	0.260	0.043	0.042	0.023	0.822
Provides investors with market related yields without the need to sacrifice credit quality.	0.044	0.926	0.035	0.121	0.068	0.043	0.881
Provides diversification benefits to investors.	0.041	0.855	0.207	0.016	0.099	0.136	0.805
Enhances a portfolio's risk-reward profile as insurance events have usually low correlation with an investor's portfolio of other assets.	0.679	0.451	0.304	0.260	0.137	0.128	0.859
Improving Transparency.	0.084	0.668	0.094	0.050	0.197	0.051	0.506

Assist the insurers in meeting regulatory capital requirements.	0.630	0.363	0.186	0.107	0.500	0.066	0.829
Economic alternative to higher priced reinsurance.	0.498	0.262	0.526	0.378	0.297	0.081	0.831
Provides insurers with necessary funding required for future growth.	0.799	0.063	0.118	0.102	0.512	0.121	0.942
Provides an additional investment avenue for the investors.	0.005	0.579	0.271	0.319	0.321	0.221	0.662
It is initially a complicated and time consuming process.	0.765	0.529	0.080	0.044	0.196	0.121	0.926
Lack of adequate and friendly Legal, Regulatory and accounting policy framework in the country regarding securitization.	0.400	0.215	0.154	0.620	0.166	0.101	0.653
Lack of awareness regarding the benefits and uses amongst participants of the process.	0.439	0.290	0.319	0.358	0.184	0.170	0.570
Lack of adequate laws governing the rights and liabilities of the parties involved.	0.744	0.049	0.134	0.465	0.065	0.241	0.852
Investors may be slow in accepting these securities because of lack of awareness.	0.037	0.226	0.342	0.645	0.025	0.334	0.697
Existing laws on Securitization not recognizing insurance companies for undertaking insurance securitization.	0.032	0.031	0.002	0.815	0.162	0.010	0.693
Transaction costs, including the fees to external auditors, lawyers, credit rating agencies as well as the cost of credit enhancements, transfer fees and stamp duty are high as seen in other forms of securitizations.	0.215	0.273	0.804	0.124	0.193	0.213	0.866
It is still to be applied by insurers in India.	0.160	0.016	0.048	0.813	0.026	0.158	0.715
Life Insurance Securitization is likely to play a major role in the future development of Indian Insurance Industry.	0.139	0.269	0.294	0.059	0.208	0.756	0.797
If the necessary legal and regulatory environment is provided can be successfully applied in Insurance sector.	0.217	0.158	0.315	0.352	0.292	0.648	0.800
Eigen values	8.158	4.806	3.855	3.265	3.018	2.333	25.435
% Var explained	0.247	0.146	0.117	0.099	0.091	0.071	0.771

Here factor loadings are calculated using the Principal Axis method and further rotated for better interpretation using Varimax rotation. In the Table 9, for the first variable 'LIS helps in improving liquidity', the factor loadings calculated from factor 1 to 6 varies from 0.895 to .020 and these loadings show the correlation of this variable with factor 3 and factor 6

respectively. The loading of .895 shows highly significant correlation between the attribute and factor 3. Similar interpretations can be given for the factor loadings of various variables included in the survey. The factor loading greater than 0.5 for each variable is underlined for the identification and nomenclature of the factors extracted. The underlined factor loadings are interpreted and correlated to name the six factors extracted. The first factor extracted is 'Motives of LIS' on account of high loadings on this factor of variables like alternative Funding Source (0.798), financing new business (0.808), improve financial indicators(0.762), monetization of the embedded value (0.658), economic alternative to reinsurance (0.654), managing extreme mortality and longevity risk(0.837) etc. It is accounted for 24.7% of the variation present in the data as shown in the last row of the Table 4. The next factor is named as 'alternative means of investment' and is named so because of high loadings on this factor of variables 'additional investment avenue for the investors (0.863), provides higher yields (0.926), provides diversification benefits (0.855). Since all these attributes relates to LIS as an alternative avenue for investment so this factor is termed as 'alternative means of investment' and it accounted for 14.6% variation in data as shown in the last row of the Table 4. In similar way the other factors extracted are LIS a risk transfer and hedging strategy, Securitization lacks popularity in India, LIS a Financial management tool and Future Role of LIS. These factors clearly define the scope, usefulness and future role of LIS for Indian markets. These identified factors provide empirical evidence in the favour of application of LIS in Indian economy.

7. Conclusion

From the findings it can be clearly concluded that in advanced countries, securitization is serving as a useful addition for insurers to finance future growth, fund regulatory capital, alternates reinsurance, co-finance acquisitions and improve long term return on capital thereby increasing the value to shareholders. The empirical analysis presented in this study concludes that besides the benefits the major motivational factors that will encourage the life insurers in India to go for securitization are mainly to provide insurers with alternative funding source required to finance future growth, to assist the insurers in meeting regulatory capital requirements, to provide an economic alternative to reinsurance and an effective risk management strategy. The factors presented above clearly define the scope, usefulness of LIS for Indian markets. It can be said that life insurance securitization has scope of implementation in Indian economy. It is seen to be beneficial for the health of the sector by improving capitalization and solvency. It can also be concluded that role of LIS as a developmental tool for the life insurance industry as well as the India economy is well appreciated but the problems and hurdles which are distracting the growth path of Securitization in India like lack of regulatory support, lack of awareness etc must be addressed urgently.

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मानवाधिकार एवं भारतीय महिलाएँ

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मानव होने के नाते मानवाधिकार लोगो को विरासत में मिले है, जिनसे उन्हें वंचित नहीं किया जा सकता है। चाहे वह मानव कोई भी जाति का धर्म, लिंग, या कोई भी देश का हो या कोई गुन्हेगार हो, पहले वह मानव है। मानव अधिकार को नैतिक एवं कानूनी अधिकार के रूप में परिभाषित किया जा सकता है, जो मानवीय गरिमा को सुनिश्चित करता है। हमारे देश में पिछली अनेक सहस्राब्दियों से महिलाओं की स्थिति में कई परिवर्तन होते रहे हैं। भारत में महिलाएँ अब शिक्षा, राजनीतिक, मीडिया, कला तथा संस्कृति सेवा क्षेत्र विज्ञान और प्रौद्योगिक आदि क्षेत्रों की गतिविधियों में हिस्सा ले रही हैं। इस का कारण भारतीय संविधान आजादी, भाईचारे, समानता और न्याय के मजबूत आधार पर खड़ा होने की वजह से है। उसमें महिला सशक्तिकरण के अनेक प्रावधान हैं। समानता और गैर भेदभाव के प्रति महिलाओं के अधिकारों को संविधान में मूलाधिकार के रूप में प्रस्तुत किया गया है। इसे कानून के माध्यम से स्थापित किया गया है। इसके अंतर्गत नागरिक, राजनैतिक, आर्थिक, सामाजिक और सांस्कृतिक अधिकार भी आते हैं। मानव अधिकार राज्य से विधिमान्य अपेक्षाएँ हैं। भारत सरकार ने हमेशा महिलाओं के मानवाधिकारों की रक्षा की है।

संयुक्त राष्ट्र चार्टर तथा आंतर्राष्ट्रीय मानव अधिकार घोषणा

संयुक्त राष्ट्र ने मानव अधिकार आंदोलन को अंतर्राष्ट्रीय शांति के लिए एक अनिवार्य तत्व के रूप में प्रारंभ किया और मानव अधिकार चार्टर प्रकाशित किया। यह चार्टर सभी सदस्य देशों से अनुपालन की अपेक्षा करता है। इसके द्वारा 10 दिसंबर, 1948 को मानव अधिकार की अंतर्राष्ट्रीय घोषणा की गयी, जिसमें मानव के कुछ मौलिक अधिकार समाहित हैं। ये निम्नलिखित हैं –

1. वाक्य स्वतंत्रता का अधिकार
2. न्यायिक उपचार का अधिकार
3. सरकार (किसी देश में) में भागीदारी का अधिकार
4. काम का अधिकार
5. स्तरीय जीवन जीने का अधिकार
6. आराम एवं सुविधापूर्ण जीवन जीने का अधिकार
7. शिक्षा का अधिकार
8. समान काम के लिए समान वेतन का अधिकार
9. सामाजिक सुरक्षा का अधिकार
10. समाज की सांस्कृतिक गतिविधियों में भाग लेने का अधिकार
11. कला का आनंद लेने का अधिकार तथा वैज्ञानिक प्रगति में भाग एवं उससे लाभ लेने का अधिकार
12. जीवन, सुरक्षा एवं स्वतंत्रता का अधिकार
13. मनमानी ढंग से गिरफ्तारी अथवा निर्वासन के विरुद्ध अधिकार
14. निष्पक्ष एवं स्वतंत्र न्यायिक सुनवाई का अधिकार
15. विचार, विवेक एवं धार्मिक स्वतंत्रता
16. शांतिपूर्ण सभा-संगोष्ठी करने तथा संघ बनाने का अधिकार

इस घोषणा में प्रजातांत्रिक संविधानों में निहित नागरिक एवं राजनैतिक अधिकार ही नहीं अपितु कई आर्थिक, सामाजिक एवं सांस्कृतिक अधिकारों की भी चर्चा है। इस घोषणा में प्रासंगिकता और प्रभाव में कोई कमी नहीं आयी है। जनसंपर्क बढ़ने से वैश्विक स्तर पर सामुदायिक उत्तरदायित्व की भावना का विकास हुआ है।

प्रत्येक नागरिक एवं प्रत्येक राष्ट्र के लिए अंतर्राष्ट्रीय मानव अधिकार घोषणा सर्व स्वीकृत है। इस घोषणा पर हस्ताक्षर करने वाले प्रत्येक देश का यह कर्तव्य है कि वे अपने यहां इन अधिकारों का संवर्धन तथा संरक्षण सुनिश्चित करे। संयुक्त राष्ट्र मानवाधिकार आयोग ने सन् 1948 से 1954 के बीच मानवाधिकार सम्बन्धी वैधानिक रूप से बाध्य दो मसौदा तैयार किया। आर्थिक, सामाजिक, सांस्कृतिक अधिकारों से सम्बन्धित आंतर्राष्ट्रीय मसौदा को जनवरी, 1976 में लागू किया गया। नागरिक एवं राजनैतिक अधिकार से सम्बन्धित अंतर्राष्ट्रीय मसौदा को मार्च, 1976 में लागू किया गया। आंतर्राष्ट्रीय घोषणा के साथ-साथ इन प्रावधानों को मिलाकर अंतर्राष्ट्रीय मानवाधिकार बिल बनाया गया है। इसके अंतर्गत नागरिक एवं राजनैतिक अधिकार परम्परागत अधिकार हैं तथा आर्थिक, सामाजिक एवं सांस्कृतिक अधिकार आधुनिक अधिकार हैं।

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भारत में स्वतंत्रता आन्दोलन के समय से मानव अधिकार को मान्यता दी जाने लगी । द्वितीय विश्वयुद्ध के पश्चात् मानव अधिकारों के प्रति विश्व समुदाय की चिन्ता बढ़ने लगी । भारतीय स्वतंत्रता संग्राम पूर्णतः नागरिक अधिकार एवं मानव अधिकार के लिए लड़ा जाने वाला संग्राम था ।

मानवाधिकार और महिलायें

वर्तमान भारतीय महिलायें समाज एवं राज्य की विभिन्न गतिविधियों में पर्याप्त सहभागिता कर रही हैं, परंतु इससे उनके प्रति घरेलू हिंसा के अलावा कार्यस्थल पर, सड़कों एवं सार्वजनिक यातायात के साधनों में एवं समाज के अन्य स्थलों पर होने वाली हिंसा में भी वृद्धि हुई है । इसमें शारीरिक, मानसिक एवं यौन सभी प्रकार की हिंसा सम्मिलित है ।

भारत में महिलाओं के प्रति हिंसा के सन 2003 में पंजीकृत मामले हैं –

प्रताड़ना (30.4%), छेड़छाड़ (25%), अपहरण (12%), बलात्कार (12.8%), भ्रूण हत्या (6.7%), यौन उत्पीड़न (4.90%), दहेज मृत्यु (4.6%), दहेज निषेध (2.3%) व अन्य (0.6%)। ये अपराध पूरे राष्ट्रीय स्तर पर होते हैं, पर उनमें उत्तरप्रदेश सबसे आगे है । महिलाओं के विरुद्ध अपराधों में आधे से कुछ अधिक अपराध (56.70%) केवल पांच राज्यों में होते हैं जो उ.प्र., मध्य प्रदेश, महाराष्ट्र, आन्ध्र प्रदेश, राजस्थान है ।

मानव अधिकारों की सार्वभौमिक घोषणा ने भेदभाव को न करने के सिद्धान्त की पुष्टि की थी और घोषित किया था कि सभी मानव स्वतंत्र पैदा हुए हैं और गरिमा एवं अधिकारों में समान हैं तथा सभी व्यक्ति बिना किसी भेदभाव के, जिसमें लिंग पर आधारित भेदभाव भी शामिल हैं, सभी अधिकारों एवं स्वतंत्रताओं के हकदार हैं । फिर भी महिलाओं के विरुद्ध अत्याधिक भेदभाव होता रहा है ।

सर्वप्रथम महिलाओं की प्रस्थिति पर 1946 में एक आयोग की स्थापना की गयी थी । महासभा ने 7 नवंबर, 1967 को महिलाओं के विरुद्ध सभी प्रकार के भेदभाव की समाप्ति पर अभिसमय अंगीकार किया । 1981 एवं 1999 में अभिसमय पर ऐच्छिक उदाचार को अंगीकार किया, जिससे लैंगिक भेदभाव, यौन शोषण एवं अन्य दुरुपयोग से पीड़ित महिलाओं को सक्षम बनाया जायेगा ।

महिला आंदोलन आज पूरे विश्व में सर्वत्र जोर पकड़ रहा है । यह आंदोलन इतना प्रखर हो गया है कि संयुक्त राष्ट्र ने 1975 से 1985 के दशक को 'नारी उन्मुक्त दशक' का नाम दिया। संयुक्त राष्ट्र संघ ने नारी उन्मुक्त के लिए कई सम्मेलनों का आयोजन किया । 1995 में चौथा सम्मेलन बीजिंग में हुआ, जिसके द्वारा महिलाओं के सम्बन्ध में बहुत अधिक जानकारी हुई है और जो राष्ट्रीय महिला आंदोलनों एवं अंतर्राष्ट्रीय समुदाय के बीच अमुल्य कड़ी का आधार बना ।

संयुक्त राष्ट्र घोषणा-पत्र के उद्देश को दृष्टिगत रखते हुए भारत में मानवाधिकार आयोग का गठन किया गया है । मानव अधिकार संरक्षण अधिनियम, 1993 की धारा 30 में मानव अधिकारों के उल्लंघन सम्बन्धी शीघ्र सुनवाई उपलब्ध कराने के लिये मानव अधिकार न्यायालय अधिसूचित करने की परिकल्पना की गयी है । आंध्रप्रदेश, असम, सिक्किम, तामिलनाडू और उत्तर प्रदेश में इस प्रकार के न्यायालय स्थापित भी किये जा चुके हैं । राष्ट्रीय महिला आयोग के गठन से नारी की समाज में स्थिति सुदृढ़ हुई है । अब महिला उत्पीड़न की घटनाओं में अपेक्षाकृत कमी आयी है ।

