INFLUENCE OF DEMOGRAPHIC FACTORS ON PROBLEMS FACED BY AGRO BASED INDUSTRIES

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Abstract

India is an agrarian nationand Agro-Based industry is considered as the sun rising sector of the Indian economy.The scope of the agro-processing industry encompasses all operations from the stage of harvest till the material reaches the end users in the desired form, packaging, quantity, quality and price. Though many schemes are there to support the agro based industry they still encounter some problems like Infrastructural, Management, Technological, Financial, Environmental, Marketing, Government policy, Raw material etc. The present study is intended to understand the influence of demographic factors on problems faced by agro based industry

Key Words: Agro based Industry, Financial problems, Infrastructural problems, Management problems, Marketing problems, Technological problems.

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Introduction

Agro based industries supports a large portion of rural population in India, acts as one of the major employments generating sector and provides a linkage between agriculture and industry to add more value for agricultural products. By the middle of the nineteenth century, common agro processing industries included hand pounding units for rice, water power driven flour mills, bullock driven oil ghanies, bullock operated sugarcane crushers, paper making units, spinning wheels and handloom units for weaving. Importance of agro-processing sector was first realized and documented after the disastrous famine of Bengal during 1870's. Realizing the importance of the agro-processing sector for rural development as a tool for POORN SWARAJ (complete self-rule), Mahatma Gandhi during 1930's promoted CHARKHA (spinning wheel) and balanced nutrition by setting example and writing articles in his famous magazine "Harijan".Post-independence era in India witnessed rapid growth in agro processing sector specifically during 1980s. It followed the first phase of the Green Revolution that had resulted in increased agricultural production and the need for its post-harvest management. The importance of the sector was realized by the business community leading to diversification from grain trading to processing. Lead was given by the rice processing industry, followed closely by wheat milling, paper and pulp industry, milk processing sector, jute industry, sugarcane processing and oils extraction through solvent plants.

Review of Literature

Katyal&Xaviour, 2015, MSME sector is generating large employment opportunities but beyond this factor whether a small or a medium enterprise, MSMEs resources are not properly utilized and managed. This affects the performance of the enterprises and lead to loss. The contribution made by agro based unit to the national income of the country cannot be ignored and the challenges faced by agro based unit need to be handled effectively to improve its performance (Paramasivan&Pasupathi, 2016; Reddy&Kumari, 2014;Sumathi&Kavitha, 2017). The problems faced by SMEs include limited access to international markets, the existence of laws, regulations and rules that impede the development of the sector, weak institutional capacity, lack of management skills and training, and most importantly finance (Abor&Quartey, 2010;Gupta, 2015; Islam, 2009;Latha& Murthy, 2009;Rantso, 2016;Siddiqui, 2015).Aruna (2015) highlight the problems faced by MSMEs in India include, absence of adequate and timely banking finance,

non-availability of suitable technology, ineffective marketing due to limited resources and non-availability of skilled manpower. Even though many government schemes are there to support MSMEs, majority of the enterprises are not aware about it and its benefits (Bowen, Morara&Mureithi, 2009;Jain &Madan, 2012;Pranmalai&saravanpandi, 2014; Rama, 2018). MSME faces competition in global market due to lack of access to global market (Khalique, Isa, shaari&ageel, 2011;Khurud, 2015). Vyankatesh (2017) Small scale industries contribute to the economic development of the country and helps in poverty eradication. Italso helps in avoiding regional disparities. Suneetha&Sankarajah (2014) women empowerment is possible through setting up of MSMEs and many schemes are there for promoting women empowerment. Entrepreneurship programme should be made effective to enhance growth in small firms (Bureau, Salvador &Fendt,2012; Giroux, 2009). Kathuria&Mamta, 2012, Disbursement of loan need to be simplified and interest rate should be lowered to enhance the competitive strength of Small and Medium Enterprises. Expertise service and government support is needed to overcome the marketing problems faced by MSMEs (Narzary,2013;Mohanraj&Manivannan, 2012; Noorinasab, Seifabad&Zarei, 2016). Rogerson, 2013, recommends that managers need proper education and training for formulating proper marketing strategies and professional marketing manager need to be hired in order to avoid the risk in taking marketing decision. Ahiawodzi&Adadi (2012) observed that access to credit have positive impact on the growth of the SMEs. Sureesh&Mohideen (2012) In order to develop the MSME sector properly, it is necessary for government agencies, regulators and financing agencies to come hand in hand.