उच्च न्यायालय द्वारा यौन उत्पीड़न की घटनाओं की रोकथाम के लिये निम्नलिखित दिशा-निर्देश जारी किये :-

- 1) जहाँ कामकाजी महिलायें हैं, वहाँ के नियोक्ताओं एवं अन्य जिम्मेदार व्यक्ती का कर्तव्य होता कि, कार्यस्थल में किसी भी प्रकार का यौन शोषण ना हो, अगर हुवा होगा तो दोषी व्यक्तियों के विरुद्ध अभियोजन चलाने की कार्यवाही करें ।
- 2) यौन उत्पीड़न सम्बन्धी परिवारों की सुनवाई के लिये शिकायत समितियों का गठन किया जाये ।
- 3) ऐसी समितियों का अध्यक्ष महिलाओं को बनाया जाये तथा समिति के न्यूनतम आधे पदों पर महिलाओं को नियुक्त किया जाये ।
- 4) उत्पीड़न महिला को संरक्षण प्रदान किया जाये उच्चतम न्यायालयों द्वारा कहा गया कि मानवाधिकारों के उल्लंघन के मामलों को हमेशा अन्तर्राष्ट्रीय अभिसमयों के संदर्भ में देखा जाना चाहिये यदि किसी अन्तर्राष्ट्रीय अभिसमय का उल्लंघन करनेवाला कोई कृत्य किया जाता है तो वह मानवाधिकार का उल्लंघन माना जायेगा ।

भारतीय दंड संहिता 1860 में भी महिलाओं के विरुद्ध किये गये अपराधों के लिये कठोर दंड की व्यवस्थायें की गयी हैं । धारा 354 में स्त्री की लज्जा भंग, धारा 366 में अपहरण, धारा 376 में बलात्संग, धारा 398-क में निर्दयतापूर्ण व्यवहार तथा धारा 309 व 410 में स्त्री का अपमान करने को दण्डनीय अपराध घोषित किया गया है । दहेज की मांग की विभिषिका से नारी की रक्षा करने हेतु दहेज निषेध अधिनियम, 1991 पारित किया गया है ।

हिन्दू उत्तराधिकार अधिनियम 1956 की धारा 18, स्त्रियों को सम्पत्ति में मालिकाना हक प्रदान करती है । श्रम कानून महिलाओं के लिए संकटापन्न यंत्र तथा रात्रि में कार्य का निषेध करते हैं । मातृत्व लाभ अधिनियम कामकाजी महिलाओं को प्रसुति लाभ की सुविधायें प्रदान करता है । दण्ड प्रक्रिया संहिता, 1973 की धारा 125 में उपेक्षित महिलाओं के लिये भरण-पोषण का प्रावधान किया गया है ।

इस प्रकार स्पष्ट है कि महिलाविषयक मानवाधिकारों को विभिन्न विधियों एवं न्यायिक निर्णयों में पर्याप्त संरक्षण प्रदान किया गया है बदलते परिवेश में संविधान में 12 वें संशोधन द्वारा अनुच्छेद 14/क (ड) के अंतर्गत नारी सम्मान को स्थान दिया गया और नारी सम्मान के विरुद्ध प्रयासों का त्याग करने का आदर्श अंगीकृत किया गया ।

महिलाओं के प्रति हिंसा विश्वव्यापी घटना बनी हुई है, जिससे कोई भी देश, समाज एवं समुदाय मुक्त नहीं है। महिलाओं के प्रति भेदभाव इसलिये भी विद्यमान है, क्योंकि इसकी जड़ें सामाजिक प्रतिमानों एवं मूल्यों में जमी हुई हैं और वे अंतर्राष्ट्रीय करारों के परिणामस्वरूप परिवर्तित नहीं होते हैं। वैसे तो महिलाओं के विरुद्ध हिंसा के कारणों को समाप्त किये बिना उसका पूर्ण निदान संभव नहीं लेकिन यदि हम पाश्चात्त एवं विकसित देशों पर दृष्टिपात करें तो ऐसा लगता है कि इसका कारण मानवीय संरचना व स्वभाव में अंतर्निहित होने के कारण जड़ से इसका उन्मूलन सम्भव नहीं। प्रत्येक स्थल एवं प्रत्येक प्रकार की महिला विरोधी हिंसा के लिये समाज और राज्य दोनों को ही अपना नैतिक एवं विधिक उत्तरदायित्व निभाना पड़ेगा। महिला हिंसा के भयानक स्वरूप के विरुद्ध संघर्ष के लिये और जनजागृति पैदा करने के लिए एक व्यापक अभियान चलाया जाना जरूरी है।

संम्पूर्ण विश्व में महिलाएँ सदियों से दोगले दर्जे की नागरिक समझी जाती रही हैं। यद्यपि उनकी प्रशंसा में गीत भी रचे गये; कवियों, कथाकारों की लेखनी, चित्रकारों की तूलिका ने उनके सौंदर्य, कमनीयता, देवत्व, ममता, सहनशीलता, करुणा आदि के अनेक भावचित्र उकेरे, लेकिन सृष्टि के संसाधनों में समान भागीदारी उसे कभी प्राप्त नहीं हुई। सामाजिक, धार्मिक, विधिक, शैक्षणिक, आर्थिक व सांस्कृतिक हर क्षेत्र में उपेक्षित समझा और उसकी यह पीड़ा सदा से ही संवेदित करती रही कि उसे पुरुष के अधीन ही परतंत्र, पराश्रमी, पराधीन जीवन क्यों जीना पड़ता है? लेकिन इन परिस्थितियों में परिवर्तन आया। विश्व के वे देश जहाँ स्वतंत्रता तथा समानता जैसे लोकतंत्र के आधारभूत सिद्धांत स्वीकार व प्रयोग किये जा रहे थे, वहाँ जागृत चेतन के फलस्वरूप महिलाओं की स्थिति से संबंधित प्रश्न भी उठने लगे तथा उनकी स्थिति के बेहतर करने की दिशा में प्रयास होने लगे।

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GST (Goods and Services Tax) - Prospects of GST in Indian Context

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Abstract

GST refers to goods and service tax. GST is a value added tax (VAT) chargeable on both goods and services, as against the prevailing VAT on only goods. GST is an indirect tax which is chargeable on manufacture, sale and consumption of goods and services at a national level. It is implemented to maintain uniformity in taxation system in all over state within the country,. Its main objective is to consolidate all indirect tax levies into a single tax, by replacing multiple tax system. GST has implemented with some problems also like division of taxation power between Centre and State. The GST will be applicable on the basis of Destination principle. Our government should educate small or big manufacturers and traders regarding benefits of implementing the GST. GST is essential for our country. It will reduce variance and will contribute in integrated tax system in Indian economy. The government has already built a digital infrastructure to promote GST. At last I want to say that GST will contribute in 'Make in India' .It is universally beneficial at national level, Because Most businesses don't want inconvenient dealing with multiple forms and rules in taxation system. Now there is a uniform taxation regime, and it is for stakeholder's interest at whole. It would be unrealistic to expect a flawless GST but it will bring more transparency in Indian economy.

Key Words-VAT, GST, Indirect Tax, Demonetization

Introduction

GST refers to goods and service tax. It is an indirect tax which is charged by the individual on consumption of any goods and service. On 1st July 2017 India took a step to go with GST to facilitate consistent tax system in all states. There are two components of GST-Central GST and State GST. CGST is applicable in the case of **Inter-State** sale of goods and services. It replaced the followed old taxes like Central Excise Duty, service Tax, Central Sales Tax etc where as SGST applicable in the case of **Intra-State** sale of goods services. It replaced the following old taxes like Entry tax, Luxury tax, VAT/Sales Tax, Entertainment Tax etc. GST has been commonly accepted by world and more than 140 countries have implemented the same. In India GST ranges is between **0%- 28%** on goods and services. Under GST there are some exempted class of goods or services or a negative list of goods and services on which GST is not applied.GST reduce deformity in the economy, to ensure greater regional equity by getting relieve of inter-state sales tax and having a destination-based tax, and to create a smooth national market by removing inter-state trade barriers. It is hoped that the reform of taxation system will surely reduce the compliance cost for taxpayers by simplifying and to uniform the tax structure and by making the administration uniform across states.

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Materials and Methods

For the purpose of depth study the contents have been taken from interview, relevant books and articles from journals and websites. The method used in analytical and descriptive. Both primary as well as secondary sources of information have been taken.

Result and Discussion

India's Tax Regime Tax policies play an important role on the economy through their impact on both efficiency and equity. India's international trade has increased rapidly during the last two decades. Differential indirect tax rates in the economy without apt setoffs have lead to tax cascading which distort production efficiency as well consumption pattern basket. A system of VAT on services at the central government level was introduced in 2002. The states collect taxes through state sales tax VAT, introduced in 2005, levied on intrastate trade and the CST on interstate trade. GST stands for "Goods and Services Tax". The main objective of GST is to consolidates all indirect tax levies into a single tax, except customs replacing multiple tax levies, overcoming the limitations of existing indirect tax structure, and creating efficiencies in tax administration.

The important gains from the GST reform are that it is expected to broaden the tax base, reduce distortions in the economy through a more comprehensive input tax credit, enhance export competitiveness by comprehensively relieving domestic consumption taxes on exports, ensure greater regional equity by getting rid of inter-state sales tax and having a destination-based tax, and help create a seamless national market by removing inter-state trade barriers. It is hoped that the reform will significantly reduce the compliance cost for taxpayers by simplifying and harmonising the tax structure and by making the administration uniform across states. Such GST could be on entire goods and services or there could be some exempted class of goods or services or a negative list of goods and services on which GST is not levied. GST is an indirect tax in lieu of tax on goods (excise) and tax on service (service tax). GST will be a national level value added tax applicable on goods and services. One of the reasons to go the GST way is to facilitate seamless credit across the entire supply chain and across all States under a common tax base. It is a tax charged on goods and services, which will be levied at each point of sale or provision of service, in which at the time of sale of goods or providing the services by the seller or service provider can claim the input credit of tax which he has paid while purchasing the goods or procuring the service. This is because they include GST in the price of the goods and services they sell and can claim credits for the most GST included in the price of goods and services they buy. The cost of GST is borne by the final consumer, who can't claim GST credits, i.e. input credit of the tax paid. Therefore, GST is a broad based and a single comprehensive tax levied on goods and services consumed in an economy.

The dual GST proposed to be introduced is expected to expand the tax bases and simplify and harmonise the conception tax systems presently levied at both central and state levels. The central VAT (Cenvat) levied on goods at the production stage. In the proposed Central GST, the base will be expanded by merging the service tax with the Cenvat, extended to wholesale and retail levels and simplified to have only one or two rates. The merger of service tax in GST helps to ensure more comprehensive input tax credit and relieve the tax on exports. The State GST will expand the base of the prevailing VAT to include services. Harmonisation of tax rates and administration across states would bring about significant gain in minimising distortions and reducing compliance cost for taxpayers.¹

Reason behind moving towards GST (Need of GST)

Presently, the Constitution empowers the Central Government to levy excise duty on manufacturing and service tax on the supply of services. Further, it empowers the State Governments to levy sales tax or value added tax (VAT) on the sale of goods. This exclusive division of fiscal powers has led to a multiplicity of indirect taxes in the country. In addition, central sales tax (CST) is levied on inter-State sale of goods by the Central Government, but collected and retained by the exporting States. Further, many States levy an entry tax on the entry of goods in local areas. This multiplicity of taxes at the State and Central levels has resulted in a complex indirect tax structure in the country that is ridden with hidden costs for the trade and industry. Firstly, there was no uniformity of tax rates and structure across States. Secondly, there is cascading of taxes due to 'tax on tax'.

The introduction of GST would mark a clear departure from the scheme of distribution of fiscal powers envisaged in the Constitution. The proposed dual GST envisages taxation of the same taxable event, i.e., supply of goods and services, simultaneously by both the Centre and the States. Therefore, both Centre and States will be empowered to levy GST across the value chain from the stage of manufacture to consumption. The credit of GST paid on inputs at every stage of value addition would be available for the discharge of GST liability on the output, thereby ensuring GST is charged only on the component of value addition at each stage. This would ensure that there is no 'tax on tax' in the country.

GST will simplify and harmonise the indirect tax regime in the country. It is expected to reduce cost of production and inflation in the economy, thereby making the Indian trade and industry more competitive, domestically as well as internationally. It is also expected that introduction of GST will foster a common or seamless Indian market and contribute significantly to the growth of the economy. Further, GST will broaden the tax base, and result in better tax compliance due to a robust IT infrastructure. Due to the seamless transfer of input tax credit from one stage to another in the chain of value addition, there is an in-built mechanism in the design of GST that would incentivize tax compliance by traders.

Salient features of proposed GST:

The GST Framework could easily be one of the most important tax reforms to be tabled for discussion in the Parliament. It does bring with some problems, like **division of taxation power** between Centre and State. The GST will be applicable on the basis of **Destination principle**. So the GST has two components:-One levied by Centre (here in after referred to as **Central GST**) and The other levied by the States (here in after referred as **State GST**). The GST would be levied in 3 different forms-IGST, CGST, SGST. The dual GST proposed to be introduced is expected to expand the tax bases and simplify and harmonise the conception tax systems presently levied at both central and state levels. Some features of implementation of GST are as follows-

Dual GST: Both Centre and States will simultaneously levy GST across the value chain. Tax will be levied on every supply of goods and services. Centre would levy and collect Central Goods and Services Tax (CGST), and States would levy and collect the State Goods and Services Tax (SGST) on all transactions within a State.

Inter-State Transactions and the IGST Mechanism: The Centre would levy and collect the Integrated Goods and Services Tax (IGST) on all inter-State supply of goods and services. The IGST mechanism has been designed to ensure seamless flow of input tax credit from one State to another.

Destination-Based Consumption Tax: GST will be a destination-based tax. This implies that all SGST collected will ordinarily accrue to the State where the consumer of the goods or services sold resides. In particular, it would replace the following indirect taxes as these will be subsumed in the proposed GST:

Central Taxes to be subsumed

- Central Excise Duty
- Additional Excise Duty
- The Excise Duty levied under the Medicinal and Toiletries Preparation Act
- Service Tax
- Additional Customs Duty, commonly known as Countervailing Duty (CVD)
- Special Additional Duty of Customs-4% (SAD)
- Cesses and surcharges in so far as they relate to supply of goods and services.

State Taxes to be subsumed

- VAT/Sales Tax
- Central Sales Tax (levied by the Centre and collected by the States)
- Entertainment Tax
- Octroi and Entry Tax (all forms)
- Purchase Tax
- Luxury Tax
- Taxes on lottery, betting and gambling
- State cesses and surcharges in so far as they relate to supply of goods and services.²

Scope of GST in Indian Economy

Value added tax was first introduced by Maurice Laure, a French economist, in 1954. The tax was designed such that the burden is borne by the final consumer. Since VAT can be applied on goods as well as services it has also been termed as goods and services tax (GST). During the last four decades VAT has become an important instrument of indirect taxation with 130 countries having adopted this, resulting in one-fifth of the world's tax revenue. Tax reform in many of the developing countries has focused on moving to VAT. Most of these countries have gained thus indicating that other countries would gain from its adoption.