Research Gap

The review of literature revealed that the studies which examined the problems faced by agro based industry are scant in literature. The purpose of the study is to find answers to the following research questions. (a) What are the problems faced by agro based industries in kottayam district? (b) Whether the problem faced by agro based industries differ on the basis of age, gender and educational qualification? This study thus aims to fill the gap in the literature and hence the study is quite relevant and timely from the point of view of academic face and economic development.

Hypotheses

This study proposed the following hypotheses.

H01 Problems faced by agro based industries in Kottayam district are independent of age, gender and educational qualification.

Materials and Methods

The study is solely based on primary data collected from 60 agro based unit in Kottayam district. The sample of this study includes entrepreneurs who are running agro based industries like food processing industries, bakery, poultry farms, dairy farms, pickle, jam, squash processing industries, oil mills etc. Non-probability sampling method was used in the selection of sample. The data was collected using a structured questionnaire, responses on the various measures used in the study were obtained on a five-point scale as strongly agree (5), agree (4), neutral (3), disagree (2) and strongly disagree (1). The collected data was analysed using mathematical and statistical tools like Arithmetic Mean, Standard Deviation and t test

Sample Profile

Out of 60 respondent's63 percent are under the age category above 40 and the remaining belongs to the age category of below 40. 60 percent of them are male and 40 percent are female. 73 percent of the respondents possess basic education and 27 percent have bachelors degree. Majority of the respondents invested less than 10 Lakh for starting the enterprise and 36.7 percent of the industries were established 15 years ago. Majority of the industries are located in rural area utilizing locally available resources for satisfying their needs and market their products within the district.

Description of measures of problems faced by agro based industry

Table 2 to 9 provides description of measures of various problems faced by agro based industryand these measures are grouped into 8 constructs such as Infrastructure (INF), Management (MAN), Technological (TECH), Financial (FIN), Political Influence (PI), Marketing (MK), Government Policy (GP) and Raw Material (RAM)

The standards used for comparing mean value of each of the 27 measures and their interpretation are given in table 1.

Table1

Standards for comparison of mean values

Mean Values	Interpretation of Problems
Below 1.50	Very Low
1.51 to3.0	Low
3.01 to 4.5	High
Above 4.5	Very High

Source: Authors own

Table 2

Measures of Infrastructural Problems faced by Agro based industry

Measures	Item Acronym	Mean	SD
My unit face difficulty in transportation- transportation of raw material and finished product due to poor or non-existence of roads	INF1	2.43	1.55
Water scarcity affects production in my business unit.	INF2	2.63	1.65
My unit cannot afford to use generators due to its high cost-high cost of diesel charge.	INF3	2.83	1.68

Source: Primary Data

INF1, INF2 and INF3 are the measures of infrastructural problems faced by agro based industry. On an average theagro based unit faces low infrastructural problem as theirmean lies between the range of 1.51 to 3.0 respectively. Thus, it is concluded that agro based industries do not have infrastructural problems.

Table 3

Measures of Management Problems faced by Agro based industry

Source: Primary Data

Measures	Item Acronym	Mean	SD
I need training in entrepreneurial and leadership skill.	MAN1	4.13	1.19
My unit require more expertise service to formulate proper strategic and business plan.	MAN2	2.57	1.48
I face shortage of skilled manpower.	MAN3	3.40	1.5
Labour charges are high and not affordable.	MAN4	3.83	1.31
I need more cooperation from everyone in the organisation to conduct meetings.	MAN5	3.40	1.57

In case of MAN1, MAN3, MAN4 and MAN5 measures, mean is between 3.01 and 4.5 which indicate that agro based industries face high problems on these measures. In case of MAN2, mean lies between 1.51 to 3.0,thus agro based industries face low problems on this measure. This indicate that except the measure, my unit require more expertise service to formulate proper strategic and business plan, all othermeasures are a problem for agro based industry.

Table 4

Measures of technological Problems faced by Agro based Industry

Measures	Item Acronym	Mean	SD
My unit need more updated technology to increase the efficiency of production.	TECH1	4.87	0.35
I need employees who can adapt with technological changes.	TECH2	4.50	0.86

Source: Primary Data

For TECH1 andTECH2, the mean is above 4.5 which indicate that agro based industry facesvery high problem due to lack of updated technology to increase the efficiency of production and lack of employees who can adapt with technological changes.