Tax policies play an important role on the economy through their impact on both efficiency and equity. A good tax system should keep in view issues of income distribution and, at the same time, also to generate tax revenues to support government expenditure on public services and infrastructure development. For a developing economy like India it is desirable to become more competitive and efficient in its resource usage. Apart from various other policy instruments, India must pursue taxation policies that would maximise its economic efficiency and minimise distortions to efficient allocation of resources, specialisation, capital formation and international trade. Traditionally India's tax regime relied heavily on indirect taxes including customs and excise. Revenue from indirect taxes was the major source of tax revenue till tax reforms were undertaken during nineties. The major argument put forth for heavy reliance on indirect taxes was that the India's majority of population was poor and thus sources of direct taxes had been limited. Another argument for dependence on indirect taxes was that agricultural income was not subjected to central income tax and there were administrative difficulties involved in collecting taxes. So GST has been introduced in India with a goal to uniform all Indirect taxes and also to maintain smooth flow of national Trade and International Trade.

Our government should educate small manufacturers and traders on the benefits of implementing the Goods and Services Tax (GST), while pushing opposition parties to get the GST Bill cleared in the Parliament, according to tax experts."GST is essential for our country. Most businesses do not want hassles dealing with multiple forms and rules. If there is a uniform taxation regime, then it is in their interest to comply. Most traders and business leaders would be more than willing as GST brings in more transparency.⁴

GST: Prospects for Indian Economy

The broad objectives of this study refer to analysing the impact of introducing comprehensive goods and services tax (GST) on economic growth and international trade; changes in rewards to the factors of production; and output, prices, capital, employment, efficiency and international trade at the sectoral level. The results and conclusions of this study are comparative static in nature and may not be interpreted as forecasts of the variables under analysis. The differential multiple tax regime across sectors of production leads to distortions in allocation of resources thus introducing inefficiencies in the sectors of domestic production. With regard to India's exports, this leads to lack of international competitiveness of the sectors which would have been relatively efficient under distortion-free indirect tax regime. Add to this, the lack of full offsets of taxes loaded on to the fob export prices. The export competitiveness gets negatively impacted even further. Efficient allocation of productive resources and providing full tax offsets is expected to result in gains for GDP, returns to the factors of production and exports of the economy. GST would lead to efficient allocation of factors of production. The overall price level would go down.³

Conclusion

The main objective of my study is to analyse the impact of introducing Goods and Services Tax (GST) on economic growth, International Trade, Internal Trade and on consumers. In India GST is expected to lead the efficient allocation of factors of production and leading to gains in GDP and exports. The broad framework of GST is now clear. The GST is to be a dual tax with both central and the State GST component charged on the same base. Thus all goods and services barring a few exceptions will come under GST base. Importantly, there will be no distinction between goods and services. Most of the indirect taxes would be subsumed under GST except for stamp duty, toll tax, passenger tax and road tax. All goods and services would be taxed with some exceptions. The items of basic necessities and goods of local importance are put under the exempted category. It would be unrealistic to expect a "flawless" GST. In fact, such a GST structure does not exist in any country where both the centre and states are empowered to charge the tax. In fact, the introduction of GST is only the next stage of Economic Reform. In that case, the introduction of GST will not be a very easier to implement so we should keep expectations at a realistic level also. However the move towards GST would be one of the most important indirect tax reforms in India. This will enhance the economic welfare of our country positively.

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Logical Thinking And Creativity: Learners Perspectives

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Introduction

Logical thinking is the rational cognitive process of reflecting objective reality actively with the help of concepts, judgments, reasoning and other forms of thinking. Through abstraction and analysis and thinking about the sensual materials, and the thinking process of discarding the dross and selecting the essential, eliminating the false and retaining the true, getting from one to the other, getting from the outside to the inside, logical thinking requires us to put the specific image and individual properties of things aside, reveal the properties and nature of things, form concepts and use them to judge and reason to reflect the objective reality generally and indirectly. Revealing the nature of things through abstractive gives it the features of consciousness, process, and necessity. The basic forms of logical thinking include concepts, judgments and reasoning. Logical thinking ways mainly include induction and deduction, analysis and synthesis, as well as from the abstract to the concrete and so on.

There are differences between the two concepts of logical thinking and the logical way of thinking. The feature of logical thinking is that it is first based on the 'should-be' point; from this perspective it begins to establish a viewpoint, then propose illustrations, and then on the basis of illustrations begins to argue that the viewpoint is correct or to extract the viewpoint from tremendous arguments, and finally draws the logical and normative conclusion with induction and deduction. It is a thinking way in which the brain, with respect to the targeted objects, conducts induction, summary, abstract, and reasoning – an ordered thinking method of inductive reasoning. This thinking way presents the advantage of normativity and easy understanding.

The logical thinking way can be divided into *argumentum fortiori* and *argumentum contrario*, the former starts with induction, namely, from the individual to the general; the latter begins with deduction – from the general to the individual. Arrange the work in an orderly way; design it as a whole, and then the plans, measures, methods, tricks, strategies, details, and control, which are the positive thinking method of brain reasoning. Or it can be started from the bottom; making sure how to get higher and at last get to the top to form a tower. These are two kinds of reasoning: *argumentum fortiori* and *argumentum contrario*. The normativity and rationalization of this method is very helpful to keep one's presence of mind in guiding the overall work.

Critical thinking is the ability to think clearly and rationally about what to do or what to believe. It includes the ability to engage in reflective and independent thinking. Someone with critical thinking skills is able to do the following :

- understand the logical connections between ideas
- identify, construct and evaluate arguments
- detect inconsistencies and common mistakes in reasoning
- solve problems systematically

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- identify the relevance and importance of ideas
- reflect on the justification of one's own beliefs and values

Critical thinking is not a matter of accumulating information. A person with a good memory and who knows a lot of facts is not necessarily good at critical thinking. A critical thinker is able to deduce consequences from what he knows, and he knows how to make use of information to solve problems, and to seek relevant sources of information to inform himself. Critical thinking should not be confused with being argumentative or being critical of other people. Although critical thinking skills can be used in exposing fallacies and bad reasoning, critical thinking can also play an important role in cooperative reasoning and constructive tasks. Critical thinking can help us acquire knowledge, improve our theories, and strengthen arguments. We can use critical thinking to enhance work processes and improve social institutions.

Some people believe that critical thinking hinders creativity because it requires following the rules of logic and rationality, but creativity might require breaking rules. This is a misconception. Critical thinking is quite compatible with thinking "out-of-the-box", challenging consensus and pursuing less popular approaches. If anything, critical thinking is an essential part of creativity because we need critical thinking to evaluate and improve our creative ideas.

A slow learner is a child of below average intelligence, whose thinking skills have developed significantly more slowly than the norm for his/her age. This child will go through the same basic developmental stages as other children, but will do so at a significantly slower rate. However, this development, while being slower, nevertheless be relatively even.

On the other hand, a child with specific learning disability, is one of average or above average intelligence who has specific difficulties which can make learning very difficult. There may be deficits in any of the basic central nervous system functions, which have to do with the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities ie attention, memory, language, auditory and visual perception, motor coordination and planning, spatial orientation, impulse control and sequencing. In short, if there is a discrepancy between the child's potential and actual achievement

Objectives

1. To study the difference in Logical thinking of learning disabled, slow learners and normal learners.
2. To study the difference Creative thinking of learning disabled, slow learners and normal learners.

Hypotheses

Hypothesis-1

There will be significant difference among learning disabled, slow learners and normal learners in Logical thinking.

Hypothesis-2

There will be significant difference among learning disabled, slow learners and normal learners in Creative thinking.

Methodology

Research Design

An examination configuration is the game plan of conditions for accumulation and investigation of information in a way that expects to consolidate significance to the exploration reason with economy in system. Indeed, the examination configuration is the calculated structure inside

which research is directed; it establishes the blue print for information gathering, estimation and investigation of information. Picking a most reasonable plan is the significant advance in any exploration.

In this specific research, the examiner attempted to comprehend the logical and creative thinking of learning disabled, slow students and normal students make a relative examination of the three gatherings. Unmistakable research configuration is utilized to test the validity of the speculation of the investigation.

Procedure

In this examination, the specialist utilized purposive inspecting method. The populace for the present examination characterized as learning disabled, slow students, and typical students school understudies from Ernakulam locale. The example comprise of 60 learning handicapped 60 slow learners and 60 ordinary students, having a place with class 8-12. Purposive sampling is described by the utilization of judgment and a conscious exertion to acquire delegate tests by including apparently ordinary regions or gatherings in the example (Kerlinger, 1998). The age of the subjects ranges from 13 to 18.

In the examination, the examples of learning incapacitated and moderate students are chosen just distinguished cased by Vigyan vally learning centre, Ernakulam.

Vigyan Valley Learning Center, under the Vigyan Valley Education Trust, is an instructive office that centers the understudies with learning handicapped and moderate students, and is resolved to react suitably and adequately to their adapting needs. The Center is focused on finding a way to guarantee that these understudies can seek after their investigations without disservice.

Tools

Tool 1: Styles of learning and thinking (SOLAT)

Tool 2: Mental Health Profile

General Data Sheet

Data collection

The data were collected with the help of the clinical psychologist, special teachers and principals of the particular schools. The questionnaires were distributed among normal learners, learning disabled and slow learners. In this study, the clinical psychologists early identified cases of learning disabled, slow learners and normal learners are selected

The respondents were met individually and appraised the purpose of the research. Also given them verbal guidance to fill the questionnaire in a most purposeful manner. All the questionnaires were also containing instructions on how to fill the questionnaires.

The subjects were allowed to complete the questionnaire at leisure and each subject took around 1 hour to complete the questionnaire. Necessary clarifications were provided as and when requirement arisen.

Analysis of Data

The collected data were coded and then strictly checked. Each item were appropriately coded and entered into the master sheet according to the identification code.

Table 1: Summary of ANOVA of logical thinking and creative thinking of learning disabled, slow learners and normal learners

Variables	Source	Sum of squares	Df	Mean Square	F
Logical Thinking	Between Groups	.71	2	.35	1.52
	Within Groups	41.26	177	.23	
	Total	41.97	179		
Creative Thinking	Between Groups	80.04	2	40.02	54.60**
	Within Groups	129.73	177	.73	
	Total	209.77	179		

** Significant at 0.01 level

Table 2: Mean and standard deviation of learning disabled, slow learners and normal learners based on their logical thinking and creative thinking

Groups		Logical Thinking	Creative Thinking
Learning disabled	Mean	4.70	4.10
	N	60	60
	Std. Deviation	.64	1.05
Slow learners	Mean	4.83	3.30
	N	60	60
	Std. Deviation	.37	1.01
Normal learners	Mean	4.83	4.93
	N	60	60
	Std. Deviation	.37	.25
Total	Mean	4.79	4.11
	N	180	180
	Std. Deviation	.48	1.08

A significant result was obtained in the one way ANOVA test, in which $F= 86.18$ (significant at 0.01 level) and it indicates that there are significant differences among the learning disabled, slow learners and normal learners. The present investigation tested the logical thinking and creative thinking of learning disabled, slow learners and normal. The F ratio obtained in the analysis was 54.60 it was significant. This means that creative thinking of three groups is significant difference. It was significant at 0.01 level. The results are presented in table 1. Since analysis of variance does not show which pair of groups show significant difference, further analysis was carried out using Shaffee Test.

In the comparison of three groups of subjects, under study, for the variable logical thinking, the F- ratio obtained is 1.52 and is not significant. These indicate that learning disabled, slow learners and normal learners not differ among themselves in the variable.

The F- ratio obtained on comparing the three groups for the variable creative thinking is 54.60, and is significant statistically. This show that learning disabled, slow learners and normal learners differ among themselves in the variable creative thinking. The Scheffe procedure is computed in this case, since the F- ratio is significant

Table 3: Results of Scheffe Procedure for the Logical thinking of learning disabled, slow learners, and normal learners

Variable	Three groups	Three groups	Mean Difference	Sig.
Logical Thinking	Learning disabled	Slow learners	-.13	NS
		Normal learners	-.13	NS
	Slow learners	Learning disabled	.13	NS
		Normal learners	.00	NS
	Normal learners	Learning disabled	.13	NS
		Slow learners	.00	NS

NS- Not significant

The results given in Table 3 indicate that logical thinking of learning disabled, slow learners and normal learners are no significantly different.

The results are supporting the studies with the findings of Fincham (1979) two issues regarding the cognitive skills of learning disabled children are investigated: (1) logical thinking on tasks comprising physical and social materials and (2) the relationship between performance on these two measures. Learning disabled and normal achieving 8- and 9-year-old boys, approximately equated on the variables of IQ, age, and socioeconomic status, were administered three conservation tasks and Flavell's measure of cognitive role-taking. No performance differences were found between the two groups. However, conservation and role-taking ability were significantly related in the normal group but not in the learning disabled group. These results are discussed in terms of the criteria used to identify learning disabled children and the structure of their intellect.

The results are supporting the studies with the findings of Riley (1989) investigated the cognitive abilities as measured by the Inventory of Piaget's Developmental Tasks (IPDT) of male and female fourth and fifth graders with learning disabilities A two-way analysis of covariance revealed no significant mean difference in cognitive ability between students with learning disabilities and non disabled students. No significant differences existed in performance between males and females. Multiple regressions showed that a linear combination of reading and mathematics achievement yielded a significant positive correlation to cognitive ability.

The results are supporting the studies with the findings of Derr (1985) investigated the development of the cognitive stage of concrete operations, specifically conservation, in learning disabled children who had significant deficits in mathematics achievement. Twenty-two 9-12 year old learning disabled children with severe mathematics disabilities, and eighteen normal control students with average achievement in mathematics, were given six tests of conservation. Significant group differences appeared which indicated that many learning disabled children have not yet developed the concept of conservation, even in the upper elementary grades. This lag in cognitive development may constrict the ability to understand mathematics instruction as it is often taught today.

The results are supporting the studies with the findings of Dirk (2011) cognitive scientists have studied internal cognitive structures, processes, and systems for decades in order to understand how they function in human learning. The results also indicate that supportive information is an important aid for developing cognitive structures while solving inductive reasoning tasks.

The results are supporting the studies with the findings of Tobin (1981) the paper describes the development of the Test of Logical Thinking (TOLT) to measure five modes of formal

reasoning: controlling variables, proportional reasoning, combinatorial reasoning, probabilistic reasoning, and correlational reasoning. Each of the 10 items requires participants to select a correct response and justification from a number of alternatives. Analysis of data from 682 students from grades 6 through college indicated high test reliability (coefficient $\alpha = .85$) and provided confirmation that the test measured one major underlying dimension termed *formal thought*. A correlation of .80 ($p < .0001$) suggested a strong relationship between the two measures of formal reasoning.

The results are supporting the studies with the findings of Goodrum (2009) in general terms the study indicates for the three schools examined the relationship between the academic grade of junior secondary advanced science students and creative right hemispheric thinking is weak, but the relationship between the student's grade and rational logical thinking is much stronger. It may be that such relationships are a natural consequence of maturation and not related to the work done in the school. Most educators would feel that the school system has some effect. If each child is going to realize one's full thinking potential, it is important that the creative and holistic modes of thinking be developed. In a future world which will be immersed in rapid change the need for this type of thinking is even more acute.