Table 5

Measures of financial problems faced by Agro based industry

Measures	Item Acronym	Mean	SD
My unit face difficulty in raising credit from banks and other institution due to lack of collateral security, high borrowing cost and high interest rate.	FIN1	4.03	1.07
It is very difficult for my unit to recover debt.	FIN2	3.73	1.23
Introduction of financial policies like Demonetization, GST etc. had affected the working capital of my unit.	FIN3	4.67	0.60

Source: Primary Data

Study of FIN3 measure shows that mean is above 4.5. Therefore, FIN3 measure, introduction of financial policies like Demonetization, GST etc. had affected the working capital of agro based industry is a very high problem. In case of FIN1 and FIN2 measures, mean value is between 3.01 and 4.5 this indicate that measures such as my unit face difficulty in raising credit from banks and other institution due to lack of collateral security, high borrowing cost and high interest rate and it is very difficult for my unit to recover debt is a high problem for agro based industry.

Table 6

Measures of political influence problems faced by Agro based industry

Measures	Item Acronym	Mean	SD
Corruption and demanding bribery from the part of government officials and politicians is affecting the expansion capacity of my unit.	PI1	3.83	1.44

Source: Primary Data

PI1 measure have mean value above 3.01 and below 4.5 which indicate that Corruption and demanding bribery from the part of government officials and politicians are affecting the expansion capacity of my unit, is a high problem for agro based industries.

Table 7

Measures of marketing problem faced by Agro based industry

Measures	Item Acronym	Mean	SD
My unit is unable to conduct market survey due to lack of expertise service and facing competition.	MK1	2.73	1.6
My unit do not have access to international market due to limited marketing experience and information about foreign market.	MK2	3.93	1.55
I will be able to increase my operations and sales if I am shifting from existing location to another location.	MK3	2.93	1.68

Source: Primary Data

In case of MK2 measure, mean is above 3.01 and below 4.5 which indicate that lack ofaccess to international market due to limited marketing experience and information about foreign market is a high problem for agro based industry. MK1 and MK3 measures have mean between 1.51 and 3.0. This indicates that agro based industries faces low problems on these measures.

Table 8

Measures of government policy problems faced by Agro based industry

Measures	Item Acronym	Mean	SD
Existing laws and regulation hinder the development of my unit.	GP1	4.23	1.07

Licensing and registration issues had troubled me in the starting of the unit.	GP2	4.10	1.06
Tax clearance certificate and midway policy reversals are affecting the performance of my unit.	GP3	3.90	1.09
If more subsidies and incentives are granted I will be able to increase my production opportunities.	GP4	4.67	0.85

Source: Primary Data

For GP4 measure, mean value is above 4.5.This indicate that GP4 measure, if more subsidies and incentives are granted production opportunity of agro based industry will increase, is a very high problem. For GP1, GP2 and GP3, mean value lies between 3.01 to 4.5.This indicate that agro based industries face high problems on these measures.

Table 9

Measures of raw material problems arise in Agro based industry

Measures	Item Acronym	Mean	SD
Poor quality of locally available raw material forces me to depend on imported raw materials.	RAM1	3.03	1.63
Cost of my raw material is very high and not affordable.	RAM2	3.23	1.61
Non-availability of raw material leads to scarcity and delay in production.	RAM3	3.77	1.63

Source: Primary Data

In case of RAM1, RAM2 and RAM3 measures, mean value lies in the range of 3.01 to 4.5. This shows that all measures of raw material are a high problem for agro based industry.

Influence of demographic factors on problems faced by agro based industries

T test is used to determine whether Problems faced by agro based industries are independent of age, gender and educational qualification. Age of the entrepreneur is classified into two categories, below 40 and above 40. 63 percent of the entrepreneurs are under the age category of below 40 and the remaining belongs to the age category of above 40. 60 percent of the

entrepreneurs are male and 40 percent are female.73 percent of the respondents possess basic education and 27 percent have bachelor's degree. It is tested at 5 percent level of significance.

Age

Table 11

T- Test based on age and problems faced by agro based industry

Problems	Mean		SD		t-value	Sig.	Mean
	Below 40	Above 40	Below 40	Above 40			difference
Infrastructural	2.61	2.65	1.71	1.15	-0.117	0.907	-0.04
Management	3.77	3.30	0.69	0.79	2.31	0.02**	0.47
Technological	4.91	4.55	0.29	0.59	2.64	0.01**	0.36
Financial	3.97	4.26	0.83	0.71	-1.60	0.11	-0.32
Political Influence	3.54	4.00	1.41	1.43	-1.19	0.23	-0.45
Marketing	3.39	3.08	1.36	1.02	0.99	0.33	0.31
Government Policy	4.21	4.24	0.84	0.87	-0.14	0.89	-0.3
Raw material	3.48	3.26	1.20	1.45	0.61	0.55	0.22

** Significance at 0.05 level

Table 11 shows the result of t test based on age of the entrepreneur and the problems faced by agro based industries. Management (sig = 0.02) and technological (sig = 0.01) problem have sig value less than 0.05. Hence the null hypothesis (H01) problems faced by agro based industry is independent of age is rejected for management and technological problem. Other problems have sig value higher than 0.05, hence the H01 problems faced by agro based industry is independent of age is accepted for all other problems.