Table 4: Results of Scheffe Procedure for the Creative Thinking of learning disabled, slow learners, and normal learners.

Variable	Three groups	Three groups	Mean Difference	Sig.
Creative Thinking	Learning disabled	Slow learners	.80	**
		Normal learners	-.83	**
	Slow learners	Learning disabled	-.80	**
		Normal learners	-1.63	**
	Normal learners	Learning disabled	.83	**
		Slow learners	1.63	**

Note: * The mean difference is significant at the 0.01 level.

The results given in Table 4 indicates that creative thinking of learning disabled, slow learners and normal learners are significantly different. There is significant difference between learning disabled compare with normal learners and slow learners in the variable creative thinking. The mean difference being .80 and -.83 respectively. The mean difference being -.80 and -1.63 respectively. The results indicate that normal learners differ significantly among learning disabled and slow learners. The mean difference being .83 and 1.63 respectively.

The result is supporting the studies with the findings of *Abrami* (2008) critical thinking (CT), or the ability to engage in purposeful, self-regulatory judgment, is widely recognized as an important, even essential, skill. This article describes an ongoing meta-analysis that summarizes the available empirical evidence on the impact of instruction on the development and enhancement of critical thinking skills and dispositions. The findings make it clear that improvement in students' CT skills and dispositions cannot be a matter of implicit expectation. As important as the development of CT skills is considered to be, educators must take steps to make CT objectives explicit in courses and also to include them in both preserves and in-service training and faculty development.

The result is supporting the studies with the findings of *Clapham* (1998) analyzed the structure of the subscores obtained through streamlined scoring of 334 adults' responses to Figural Forms A and B of the Torrance Tests of Creative Thinking (TTCT). The results of commonality analyses confirmed that the five subscores of each form provide very little

unique variance and suggested that a new subscore, resistance to premature closure, may be a better indicator than fluency is of the divergent thinking skills measured by **the** figural TTCT

The result is supporting the studies with the findings of Sullivan and Tim (1969) Attitudes acquired by a child in his early school years influence his later decision to continue schooling or drop out. The Creative Problem Solving Class students are given an opportunity to progress at their own pace. Every creative process is utilized, and a better self-image is the result.

Conclusion

The study revealed that creative thinking of learning disabled, slow learners and normal learners are different.

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The Relationship between Internet Addiction, Personality And Mental Health of University Students

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Abstract

The primary aim of the present study is to examine the relationship between internet addiction, personality and mental health of the university students. A correlational survey design method was employed to achieve the objective of present study. A total of 137 students (professional 68 and Non-professional 69) participated in this research. Self-made internet addiction tests and standardized NEO (FFI) and PMHI and descriptive statistics have been used to analyze data. The result of the study revealed that a negative and significant relationship between internet addiction and mental health, and also found a negative and significant relationship between internet addiction and openness to experience, agreeableness and conscientiousness, and we found a positive and significant relationship between internet addiction and Neuroticism.

Keywords: Internet Addiction, Personality, Mental Health, Students, University.

Introduction

Internet is an important part of human beings' life. It is an effective tool of sharing information and communicating with each other. But, it is problematic that excessive use of the Internet becomes a causes of internet addiction. The issue of internet addiction was first addressed by Kimberly Young in her PhD thesis in 1996 (Young, 1996). Later on many countries have identified that the internet addiction is hazardous for public health. A number of countries are in support of education, research and treatment for internet addiction (Block, 2008). A number of researchers found that excessive use of computer, digital gadgets are the main causes of internet addiction. It's also found that internet addiction is also causes of depression and anxiety of users. The study by Dong et al. (2011) found that higher score of depression, anxiety, psychoticism is prone to internet addiction. An internet addicted person losses control of internet uses; individual are always engaged in various types of online activities. The individual has less sleep, skips his/her meals, always being busy with online activities. Internet addiction is an impulsive control disorder according to diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorder (DSM V, 2008).

A number of researchers found that different types of personality traits are related with different online activities (A.R. Kayis, et al. 2016). The clinical studies found that internet addiction is also associated with a specific pattern of behaviors, and internet addiction and personality traits are closely associated. A number of studies found that neuroticism is positively associated with internet addiction, whereas openness to new experience, conscientiousness, extroversion and agreeableness are negatively related with internet addiction. So, it becomes evident from the above discussion that the personality traits are very important in terms of internet addiction.

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Personality traits significantly affects the internet user significantly (Weibel, Wissmath & Groner, 2010). Some researchers also found that, there is no relationship between openness to new experience and excessive internet users (Servido, 2014, Rondler, Horzun & Vollmer, 2014), whereas others found positive association between them.

A number of psychometric disorders are correlated with internet addiction. A lot of studies found that internet is negatively associated with mental health. Some researchers found that internet addiction is associated with low self-esteem (Naseri L et al. 2015), poor sleep (Kim, et al., 2010), and suicide (Kim, et al., 2006). A survey was conducted in an Indian context included 2755 users of internet (1392 male and 1363 female). This study found that 1.3 % users (2% male and 0.6% female) were addicted to internet. Another a study conducted on 2114 (1204 male and 910 female) internet user diagnosed with internet addiction using a self-reported questionnaire reveled that internet addicted people had higher ADHD (Higher Attention Deficit Hyper-Activity Disorder) symptoms, and social phobia among male adolescents (Yen, et al., 2007). Furthermore, in a study found correlation between internet addiction, and anxiety, stress as well as depression (Younes, et al., 2016).

Objective

1. To access the internet addiction, personality and mental health of professional and non-professional students.
2. To find out the relationship between internet addiction and personality of professional students.
3. To find out the relationship between internet addiction and mental health of professional students.
4. To find out the relationship between internet addiction and personality of non-professional students.
5. To find out the relationship between internet addiction and mental health of non-professional students.

Hypothesis

1. There will be no significant relationship between internet addiction and personality of professional students.
2. There will be no significant relationship between internet addiction and mental health of professional students.
3. There will be no significant relationship between internet addiction and personality of non-professional students.
4. There will be no significant relationship between internet addiction and mental health of non-professional students.

Methods

Design and Respondents

A correlational survey design was used in present study. The participants of study were studying in Kurukshetra University, Kurukshetra and Ch. Devi Lal University, Sirsa. Total 137 students (Professional 68 & Non-Professional 69) were participated in this survey. All students were studying in both professional and non-professional courses. The age range of entire sample were 18 to 25 years.

Measurements

1. Internet Addiction Tool prepared by Sandeep Dahiya and Dr. Dinesh Chahal (2019).
2. NEO Five Factor Personality (NEO-FFI), the short version, is 60 items (12 items per domain). The test was developed by Paul T. Costa, JR. and Robert R. McCrae (1992).

3. Positive Mental Health Inventory by Dr.C.D. Aghesh and Dr.R.D. Helode (2008), Published by Psychoscan, Wardha.

Statistical techniques to be used

- Descriptive statistics (Mean, S.D.)
- T-test
- Pearson Correlation of coefficient

Delimitation of the study

1. The study was delimited to universities of Haryana.
2. The study was delimited to P.G. and U.G. students of universities Haryana.
3. The study was delimited in professional and non-professional students in universities.
4. The study was also delimited to variables to Internet Addiction association with Personality and Mental Health.

Analysis of Collected Data

Analysis of data is divided in two sections. The first section deals with mean, S.D. and Pearson correlation. Second section of analysis deals with the stepwise multiple correlation. Objective:1. To access the internet addiction, personality and mental health of professional and non-professional universities students.

Table:1

Variable	Courses	Mean	S.D.
IAQT	Professional	9.02	4.57
	Non-Professional	9.35	4.64
M.H.	Professional	20.26	4.45
	Non-Professional	19.63	4.72
N	Professional	21.85	6.46
	Non-Professional	22.68	7.05
E	Professional	27.38	5.80
	Non-Professional	27.05	5.03
O	Professional	25.02	5.00
	Non-Professional	25.89	4.37
A	Professional	26.69	5.24
	Non-Professional	26.56	4.77
C	Professional	30.55	6.42
	Non-Professional	28.60	6.30

Table: 1 shows the mean and S.D. value of professional and non-professional students with regard to internet addiction, personality and mental health.

Objective: 2. To find out the relationship between internet addiction and personality of professional students.

Hypothesis: 1. There will be no significant relationship between internet addiction and personality of professional students.

Table: 2.

Variable	Neuroticism	Extroversion	Openness to Experience	Agreeableness	Conscientiousness
Internet Addiction	.371**	-.364**	.039	-.180	-.616**

** correlation is significant at the 0.01 level (2-tailed)

* correlation is significant at the 0.05 level (2-tailed)

Table 2 showed that the internet addiction is positively associated with neuroticism and significant at 0.01 level and negatively associated with extroversion and conscientiousness and significant at 0.01 level. In the similar line of research Kakasaki, Tselios and Katsanos (2017) found that a negative, and significant correlation between internet addiction and personality. A number of studies found that a positive and significant correlation between neuroticism and internet addiction (Costa & McCrae 1992, Cao, Su, Liu & Gao 2007, Hardie & Tee 2007).

Objective: 3. To find out the relationship between internet addiction and mental health of professional students.

Hypothesis: 2. There will be no significant relationship between internet addiction and mental health of non-professional students.

Table: 3.

Variable	Mental Health
Internet Addiction	-.296*

* correlation is significant at the 0.05 level (2-tailed)

Table 3 shows that internet addiction is negatively associated with mental health and significant at 0.05 level. Support for the present results provided by Kasacis & Oreskovic (2017), they revealed that association between mental health and internet addiction was negative and statistically significant.

Objective: 4. To find out the relationship between internet addiction and personality of non-professional students.

Hypothesis: 3. There will be no significant relationship between internet addiction and personality of non-professional students.

Table: 4.

Variable	Neuroticism	Extroversion	Openness to Experience	Agreeableness	Conscientiousness
Internet Addiction	.333**	.031	-.051	-.238*	-.313**

** correlation is significant at the 0.01 level (2-tailed)

* correlation is significant at the 0.05 level (2-tailed)

Table 4 shows that internet addiction is positively associated with neuroticism and significant at 0.01 level and internet addiction is negatively associated with agreeableness and conscientious and significant at 0.05 level. Sulaiman, Shin, & Rofaie, (2019), were also found that a negative and significant correlation between internet addiction and agreeableness.

Objective: 5. To find out the relationship between internet addiction and mental health of non-professional students.

Hypothesis: 4. There will be no significant relationship between internet addiction and mental health of non-professional students.

Table: 5.

Variable	Mental Health
Internet Addiction	-.424**

** correlation is significant at the 0.01 level (2-tailed)

Table 5 shows that internet addiction is negatively associated with mental health and significant at 0.01 level. Empirical support for the negative and significant correlation between internet addiction and mental health reported by Madhuri & Vedpal (2016).

Discussion

The present study was done with correlational survey design, and found the relationship between internet addiction, personality and mental health of university students. The respondents were studying in professional and non-professional courses in Kurukshetra University, Kurukshetra and Ch. Devi Lal University Sirsa. The data collection tool of present study is standardized and non-standardized. The results were analyzed by SPSS software. We found that there is a negative and significant relationship between internet addiction and mental health of both professional and non-professional students. The age group of all participants were 18 to 25 years. The obtained result of present study was similar to previous study conducted by Şenormancı, et al., (2014), and Dong et al. (2012). An excessive user of internet had obtained higher score of neuroticisms. On the other side excessive internet use and openness to experience, agreeableness and conscientiousness move in opposite direction. Whereas, excessive internet use and mental health also move in opposite direction.

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Tectonic Shift in Supply Chain techniques: From Ancient to Contemporary

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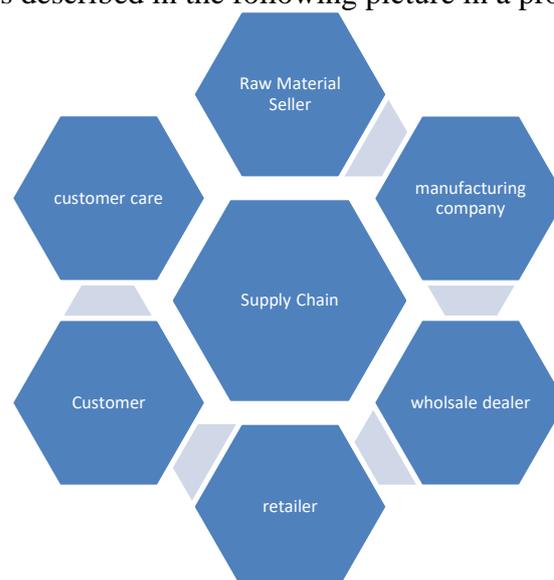
***Abstract:** Business plays a major role in the economy of any country. It gives maximum income to national development. Business or industrial sector need proper management. In management of any organization, there are several aspects that needs to manage. Current paper is an effort to focus on the market management. In market management supply chain management is very crucial part to manage, but it is essential to manage. Therefore, the comparison of traditional method of supply chain and new technical method of management is done.*

***Key Words:** Market management, customer, supply chain, inventory, ERP, etc.*

Introduction

India is under development country. The rapid growth in industrial sector is one of the feature of India as developing nation. Today, in National growth, the development of business, industries, entrepreneurs play a vital role. Being, the maximum part of rural sector, India has two types of industries i.e. Small Scale and Large Scale. Tradition helps to use new method with overcoming the drawback of traditional method. Hence, it is important to study on the different techniques of market management in which supply chain is one of the important element.

The method which is involved with inventory management, involved with interconnection and communication within various business sectors may called as a Supply chain. It starts from purchasing raw material to selling finished goods direct to the customers. The network of supply chain is described in the following picture in a proper manner:



Picture no. 0.1: The Supply Chain

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Supply Chain Management

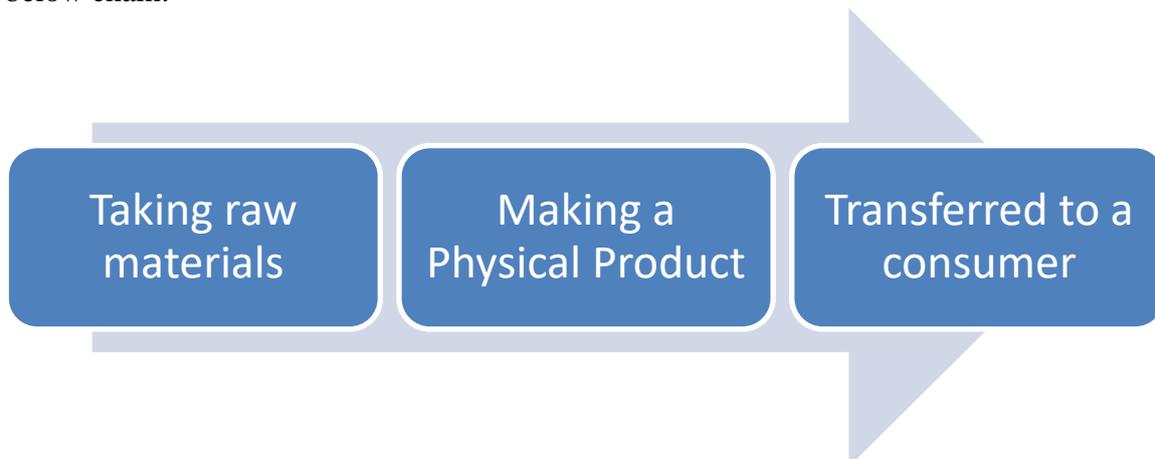
Supply Chain Management (SCM) is the process of control Unit of purchasing inventory. The picture number 0.1 explains the major components of supply chain i.e. Raw material seller, manufacturing company, wholesale dealer, retailer, customer and new one component i.e. customer care. This all chain is for the customers' satisfaction. Because, if you need maximum output in minimum input, then you need to work for customers satisfaction. Hence in modern technique, this new component as customers' satisfaction is added. The current chain has six components while traditional the traditional supply chain process involves following three components:

- a. Taking raw materials
- b. Making a Physical Product
- c. Transferred to a consumer..

One more important thing with addition in both types is transportation. This all means that a company needs to manufacture and distribute its products to its final customers which includes the suppliers of raw materials, components and services provided for the customers' satisfaction.

Ancient/Traditional Method of Supply Chain:

Traditional method has explained above are having three major elements described in the below chain:



Picture 0.2 Traditional Method of Supply Chain

As Given in the above picture 0.2 , the traditional method of supply goes with the sequence of Taking Raw Material, Making physical Product and transferred the finished good to customer.

a. Taking/ purchasing Raw Material:

This is the first step of supply chain in inventory management. Placing the order before time or in time and gather the raw material for the manufacturing process is the first step in traditional method of supply management.

b. Manufacturing Process:

In the above picture it is called as making physical product. After purchasing the raw material, this process of manufacturing goods will starts and the physical product will get ready.

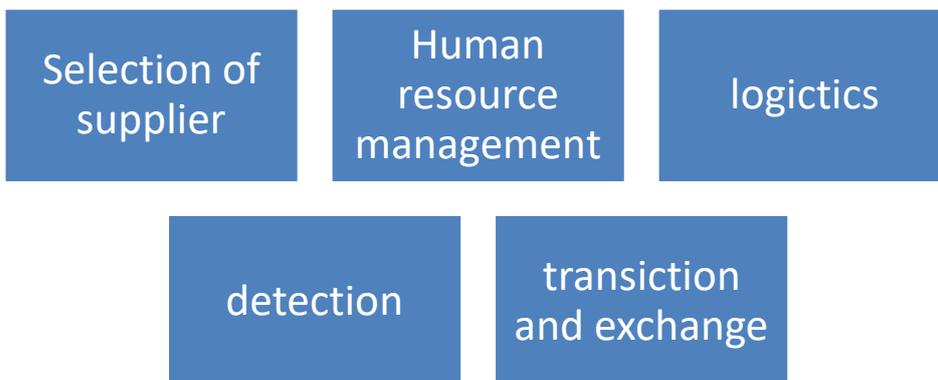
c. Transfer Good to Consumers:

This is the main motive of any organization as to provide the finished goods in time to the customers. Sometimes it may be by two ways. Manufacturer to wholesaler and wholesaler

to retailer and retailer to customers. May be direct to customer. It is depend on the policy of an organization.

Modern Method of Supply Chain

As current age is the age of technology. The change is part of each and every sector of human life. Then how could it has excuse for enterprises. There are several new methods, new ways of supply management in current era. There are several new methods of supply management. Online supply chain is one of the notable and easy method of new era. In the modern method of supply management, it is very easy to save time, to get material in desired time and desired way. It can give immediate feedback which is useful to recover the lacunas of previous work and so on. There are various soft-wares available in the market which will help and maintain proper record of supply chain forever. Automation is one of the major feature of modern technique of supply chain. Few major features of modern supply chain are given in below picture:



Picture Number 0.3 Modern Method of Supply Chain

As shown in the above picture 0.3, there are few important linkage of work in the supply chain which are used in modern technique of supply management.

a. Selection of Supplier:

In ancient or traditional method, there are limited sources to get information of suppliers of all types i.e. may be raw material seller to direct retailer. This is due to the automation of the process. Online resources of getting information about these several option of suppliers are available. So No option with their quality and rank of the quality product from naïve place. Even, now-a-days, there are the facilities of exchanging the goods, if you are not satisfied with the quality.

b. Human Resource Management:

The term Human Resource Management, here indicates the relationship between the partners, customers and employees working in the concern chain. Due to hi-tech digital system of supply chain, good relations are maintained easily as there are written terms and conditions by supplies when we ask for any product. Until and unless we will not agree the terms and condition, the next step for purchasing from the supplies is blocked. Hence. Totally transparency between customers and supplier with legal acceptance is possible in the automotive method of Supply Chain.

c. Logistics:

Here, the term logistics is defined in terms to the different steps of supply i.e. routine, dispatching and maintenance. Most of the people are aware about the online process of purchasing in which logistics. What are the routine work policies of supplier, how the goods are dispatched and the whole process of dispatching the goods is maintained is clear. Even there are several suppliers who provide the updates of dispatched good in the geo-trace method up to delivering the expected goods to concern customers.

d. Detection and Correction:

No one is hundred percent perfect. Continues improvement and total quality maintenance are the mandatory part of an organization. When, there is detection of any fault regarding to the quality of the good, the corrections are needed. In the technical quality maintained process, there are soft-wares available in the market which helps to find out the fault or which helps to detect the fault within few second while in traditional method, this faults are the part of users complaints.

e. Transaction and Exchanging Goods:

It is easy very easy method of communication. As new methods of supply chains are mostly depend on online, it seems very easy for the transaction. Having cash in hand, go with a large amount of rupees is risk for an individual. There is risk of robbery or physical attack due to online transaction. Trust matters there, because now-a-days, there are many news of fraud in online purchasing and supply method. But few companies are having good status, rank and policies to as cash on delivery, exchanging faulty product etc.

ERP- an example of modern supply Chain

Enterprise Resource Planning (ERP) is one of the new method of supply management. It is very useful to gain visibility in the supply process in all kinds of operations running in an organization. It will help to increase speed, efficiency and overall customer satisfaction related to supply management. The aims of an organization in respective to supply management:

- a. To interact with customers and suppliers.
- b. To purchase the proper raw material
- c. To bring finished goods in the market
- d. To combat with un-efficiency.
- e. To reduce the waste
- f. To maintain the record of all supply chain right from raw material to customer.

To achieve the above all aims, Enterprise Resource Planning method of supply management is invented. ERP is called as superior supply chain management because it has following key roles in supply management:

A. Planning:

Planning is the basic function of any organization. Or it may be the key of organizational management as well as supply management. Selection of marketing channel, selection of proper method of inventory management, define the production policies etc. must be planned in an advance and should keep record of it for long time is important task of supply planning. ERP has subheads and sub-tools which may help in planning theses all tasks.

B. Use of ERP Soft-ware Application:

In an organization handling the procurements of goods, supply of goods and services as well as other resources needed for the supply are handled easily with the use of ERP soft-ware application.

Thus, these and other as monitoring, accessing the work, measuring the result, getting the customer's view about the product etc. numerous tasks are done easily with the Help ERP. Organizations are using these all at their level and work best for smooth working of organization in respect to supply management.

Traditional Vs Modern Method of Supply Chain:

Ahmed, Divisional Supply Chain Manager at Eaton, discusses the difference between traditional purchasing method and modern purchase method in a tabulated form. His table is as below:

	TRADITIONAL PURCHASING	STRATEGIC SOURCING
COST	Lowest possible cost per unit	Best possible value and total cost of ownership
QUALITY/ QUANTITY	High volumes for generating mass discount	Highest possible quality for lowest possible cost
SKILLS SET	Negotiation, analytical, proficiency skills	Soft negotiating, solving, collaborating, cross-functional skills based on mutual respect and compromises
LOCATION	Locally known supplier base	Global supplier network
PROCEDURE	"what to buy and from whom"	Requesting and comparing for identifying best cost-quality-service-offer
RELATIONSHIP	Based on acquaintanceship	Intense and sustainable
SUPPLIER PERFORMANCE	Effective (completing activities and achieving goals, by doing the right things)	Efficient (lean approach: achieving high outputs with minimum inputs, by doing the things right)
ADJUSTMENTS	Reactive approaches for failure improvement	Proactive approaches for failure prevention

Table 0.1 Traditional Purchasing and Modern Purchasing (Source- Internet)

(http://www.smartprocurement.co.za/archives/7_key_differences_strategic_sourcing_vs_traditional_purchasing.php#sthash.KDY1QWdH.S0LEQIsZ.dpbs)

As explained by Ahmed, Divisional Supply Chain Manager at Eaton, we found the changes in cost, quality, skill set, location, procedure, relationship, supplier performance and adjustment are the element in which we found the change between traditional and modern supply chain. Apart from it, advertising method is different for these two supply methods. The cost of advertising is also having great gap in these two supplying methods. There are few limitations of using technical tools and assets which required for new method of supply chain. Global market is one the best outcome of supply chain in modern age, but it is not easy to deal everyone.

Conclusion: Thus, we can conclude that these are many similarities and several differences between supply chains ancient and modern method. After all customers' satisfaction is main aim of any organization. To complete this aim, one needs to use the suitable method of supply management. No matter it is traditional or modern, the thing is it should be proper, beneficiary to all connected with this supply chain. The profit of organization is depend on

the customers' satisfaction. Three elements in supply chain are common as availability of raw material, manufacturing of finished goods and selling the finished goods to the customers. One can use traditional method, one can use modern method or can use combination of two methods. It is totally depend on the customers, their living area, their development in technical sectors, availability of internet and other facilities that required for online purchasing. Therefore, are per the need, available facilities towards the customers, the supply management policy should be defined by organization.

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Carbon Accounting: Some Issues With Special Reference To India

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Dr. Pradipta Banerjee**

Abstract

The necessity of carbon accounting has emerged in the recent past as a result of emergence of the concept of carbon credit. In order to curtail the worse impact of global warming resulting from excessive emission of greenhouse gases in the atmosphere, the United Nations came forward through the convention United Nations Framework Convention on Climate Change (UNFCCC) in the year 1992 followed by adoption of Kyoto Protocol in the year 1997 which came into force in the year 1997. The Protocol made it mandatory and legally binding to the signatory developed countries (as those countries were the major contributors of emission of greenhouse gases) to reduce their emission level of greenhouse gases and suggested some mechanisms for achieving their targets of emission reduction which gave birth of the carbon trading and carbon market. In carbon trading, India has emerged as one of the largest beneficiaries in terms of earning revenue through sale of carbon credits having second highest number of Clean Development Mechanism (CDM) projects after China. Therefore, developing a framework for carbon accounting was felt for the country but till now no uniform accounting of carbon accounting. The present paper has investigated the issues associated with carbon accounting in India and found that our country is committed to curtail emission of greenhouse gases in line with national sustainability priorities of our country but is lagging behind in formulating proper regulatory and accounting policies in the areas of measurement, recognition and reporting of carbon credits generated from the CDM projects.

Keywords: *Carbon accounting, UNFCCC, Kyoto Protocol, CDM, Carbon credit.*

Introduction

The term 'carbon accounting' has emerged from the need for monitoring the worse impact of increasing global warming worldwide. In the past, the major damages done to the environment by the developed nations through massive industrialization and the urge for high economic growth but later a need was felt for sustainable development and for protection of environment. With that objective, United Nations Framework Convention on Climate Change (UNFCCC) was adopted in the year 1992 to stabilize the concentration of greenhouse gases (most importantly carbon dioxide with others like, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride) in the atmosphere through adoption of non-binding and flexible policies for signatory countries. Thereafter, in 1997 the Kyoto Protocol came into force with the objective to reduce greenhouse gas emission and came up with few mechanisms to curtail the emission of greenhouse gases worldwide within a predetermined period. As the major emitter of greenhouse gases are the developed countries, the Protocol made it compulsory and legally binding to reduce carbon footprints

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through trading of carbon credit or setting up of industries at less developed and developing countries to generate or earn carbon credits from such projects. The objective is to produce lesser amount of greenhouse gases globally through establishment of energy efficient and latest technology through sustainable methods and reducing carbon footprints. Besides, our country with other countries voluntarily committed to reduce carbon footprints and ratified the Paris Agreement in 2016 and pledged for 33-35% reduction of greenhouse gas emissions by 2030 compared to 2005 level. For India, the major sources of emission are coal power plants, rice paddles and cattle. According to Potsdam Institute for Climate Impact Research, India's greenhouse emission in 2015 stood at 3571million tonnes of carbon dioxide equivalent and increased three times since 1970. The present paper attempts to discuss the issues associated with of carbon accounting in India.

II. Literature review

Dhar (2012) in his study discussed on accounting and disclosure practices of carbon emissions trading in India from clean development mechanism (CDM) projects. He pointed out that in the absence of mandatory guidance on Certified Emission Reduction (CER) accounting, different accounting practices were followed by entities in India leading challenges to the users of financial statements. He also suggested that a new set of social accounts are utmost essential for comparability and reliability of accounts. Jamal (2016) has investigated issues and challenges of carbon credit accounting with reference to India. He observed that there exists no uniform accounting practice and disclosure norms for carbon credits generated from CDM projects. Hence there exists some issues relating to accounting, legal and taxation which need to be resolved. Chaudhuri and Barman (2019) made a survey on current measuring and reporting practices on carbon accounting in India along with identifying major issues and challenges of carbon accounting in India. The study proposed for consensus at the national and international level government bodies and institutions for arriving at common opinion and for various unsettled practical accounting issues on carbon credit. Maheshwari and Goyal (2015) in their study discussed about the carbon credit and its accounting aspects with the help of a case study of Delhi Metro Rail Corporation. The study revealed that carbon trading as a tool to earn extra revenue benefits the organizations but for appropriate functioning and development of carbon markets and carbon trading it is necessary to set separate accounting standards. Nair and Nandkumar (2013) analysed the carbon trading scenario in India. The study found that India has a great potential to earn from carbon trading. Birla et al. (2012) investigated the potential for carbon trading in India and found that India has emerged as one of the largest market for carbon trading. Koralliyadan (2016) in his study examined the impact and necessity of corporate carbon accounting in Indian context and argued that proper market and exchange are required for the country to capitalize the benefits of carbon trading.

III. Objectives of the study

The present study is descriptive in nature and has been undertaken to understand the present scenario of carbon accounting and its challenges in India using data collected from different secondary sources like journals, annual reports, periodicals, magazines, websites, etc.

IV. Carbon accounting

The concept of carbon accounting is an outcome of Kyoto protocol for measuring amount of carbon dioxide and its equivalents emitted by an entity. It made mandatory for the Annex 1 nations to reduce their net emission of greenhouse gases in definite time frame creating a cap on emissions. There are 43 countries including European Union in the Annex 1 list

mainly comprise of developed countries whom are legally bound to reduce their greenhouse gas emission. To meet the objectives and to make target reductions in a feasible and cost-effective way a system has been recommended for measuring the activities related to carbon emission. The Kyoto protocol introduced three market-based mechanism primarily through national measures to limit or reduce greenhouse gas emission known as the carbon market. The following mechanism are discussed below:

1. Clean Development Mechanism (CDM) – As per article 12 of the Kyoto protocol, CDM allows a developed country (Annex B Party) to set up an emission reduction project in developing or less developed countries and to generate and sale certified emission reduction (CER), where one CER is equivalent to one ton of carbon dioxide. The mechanism helps in reduction of emission in a sustainable manner while offering some flexibility to the industrialized countries to meet their emission reduction targets.
2. Joint Implementation (JI) – As per article 6 of the protocol, under JI a country (Annex B party) can set up an emission reduction project in another Annex B party to earn emission reduction units (ERU) while an ERU is equivalent to one ton of carbon dioxide which can be counted by the country towards meeting its emission reduction targets. It enables achieving emission reduction targets in a cost efficient manner while the host country benefits from foreign investment and technology diffusion.
3. Emissions Trading (ET) – ET under article 17 of the protocol, allows countries having excess emission units (excess of unused permitted units) to sell the excess units to countries having shortage of emission units to achieve their targets in assigned amount units (AAU).

V. Some issues relating to carbon accounting in India

At present there are no specific accounting standard on carbon accounting and reporting from any National and International agencies. International Accounting Standard Board (IASB) issued IFRIC 3 emission right in 2005 but withdrawn due to mismatches in measurement and reporting. In India, The Institute of Chartered Accountant of India (ICAI) issued The Guidance note on accounting for self – generated certified emission reductions (CER) but found to be inconsistent as there are ambiguity and uncertainty about some issues. The various issues related to carbon credit accounting in India are as follows:

1. Till the approval of carbon credit generated by the CDM projects by UNFCCC, such carbon credits are treated as intangible assets but after approval those are treated inventory. The progress of conversion of carbon credits from asset to inventory gives rise to accounting complications.
2. In case of determining cost of CER, cost incurred for certification by UNFCCC is treated as cost of inventory while treatment for other ancillary costs remains unresolved.
3. There is no difficulty in getting selling price of CER as it is available from the stock markets but determining cost price involves complication in the absence of unambiguous accounting guidelines.
4. It also can create mismatch in determining profit from sale of CER if all the cost incurred in generating CER are not taken care of properly.

Apart from the above-mentioned accounting issues involved in carbon accounting in India, some regulatory issues are also involved for carbon accounting. According to the report from the pollution control board of India and pollution control committee “there are no any measurement or controlling activities about carbon emission in India”. Carbon tax has also not properly introduced and implemented in India. Carbon market and carbon credit are

growing as one of the fast-moving commodity markets in world, but it is not implemented in India because of the absence of proper carbon accounting and carbon credit methods. Among other countries, India is one of the largest beneficiaries of carbon trading through earning revenue from selling of carbon credits and having highest number of CDM projects after China. But, due to existing Indian laws, foreign based buyers especially European based buyers are not allowed to purchase CER from the market. Moreover, India has single exchange i.e. MCX for the trading of CERs which is not enough for the market for trading of CER. Forward Contracts (Regulation) bill also need to be amended to facilitate carbon trading in India.

VI. Conclusion

Presently, there are no accounting standards from any national or International Accounting Standard Board to deal with carbon credits. Though, a guideline has been issued by ICAI for recording CERs in the books of accounts, there is a need having clear policies and guidelines for accounting of carbon credits in the books of accounts to make the accounting practice reliable and comparable. As per national sustainability priority of the country India is committed to curtail emission of greenhouse gases but is lagging in formulating proper regulatory and accounting policies in areas of measurement, recognition and reporting of carbon credits generated from the CDM projects.

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Are Promotional Mix and Product Differentiation significantly related?

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Dr. Deepali Bhatnagar

Abstract

The purpose of the study was to investigate the relationship between promotional activities and perception of differentiation. To achieve this objective 780 consumers were approached for data collection. Out of these 780 responses 470 were analysed using SPSS. The result showed that consumers' demography and their perception of promotion are significantly related. It was further found that promotional mix and perception of product differentiation are positively correlated. The limitations of the study are discussed and practical implications are also discussed in the paper.

Key Words- Promotional Mix, Product Differentiation, LED TV

Introduction

Marketing promotions are based on aims and strategies of the organizations. The objectives of promotion may be one of these- to attract new customers, penetrate further into market, increase sales or increase awareness of products and brands. As per objectives promotional efforts are designed and directed. Differentiation strategies aim at distinguishing product or brand from its competitors. Such differentiation is generally based on an attribute which is important from consumers' perception. Both promotion and differentiation are marketing efforts to increase sales, create awareness and keep consumers engaged with the brand. This study attempted to explore if promotion and perception of differentiation are related or so. Consumer durables market is expected to reach US\$ 20.6 billion by 2020 (Sarangi n.d.)¹. Sarangi (n.d.) concluded that the demand for durable products is driven by education, income of consumer and number of durable products possessed by household. This signifies the potentiality of the industry. Many competitors are operative in this industry and many more will enter in future as well. Despite such tough competition only few significant players rule the LED TVs market. Thus researchers were keen to find if promotion has any effect on differentiation.

The objectives of the study were-

1. To study relationship between demography of consumers and perception of promotion mix.
2. To study relationship between promotion and differentiation of LED TVs

Literature review

Dickson and Ginter (1987)², attempted to reduce the confusion between market segmentation, product differentiation and demand function modification both theoretically and practically. Researchers found that product differentiation does not require the presence of market segmentation. However product differentiation can be used strategically along with the market segments if they are perceived to be in existence. Authors further notify that, the segment development strategy may be developed feasibly only when product differentiation strategy in its place. With these findings, researchers argue that the segmentation and differentiation are clearly exclusive strategies and not alternate to each

other. Such clarification between the concepts is useful for both academicians and practitioners.

Smith (1956)³ suggested that marketing activities can be successful only when Product differentiation and market segmentation are components of marketing strategy. The author further concludes that differentiation and market segmentation are very closely related to each other. The differences in these two concepts have been highlighted only to enhance theoretical clarity and accuracy in practice.

Bearden and Shimp (1982)⁴ researched to investigate the impact of warranty, manufacturer reputation and price on buyer's risk perception and evaluation of new product. To obtain this objective researches conducted an experiment wherein respondents were shown risky products in test format and level of extrinsic cues warranty, brand reputation and price were manipulated. Causal modeling procedure was used to test the relationship between manipulation of cues and risk perception. The result showed that that the manipulation of extrinsic cues (warranty, brand reputation and price) has effect on affective responses mediated through impact on perception of risk in products. It may also be interpreted as- Manipulation of extrinsic cues which are not related to product attributes can also lead to product differentiation.

Carpenter, Glazer and Nakamoto (1994)⁵ explored how differentiation on a meaningless attribute can create a fully differentiated brand. Two experiments with three different product categories were conducted. Results of their investigation showed that meaningless differentiation has created value in minds of consumers in many situations. In one case researchers found that meaningless differentiation was valued even if the differentiated brand was priced higher. The authors further add that this meaningless differentiation can impart competitive advantage to the brand even after consumers realizing that the differentiation attribute is not relevant. Such competitive advantage may not be sustained for longer time if competitors react to the strategy and reduce the uniqueness of the differentiated brand.

The primary objective of the study conducted by Mahmood, & Khan, (2014)⁶ was to analyse the impact of the 7Ps on customer perception. The primary data was collected from 315 respondents using convenient sampling method. In the opinion of the author, 4 Ps: price, promotion, people and physical evidence were the most influential components. Whereas product, place process were found to be weak influential factors. The bank should provide proper attention to the 4 important aspects while formulating and implementing their marketing strategy.

The research conducted by Cengiz and Yayla (2007)⁷, examined relationship between Marketing mix and word of mouth communication. Researchers developed a model and tested it with the Structural Equation Modelling. The result of the analysis showed that Price, product, promotion and place have effect on word of mouth communication. This study suggests that practitioners can use marketing mix elements to increase customer loyalty and word of mouth activities which in turn can increase customer satisfaction.

From literature review it was noted that scarce works were published exploring the relationship between promotional mix and product differentiation.

Hypotheses

The following hypothesis is formulated for this study

H₁- Perception of promotion of LED TVs are significantly related with demography of consumers

H₂- Perception of promotion is significantly positively correlated with product differentiation perception.

Research Methods

Population- Consumers from Delhi City

Sample Unit- Consumer who has bought LED TV within last 6 Months. This is purposely decided because brand perception and promotional strategies of brands are changed every now and then. The main objective of the study was to investigate effect of promotions on perception of product differentiation. Therefore logically responses of consumer who has bought TV long back would be invalid and might not helped in arriving at concrete results.

Sample Size- 470 consumers (at 95% confidence interval)

Sampling Technique- Non- probabilistic purposive Sampling technique was used to collect data.

Instrument- A structured questionnaire was developed. It was validated by recommendations from experts in the area and through pilot study. The questionnaire contained two subscales. One was to record the perception of product differentiation of LED TVs. The second subscale was drafted to record responses for the effectiveness of promotion of LED TVs. Both the subscales were drafted using 5 point likert's scale wherein 1 meant strongly disagree and 5 meant strongly agree. For collecting Demographic information forced choice questions were given. The total 22 questions were there in the questionnaire.

SPSS was used to analysis of the data.

Results of Data Analysis

The questionnaire must be reliable so as to be used for data collection. To check the reliability of the questionnaire the Cronbach's alpha coefficient is widely used in social science. The reliability of the questionnaire is shown in table no.1 below-

Table no. 1 Reliability Statistics

Cronbach's Alpha	N of Items
.944	22

The Cronbach's alpha is greater than .7. This indicated that the questionnaire used in reliable. Descriptive Statistics-

Table no. 2 Descriptive Statistics of Subscales

Subscale	N	Minimum	Maximum	Mean
Product Differentiation	470	1	5	3.29
Promotion	470	1	5	3.40

The overall mean values of two subscales which were used in the research are given table no. 2. From the mean values (> 3.29) it can be said that respondents have moderately positive perception of promotions and product differentiation of particular brands of LED TVs. However we cannot generalize these findings as they are not based on inferential statistics.

Hypotheses Testing

H₁- Perception of promotion of LED TVs are significantly related with demography of consumers

Top test this hypothesis One way ANOVA was run in SPSS.

Table no. 3 ANOVA- Perception of Promotion and Demography of consumers

		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	29.97923	4	7.494807	7.118299	.000
	Within Groups	489.5952	465	1.052893		
	Total	519.5745	469			
Family Income (Per Year)	Between Groups	96.05978	4	24.01494	15.04497	.000
	Within Groups	742.2381	465	1.596211		
	Total	838.2979	469			
Education	Between Groups	53.9154	4	13.47885	17.67555	.000
	Within Groups	354.5952	465	0.76257		
	Total	408.5106	469			
Gender	Between Groups	4.01905	1	4.01905	2.97542	.085
	Within Groups	632.1512	468	1.35075		
	Total	636.1702	469			
Occupation	Between Groups	17.12259	3	5.707531	4.296454	.005
	Within Groups	619.0476	466	1.328428		
	Total	636.1702	469			

From table no. 3 it is observed that p values for all demographic characteristics excluding gender are less than .01 ($p < .01$). Therefore it indicates that the value of F test falls in rejection area of the curve. In simple words, since p value is less than .01, null hypothesis 'Perception of promotion of LED TVs are not significantly related with demography of consumers' is failed to be accepted. Therefore, the alternate hypothesis is accepted.

H₂- Perception of promotion is significantly positively correlated with product differentiation perception.

To test the null hypothesis Pearson's correlation test is run.

Table No. 4. Correlations- Promotion and Product Differentiation

		Mean of Perception of Product Differentiation Subscale
Mean of Perception of Promotion Subscale	Pearson Correlation	.568(**)
	Sig. (2-tailed)	.000
	N	470

** Correlation is significant at the 0.01 level (2-tailed).

It is observed from table no. 4 that significance value of Pearson's test is less than .01 ($p < .01$). Therefore null hypothesis- 'Perception of promotion is not significantly positively correlated with product differentiation perception' is failed to be accepted. And hence we accept alternate hypothesis.

Discussions

From hypothesis tests it was found that except gender all demographic characteristics viz- age, income, education and occupation and perception of promotional activities of LED TV brands are significantly related. This is most probably because every LED brand has their target customer segment. To attract these customers they design their promotional activities, and it gets perceived according to segment of the customers. It was found that positive perception of LED TV does not guarantee purchase of those products/ brands. For instance one consumer may have positive perception of promotional activities of Brand 'X' but he buys brand 'Y'. Explorative research is required on such consumer behaviour.

It was found that perception of promotional activities and perception of product differentiation are significantly positively correlated. This means that if promotional activities are perceived positively then it will lead to positive perception of product differentiation. In other words it can be described as- Effective promotion of brands/ products leads to perception of product differentiation. Therefore if the promotion is effective then the product is perceived different that the competitor's products and hence can be recalled easily and recognized quickly by buyers. Therefore marketers can increase effectiveness of promotions on target audience to improve brand awareness and recall and thus to create differentiation. This study finds that effective promotion may not lead to actual sales of the brand. Marketers need to evaluate the effectiveness of promotions on actual sales and differentiation perception continuously.

Limitations of the study

The study was conducted in Delhi only. The findings may differ if the region under study is changed. Future studies may also include some other metro cities in the study. The study is conducted for LED TV brands only. So findings may not be generalized for other categories of products/ services. Future studies may be conducted for various other products to make findings generalizable.

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On Semiparallel and Weyl Semiparallel LP-Sasakian Hypersurface of Tachibana Manifold

Prabhat Narayan Singh*

Abstract : In this paper we have studied semiparallel and Weyl semiparallel LP Sasakian hypersurface of a Tachibana manifold. In this paper we have investigated that a L.P. Sasakian hypersurface of a Tachibana manifold is semi parallel if and only if it is totally umbilical with negative unit mean curvature. We have also investigated that L.P. Sasakian hypersurface is Weyl Semi parallel iff it is an h-Einstein manifold and it is totally umbilical with negative unit mean curvature. Some more results has been studied in this paper.

Keywords : LP Sasakian Manifold, Tachibana manifold, Einstein manifold .

Introduction

We consider an isometric immersion $f : M^{2n+1} \rightarrow M^{2n+2}$, let 'h' is second fundamental form and ∇ is Vander Waerden-Bortolatti connection on the manifold M^{2n+1} . J. Depriz defined the

immersion to be semiparallel if

$$(1) \quad R(X, Y) h = (\nabla_X \nabla_Y - \nabla_Y \nabla_X - \nabla_{[X,Y]})h = 0$$

hold for arbitrary vector field X, tangent to M^{2n+1} . Here 'R' is curvature tensor of connection ∇ . In [5] and [6] J. Depniz studied semiparallel immersion in real space

from. In [I] in the case of hypersurface, in the sphere and hyperbolic space, F. Dillen showed that semiparallel hypersurfaces are flat surfaces, hypersurfaces with parallel Weingarten endomorphism are rotation hypersurface of central helices.

In [5] many results has been studied on hypersurface in 4-dimensional space form with the curvature condition

$$(2) \quad R. h = L_h Q (g, h)$$

Where L_h is some function on hypersurface submanifold satisfying condition (2) are called pseudoparallel (see [5] and [6]). It was also shown that a pseudoparallel hypersurface of a space form is either Quasi-umbilical or a cyclic of Dupin.

In [11], it was studied that normally flat submanifold satisfying the condition

$$(3) \quad C. h. = 0$$

Where C denotes Weyl conformal curvature tensors are called as Weyl semiparallel manifolds. In this paper one more case has been studied in which submanifold satisfy the condition

$$(4) \quad C. h. = L_h Q (g, h)$$

where L_H is some function on submanifold.

In this paper we study semiparallel, pseudoparallel and Weyl semiparallel LP Sasakian hypersurface of a Tachibana manifold. We have also study the L.P. Sasakian hypersurface satisfying condition (4).

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2. Lorentzian Para-Sasakian Manifold

Let M^{2n+1} is a differentiable manifold of dimension $(2n+1)$, then M^{2n+1} is called a Lorentzian Para Sasakian manifold or simply LP Sasakian manifold if it admit a $(1, 1)$ tensor field 'f' a contravariant vect field 'x', a 1-form h and a Lorentzian metric g which satisfy

$$(5) \quad f^2 X = X + h(X) x$$

$$(6) \quad h(x) = -1$$

$$(7) \quad g(fx, fy) = g(x, y) + h(x). h(y)$$

$$(8) \quad D_x x = f x, \quad g(X, x) = h(x)$$

$$(9) \quad (D_x f) Y = g(X, Y) x + h(Y)X + 2h(X). h(Y) x$$

We can easily get some more results on a LP Sasakian manifold given below

$$(10) \quad f x = 0, \quad h(f X) = 0$$

$$(11) \quad \text{rank } f = 2n$$

Again if we put

$$(12) \quad 'F(X, Y) = g(X, f Y)$$

Then clearly 'F is symmetric

Also in a LP Sasakian manifold 1 form h is closed, therefore we have

$$(13) \quad (D_x, h) Y = 'F(X, Y)$$

$$(14) \quad 'F(X, x) = 0$$

We also have

$$(15) \quad g(R(X, Y)Z, x) = h(R(X, Y), Z) = g(Y, Z) + h(X) - g(X, Z) h(Y)$$

$$(16) \quad R(X, Y)Z = g(Y, Z)X - g(X, Z)Y$$

$$(17) \quad R(X, Y)x = h(Y)X - h(X)Y$$

$$(18) \quad S(Y, Z) = 2n \cdot g(Y, Z)$$

$$(19) \quad S(Y, x) = 2n \cdot g(Y, x) = 2n h(Y)$$

$$(20) \quad S(QX, QY) = S(X, Y) = 2n h(X) h(Y)$$

$$(21) \quad S(X, Y) = g(X, Y) = 2n g(X, Y)$$

$$\dot{S} X = 2n X$$

$$(22) \quad \dot{S} x = 2n h$$

where X, Y, Z and arbitrary vector fields S is Ricci tensor and \dot{S} is Ricci map

An LP – Sasakian manifold (M^{2n+1}, g) is called h-Einstein manifold if its Ricci tensor S satisfy

$$(23) \quad S(X, Y) = a g(X, Y) + b h(X) h(Y)$$

for any vector fields X, Y where z, b are scalar function on M^{2n+1} .

TACHIBANA SUBMANIFOLDS

Let M^{2n+2} be a $(2n+2)$ dimensional differentiable manifold, then M^{2n+2} is called a almost Tachibanian manifold if it admit a tensor field J of type $(1, 1)$, a Riemannian metric 'g' satisfying

$$(24) \quad J^2 X = -X$$

$$(25) \quad g(JX, JY) = g(X, Y)$$

$$(26) \quad (\bar{\nabla}_X J) Y + (\bar{\nabla}_Y J) X = 0$$

where X, Y are arbitrary vector field, $\bar{\nabla}$ is Riemannian connection w.r.t. 'g'. Almost Tachibana manifold on which N tensor vanishes is called Tachibana manifold [see 8].

In Tachibana manifold we have

$$(28) \quad (\bar{\nabla}_X J) = 0$$

Now, let us suppose that M^{2n+1} L P Sasakian manifold is isometrically embedded hypersurface of M^{2n+2} Tachibana manifold.

Then by Gauss and Weingarten eqⁿ we get

$$(29) \quad \bar{\nabla}_X Y = \bar{\nabla}_X Y + H(X, Y) N$$

$$(28) \quad \bar{\nabla}_X N = -AX$$

Where H denotes the second fundamental tensor and A is the shape operator. A and H are related by

$$H(X, Y) = g(AX, Y)$$

where X, Y are arbitrary tangent vector field on M^{2n+1} , N is normal vector field on M^{2n+1} .

We also know that a submanifold is totally geodesic iff second fundamental form vanishes.

Now let N be the unit normal vector field to M^{2n+1} , then JN is tangent to M^{2n+1} we set

$$(31) \quad JN = X$$

$$(32) \quad JX = fX - h(X) N$$

where J is tensor field of type (1, 1) h is a one form and X is tangent vector field on M^{2n+1}

Now differentiating (31) and (32) and then using (21) and (30) to get

$$(33) \quad \bar{\nabla}_X X = -f(AX)$$

$$(34) \quad (\bar{\nabla}_X f) Y = H(X, Y) X - h(Y) AX$$

Since M^{2n+1} is a L.P. Sasakian manifold thus we have

$$(35) \quad \bar{\nabla}_X X = fX$$

From (33) and (35)

$$-fAX = fX$$

$$f^2AX = -f^2X$$

$$(36) \quad AX = -X - h(AX + X) X$$

Contracting (36) w.r.t. X

$$(37) \quad \text{tr}(A) = -2n - h(AX)$$

Now put $X = x$ in (36) and using (37), (6) to get

$$(38) \quad AX = [\text{tr}(A) + 2n] X$$

Comparing (36) and (38) to get

$$(39) \quad AX = -X - l h(X) X$$

where $l = \text{tr}(A) + 2n + 1$

Results

Let M^{2n+1} be $(2n + 1)$ dimensional L. P. Sasakian orientable hypersurface isometrically embedded into a Tachibana manifold of dim. $(2n+2)$. It is easy to see that for a hypersurface the condⁿ $Rh = 0$, $Rh = L_h Q(g, h)$, $C.h = 0$, $C.h = L_H Q(g, h)$ can be replaced by $RH = 0$, $RH = L_H Q(g, h)$, $C.H = 0$ and $C.H = L_H Q(g, H)$ respectively

Now, Weyl conformal curvature tensor is defined on

$$C(X, Y) Z = R(X, Y) Z - \frac{1}{(2n-1)} \{S(Y, Z)X - S(X, Z) Y + g(Y, Z) \acute{S} X - g(X, Z) \acute{S} Y\} + \frac{1}{2n(2n-1)} [g(Y, Z)X - g(X, Z) Y]$$

The tensors R.H., C.H. and Q(g, H) are defined as

$$(41) \quad (R(X, Y) \cdot H)(U, V) = -H(R(X, Y)U, V) - H(U, R(X, Y)V)$$

$$(42) \quad (C(X, Y) \cdot H)(U, V) = -H(C(X, Y)U, V) - H(U, C(X, Y)V)$$

$$(43) \quad (Q(g, H)(U, V, X, Y) = -H(X \wedge Y)U, V) - H(U, X \wedge Y)V$$

$$(44) \quad \text{where } (X \wedge Y)Z = g(Y, Z)X - g(X, Z)Y$$

Here X, Y, Z, U, V are tangent vector field to M^{2n+1} .

Theorem (A) : Let M^{2n+2} be an L. P. Sasakian hypersurface of a Tachibana manifold M^{2n+2} then M^{2n+2} is semiparallel if and only if it is totally umbilical with negative unit mean curvature.

Proof. : From (41) and using $H(X, Y) = g(AX, Y)$

We get

$$(R(X, Y) \cdot H)(U, V) = -g(R(X, Y)U, AV) - g(AV, R(X, Y)V)$$

Using (39) in above we get

$$(R(X, Y) \cdot H)(U, V) = g(R(X, Y)U, V) + 1 h(V) g(R(X, Y)U, x) + g(U, R(X, Y)V) + 1 h(V) g(x, R(X, Y)V)$$

which is equal to

$$(45) \quad (R(X, Y) \cdot H)(U, V) = 1 [h(V) g(R(X, Y)U, x) + h(V) g(R(X, Y)V, x)]$$

Let M^{2n+1} is semi parallel i.e. R.H. = 0

\ we have

$$1 [h(V)g(R(X, Y)U, x) + h(U)g(R(X, Y)V, x)] = 0$$

Put $U = x$ in above we get

$$1 g(R(X, Y)V, x) = 0$$

Contracting above write X and V we get

$$1 S(Y, x) = 0$$

$$1 L[(2n h(Y))] = 0$$

put $Y = x$ to get

$$1 \cdot 2n = 0$$

which gives $1 = 0$

\ from eq. (39) we get

$$A = -I$$

\ M^{2n+1} is totally umbilical with negative unit mean curvature.

Conversely if M^{2n+1} is totally umbilical we can easily verify R.H. = 0

Hence M^{2n+1} is semi parallel.

Theorem B : Let M^{2n+1} is L. P. Sasakian hypersurface of M^{2n+2} Tachibana manifold then M^{2n+1} is pseudoparallel ($L_H \neq 1$) iff it is totally umbilical with negative unit mean curvature.

Proof : From (43) and (44) we have

$$Q(g, H)(U, V, X, Y) = -g(Y, U)H(X, V) + g(X, U)H(Y, V) - g(Y, V)H(X, U) + g(X, V)H(Y, U)$$

Using (39) in above we get

$$(46) \quad Q(g, H)(U, V, X, Y) = 1 [g(Y, U)h(X)h(V) - g(X, U)h(Y)h(V) + g(Y, V)h(X)h(U) - g(X, V)h(Y)h(U)]$$

Let M^{2n+1} is pseudoparallel

i.e. $R.H. = L_H Q(g, H)$

\ from (45) and (46) we get

$$1 [h(V) g(R(X, Y) U, x) + h(U) g(R(X, Y) V, x)] \\ = 1 L_H [g(Y, U) h(X) h(V) - g(X, U) h(Y) h(V) \\ + g(Y, V) h(X) h(U) - g(X, V) h(Y) h(U)]$$

Put $V = x$ is above eq., we get

$$1 [1 - L_H] [g(Y, U) h(X) - g(X, U) h(Y)] = 0$$

Since $L_H \neq 1$

\ $1 = 0$ which gives $A + I = 0$ i.e. M^{2n+1} is totally umbilical with negative unit mean curvature.

Conversely let M^{2n+1} is totally umbilical therefore it is semiparallel by previous theorem. We also know that semiparallel hypersurfaces are pseudoparallel. This proves the converse part.

Theorem (C) : Let M^{2n+1} be a L P Sasakian hypersurface of Tachibana manifold M^{2n+2} then M^{2n+1} is Weyl Semi parallel iff it is an h Einstein manifold or it is totally umbilical with negative unit mean curvature.

Proof. : From (42) we have

$$(C(X, Y) H)(U, V) = -g(C(X, Y) U, AV) - g(AV, C(X, Y) V)$$

Using (39) in above

$$(47) \quad (C(X, Y) \cdot H)(U, V) = 1 [h(V) g(C(X, Y) U, x) + h(U) g(C(X, Y) V, x)]$$

Now M^{2n+1} is Weyl semi parallel

i.e. $C.H. = 0$

so from (47) we have

$$1 [h(V) g(C(X, Y) U, x) + r(U) g(C(X, Y) V, x)] = 0$$

Put $V = x$ is above we get

$$1 g(C(X, Y) U, x) = 0$$

Which gives $1 = 0$ or $g(C(X, Y) U, x) = 0$

If $1 = 0$ then $A = -I$

M^{2n+1} is totally umbilical with negative unit mean curvature.

And if $g(C(X, Y) U, x) = 0$

then from (40) we get

$$0 = \left(1 + \frac{r}{2n(2n-1)}\right) (g(Y, U) h(X) - g(X, U) h(Y)) - \frac{1}{(2n-1)} [S(Y, U) h(X) \\ - S(X, U) h(Y)] + 2n g(Y, U) h(X) - 2ng(X, U) h(Y)]$$

put $X = x$ and using $\int x 2h x$ in above

$$(48) \quad S(Y, U) = \left(\frac{r}{2n} - 1\right) g(Y, U) + \left[\frac{r}{2n} - 2n - 1\right] h(Y) - h(U)$$

which shown that M^{2n+1} is an h-Einstein manifold

Now,

Conversely let M^{2n+1} is totally umbilical we can easily get $(C(X, Y) \cdot H)(U, V) = 0$

i.e. M^{2n+1} is Weyl Semi parallel

And if M^{2n+1} is an h-Einstein manifold then from (48) and (40) we get

$$(49) \quad g(C(X, Y) \cdot H)(U, V) = 0$$

Thus M^{2n+1} is Weyl Semi parallel.

Theorem (D) : Let M^{2n+1} be a L P Sasakian hypersurface of M^{2n+2} Tachibana manifold satisfying $C.H. = L_H Q (g, H)$ then M^{2n+1} is totally umbilical with negative unit mean curvature or is an h-Einstein manifold

Proof : Since M^{2n+1} satisfy $C.H. = L_H Q (g, H)$

From eq. (47) and (46) we get

$$l [h (V) g (C (X, Y) U, x) h (U) g (C (X, Y) V, x)] \\ L_H - l [g (Y, U) h (X) h (V) - g (X, U) h (Y) h (V) \\ + g (Y, V) h (X) h (U) - g (X, V) h (Y) h (U)]$$

Taking $X = V = x$ in above

$$l S (Y, U) = l [(2n - 1) L_H - 1 + \frac{r}{2n}] g (Y, U) \\ + l [L_H (2n - 1) - 2n - 1 + \frac{r}{2n}] h (Y) h (U)$$

\ from above we get

either $l = 0$ i.e. M^{2n+1} is totally umbilical with negative unit mean curvature

or $S(Y, U) = [(2n - 1) L_H - 1 + \frac{r}{2n}] g (Y, U) \\ + [(2n - 1) L_H - (2n + 1) + \frac{r}{2n}] h (Y) h (U)$

i.e. M^{2n+1} is h - Einstein manifold.

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A Study on Waste Management and Recycling of Waste Material in Bhopal City

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Abstract

This research paper would be based on waste management and recycling of waste material in Bhopal, India. The current issues are related to waste management like plastic, vegetables, hospital waste material and solid waste in Bhopal. We would analysis of recycling methods to adopt of waste management methods. Waste water generation is a major problem across the globe. Waste water comes mainly from two sources: sewage outflow from household, industrial etc and storm water originating from rainwater drainage from lawns, rooftops, roads etc. Waste Minimization can be defined as "A new and creative way of thinking about products and the processes which make them. It is achieved by the continuous application of strategies to minimize the generation of wastes and emissions". To analysis of waste material through various techniques of recycling of waste and create an awareness of waste material in Bhopal.

Keywords: Waste Management, Waste Materials, Bhopal Municipal Corporation, recycling, plastics and vegetables waste materials.

Introduction

The Bhopal Municipal Corporation (BMC) is one of the few municipalities in the country that has implemented the system of house-to-house solid waste collection. This system, adopted citywide from 15th August 2013, required the full cooperation of citizens who had to manage their waste properly and provide it to the municipal workers who would come to collect it daily. The old habits of keeping the house clean at the cost of public spaces were no long intolerable and had to be changed. To change these habits, the BMC launched an awareness campaign known as 'Team Up to Clean Up'. As citizens were the main partners in solid waste management, the campaign had a partnership approach and conducted a wide variety of consultations with citizen groups such as Resident Welfare Associations (RWAs) and traders 'associations. It also undertook a mammoth publicity campaign which was generously aided by the media. To further convey its seriousness about compliance, the municipality placed special emphasis on fining offenders during this period.

Solid waste management

Solid waste is the unwanted or useless solid materials generated from combined residential, industrial and commercial activities in a given area. It may be categorized according to its origin (domestic, industrial, commercial, construction or institutional); according to its contents (organic material, glass, metal, plastic paper etc); or according to hazard potential (toxic, non-toxin, flammable, radioactive, infectious etc). Management of solid waste reduces or eliminates adverse impacts on the environment and human health and supports economic development and improved quality of life. A number of processes are involved in

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effectively managing waste for a municipality. These include monitoring, collection, transport, processing, recycling and disposal.

Reduce, Reuse, Recycle

Methods of waste reduction, waste reuse and recycling are the preferred options when managing waste. There are many environmental benefits that can be derived from the use of these methods. They reduce or prevent green house gas emissions, reduce the release of pollutants, conserve resources, save energy and reduce the demand for waste treatment technology and landfill space. Therefore it is advisable that these methods be adopted and incorporated as part of the waste management plan.

Waste reduction and reuse

Waste reduction and reuse of products are both methods of waste prevention. They eliminate the production of waste at the source of usual generation and reduce the demands for large scale treatment and disposal facilities. Methods of waste reduction include manufacturing products with less packaging, encouraging customers to bring their own reusable bags for packaging, encouraging the public to choose reusable products such as cloth napkins and reusable plastic and glass containers, backyard composting and sharing and donating any unwanted items rather than discarding them. All of the methods of waste prevention mentioned require public participation. In order to get the public onboard, training and educational programmes need to be undertaken to educate the public about their role in the process. Also the government may need to regulate the types and amount of packaging used by manufacturers and make the reuse of shopping bags mandatory.

Recycling

Recycling refers to the removal of items from the waste stream to be used as raw materials in the manufacture of new products. Thus from this definition recycling occurs in three phases: first the waste is sorted and recyclables collected, the recyclables are used to create raw materials. These raw materials are then used in the production of new products.

The sorting of recyclables may be done at the source (i.e. within the household or office) for selective collection by the municipality or to be dropped off by the waste producer at a recycling centers. The pre-sorting at the source requires public participation which may not be forthcoming if there are no benefits to be derived. Also a system of selective collection by the government can be costly. It would require more frequent circulation of trucks within a neighborhood or the importation of more vehicles to facilitate the collection. Another option is to mix the recyclables with the general waste stream for collection and then sorting and recovery of the recyclable materials can be performed by the municipality at a suitable site. The sorting by the municipality has the advantage of eliminating the dependence on the public and ensuring that the recycling does occur. The disadvantage however, is that the value of the recyclable materials is reduced since being mixed in and compacted with other garbage can have adverse effects on the quality of the recyclable material.



Waste Collection

Waste from our homes is generally collected by our local authorities through regular waste collection, or by special collections for recycling. Within hot climates such as that of the Caribbean the waste should be collected at least twice a week to control fly breeding, and the harbouring of other pests in the community. Other factors to consider when deciding on frequency of collection are the odours caused by decomposition and the accumulated quantities.

Treatment & Disposal

Waste treatment techniques seek to transform the waste into a form that is more manageable, reduce the volume or reduce the toxicity of the waste thus making the waste easier to dispose of. Treatment methods are selected based on the composition, quantity, and form of the waste material. Some waste treatment methods being used today include subjecting the waste to extremely high temperatures, dumping on land or land filling and use of biological processes to treat the waste. It should be noted that treatment and disposal options are chosen as a last resort to the previously mentioned management strategies reducing, reusing and recycling of waste.

Review of Literature

1. Municipal solid waste management (MSWM), a critical element towards sustainable metropolitan development, comprises segregation, storage, collection, relocation, carry-age, processing, and disposal of solid waste to minimize its adverse impact on environment. Unmanaged MSW becomes a factor for propagation of innumerable ailments (Kumar et al., 2009).
2. In the developed countries, solid waste management (SWM) belongs to prominent thrust areas for pursuing research (Dijkgraaf & Gradus, 2004; Ferrara & Mission, 2005) and economic and technological advancements have initiated responsiveness of stakeholders towards it (Shekdar, 2009).
3. High population growth rates, rapidly varying waste characterization and generation patterns, growing urbanization and industrialization in developing countries (Troschinetz & Mihelcic, 2009) are the important reasons for paying attention towards MSWM as more area is required to accommodate waste (Idris, Inane, & Hassan, 2004).
4. Several studies suggest that reutilizing of solid waste is not only a viable option to MSWM (Kasseva & Mbuligwe, 2000; Sudhir, Muraleedharan, & Srinivasan, 1996) but also desirable—socially, economically, and environmentally (Kaseva & Gupta, 1996; Misra & Pandey, 2005; School Uiterkamp, Azadi, & Ho, 2011).

Objective of the Study

1. To Find Out the generate awareness among citizens on proper solid waste management practices and their responsibilities to the public.

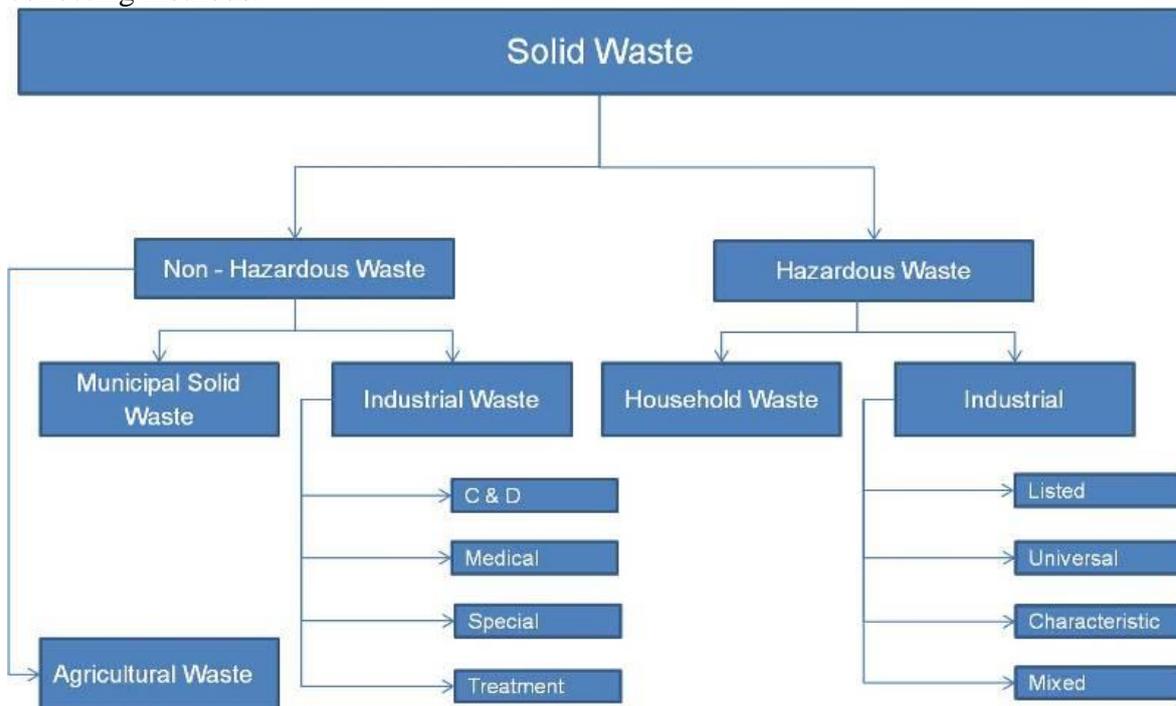
2. To find the Waste Management and Recycling of Waste Material in Bhopal City.

Research Methodology

Team up to Clean up' has been selected for documentation as it is a successful initiative by the Bhopal Municipal Corporation (BMC) that partners with the general public in an awareness drive about their responsibilities towards cleanliness and proper disposal of waste. Other initiatives of the BMC are also covered. The documentation team used primary research methods to obtain data on the background, objectives, operations and achievements of the project.

Data Analysis and Interpretations

The greatest problem regarding waste management in developing countries begins at the very starting point of the process. Due to lack of proper systems for disposal and collections, wastes and garbage's end up in the roads and surrounding. With the existing methods of collecting and disposal it is near impossible to manage such amount of waste in the future as around 30% of waste end up on the roads and public places due to ineffective disposing and collecting methods.





Plastics and their byproducts are littering our cities, oceans, and waterways, and contributing to health problems in humans and animals. The Ecology Center can help you use less plastic, recycle the plastic that you do use, and learn more about its hazards. About 300 million tons of plastic is produced globally each year. Only about 10 percent of that is recycled. The plastic that is simply trashed, an estimated seven million tons ends up in the sea each year. Plastic waste is one of many types of wastes that take too long to decompose.

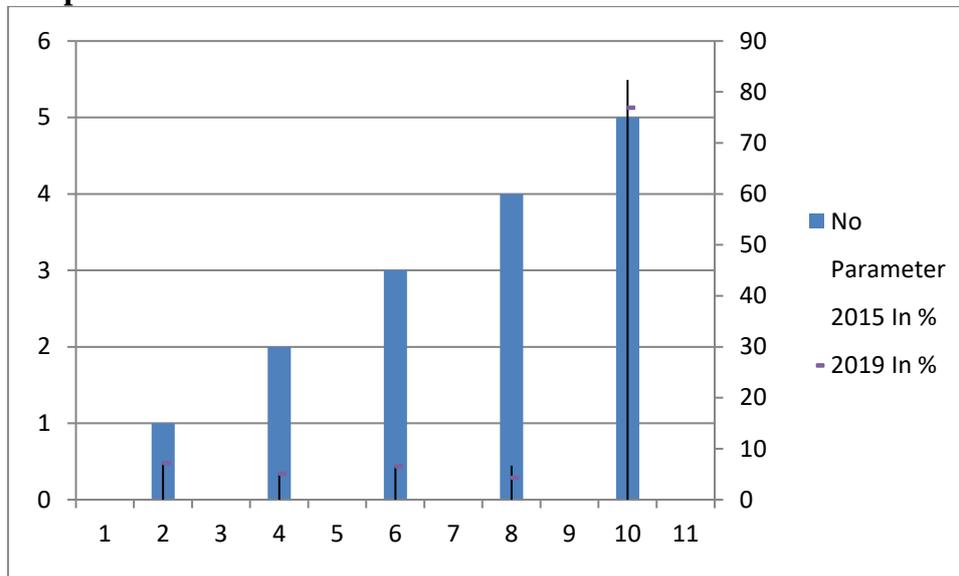
Previously there were numerous initiatives on waste management and educating people to dispose waste properly, and as they failed to achieve significant results, we have figured out the scopes that could be developing. To solve this problem, we have designed a process that ensures proper disposal and efficient waste collection.

Table 1: MSW composition (in %) at Bhopal between 2015 and 2019 (Concern, 2019)

No	Parameter	2015 In %	2019 In %
1	Glass/Metal/Organic	5.38	7.17
2	Plastics	2.74	5.1
3	Textile	1.83	6.57
4	Paper/cardboard	6.68	4.29
5	Food waste	82.37	76.87

From table, In Bhopal city MSW state that the highest percentage of waste is Metal/Organic food waste. Due to lack of consumption of raw foods this mainly happens. Moreover, fraction of organic waste decreased from 82% in year 2015 to 76% in year 2019.

Graph 1



Collection of Solid Waste

Bhopal City is presently seizing with the inconveniences of sky-scratching volumes of squanders. In that case, these inconveniences have likewise managed a window of prospects for city to discover arrangement. All sectors of people and the community have to use their new machinery also clearance Idea and rising awareness. A well-planned waste management system will help us to make atmosphere clear and budget friendly for peoples. Bhopal City Corporations are mainly maintaining this responsibility. BMC separated its area into 10 zones for supervision of solid waste production. Following table shows total waste composition in Bhopal city every day.

Table No. 2

Worked in the construction industry	Years	Response in %
		Percentage
Managerial Staff	0-5	24.00
Forman	5-10	17.50
Tradesmen	10-15	18.00
Laborer	15-20	13.00
Peon	20-25	5.00
Other	25-30	17.50
Total		100

The aim of this question was to find out the respondents position within the company. The results show that thirteen of the respondents were managerial staff while three were quantity surveyors, one was an environmental officer and one was a student on placement within the company. This means that each respondent was well capable of carrying out this survey and their answers can be considered as accurate for the use for this study.

Table No. 3 Formal waste management trained employees

Results	Number of respondents	Percentage %	Response
Questionnaires filled	95	29.5	No
Questionnaires unfilled	05	71.5	Yes
			Don't Know
Total	100	100	



Graph No. 2

The aim of this question was to establish the level of training that has been provided to the respondents to the survey. The results show that 29.5 per cent of the respondents have received some form of training while the majority at 71.5 per cent has not. It is interesting to note that some managerial staff has received formal training which is a positive step but the majority has not. It is important that all staff including staff at management level have received training in relation to waste management so that the correct information is being passed down by the management to the employees.

Findings and Suggestions

There are a number of Findings which have been drawn from the research carried out as part of this research paper. There are

1. Waste management plans should be made mandatory for all but minor developments such as one off houses.
2. It is important that these waste management plans are produced during the design stage so that they can be submitted as part of the planning process.
3. The benefits of waste management, waste minimization and the use of recycled materials should be promoted by professional bodies such as the construction industry federation.
4. Some main contractors in Ireland need to be convinced that waste management can provide benefits for the contractor and that the use of recycled materials is economically viable.

5. The setting up of recycling plants to process construction waste and other wastes should be encouraged.
6. The planning process for such a venture is often very complicated and difficult and private investors are slow to consider investing in these schemes.
7. It is essential that when construction activity increases again after the recession that the appropriate facilities and markets are in place so that construction wastes can be turned into valuable resources.

Conclusion

Bhopal Municipal Corporation through its ongoing initiatives has been addressing the pressing issues of sustainable development relating to water, environment, infrastructure and the growing needs of the urban population. Team Up to Clean Up is a simple yet important step in the right direction. Citizens need to be made aware as to what exactly their obligations are in maintaining public hygiene. These obligations must themselves be realistic. The provision of household collection by the BMC shows such a realistic expectation and is responsible for the success of the awareness program, as it does not demand the impossible. However, there is a long way to go. The move towards segregation at source is another step in the right direction and needs to be upscale throughout the city. Regular and stringent fining of offenders and crackdowns on the illegal sale of unauthorized polythene will over time convey the message to the public that the government is serious about eliminating the use of plastic. Over time, behavioral traits will change and be imbibed into their culture and people might no longer need to be so stringently monitored. Heightened awareness of the public, therefore, brings attention to the larger picture of sustaining efforts in environmental protection and mitigating the effects of climate change.

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