Gender

Table 12

T Test based on gender and problems faced by agro based units

Problems	Mean		SD		t-value	Sig.	Mean difference
	Male	Female	Male	Female			
Infrastructural	2.69	2.56	1.24	1.56	-0.35	0.72	-0.13
Management	3.46	3.48	0.65	0.96	0.13	0.89	0.03
Technological	4.47	5.00	0.60	0.00	4.31	0.00**	0.53
Financial	4.13	4.16	0.62	0.96	0.18	0.85	0.37
Political Influence	3.89	3.75	1.30	1.62	-0.36	0.71	-0.14
Marketing	3.33	3.00	1.03	1.31	-1.09	0.27	-0.33
Government Policy	4.26	4.16	0.88	0.81	-0.43	0.66	-0.97
Raw material	3.43	3.22	1.5	1.39	-0.56	0.57	-0.20

** Significance at 0.05 level

Table 12 shows the result of t test based on gender of the entrepreneur and the problems faced by agro based industry. Technological (sig = 0.00) problem have sig value less than 0.05. Hence the null hypothesis H01, problems faced by agro based industry is independent of gender of the entrepreneur is rejected for technological problem. All other problems have sig value higher than 0.05. Hence the null hypothesis H01, problems faced by agro based industry is independent of gender of the entrepreneuris accepted for all other problems such as infrastructural, management, financial, political influence, marketing, government policy and raw material.

Educational Qualification

Table 13

T test based on educational qualification of entrepreneur and problems faced by agro based units

Problems	Mean		SD		t-value	Sig.	Mean difference
	Basic Education	Bachelor's Degree	Basic Education	Bachelor's Degree			
Infrastructural	2.79	2.21	1.35	1.35	1.47	0.14	0.58
Management	3.40	3.67	0.71	0.93	-1.25	0.21	-0.28
Technological	4.75	4.50	0.42	0.73	1.64	0.10	0.25
Financial	4.24	3.87	0.75	0.749	1.67	0.10	0.36
Political Influence	4.04	3.25	1.38	1.44	1.95	0.05**	0.79
Marketing	3.15	3.33	1.20	1.03	-0.53	0.59	-0.18
Government Policy	4.35	3.88	0.67	1.17	1.97	0.05**	0.47
Raw material	3.53	2.83	1.32	1.35	1.79	0.07	0.69

** Significance at 0.05 level

Table 13 shows the result of t- test based on educational qualification of entrepreneur and the problems faced by agro based industry. Political influence (sig = 0.05) and government policy (sig = 0.05) problem have sig value less than 0.05. Hence the null hypothesis H01, problems faced by agro based industry is independent of educational qualification of the entrepreneur is rejected for political influence and government policy problem. All other problems such as infrastructural, management, technological, financial, marketing and raw material have sig value greater than 0.05. Hence the H01, problems faced by agro based industry is independent of educational qualification of the entrepreneur is accepted for these problems.

Managerial Implications

Management problem is dependent on the age of the entrepreneur. This indicate that management problem varies for the entrepreneurs who are in the age category below 40 and above 40, so separate managerial training facilities must be provided for entrepreneurs who belongs to the age category below 40 and above 40. Technological problem is dependent on age and gender of the entrepreneur. Technological problem faced by male and female who belongs to the age category below 40 and above 40 is different. Thus, based on the age and gender of the entrepreneur, training regarding updated technology should be provided. Political influence and government policy problem are different for entrepreneurs who possess basic education and bachelor's degree. The solution to overcome these problems need to be taken based on the educational qualification possessed by the entrepreneur.

Limitations and scope for further research

The study was conducted with a very small sample of 60 agro based units in Kottayam district. Therefore, the future studies can include a large sample of agro based units to generalize the result.The problems selected in the study may not cover all the problems faced by agro based units and there could be other problems. Therefore, the future studies can consider other problems faced by agro based industries also.

Concluding Remarks

This study aims to check the influence of demographic factors such as age, gender and educational qualification of entrepreneur on the problems faced by agro based industries. It was found that management problem is dependent on the age of the entrepreneur and technological problem is dependent on the age and gender of the entrepreneur. The political influence and government policy problem is dependent on the educational qualification of the entrepreneur. In order to overcome these problems adequate steps, need to be taken based on the age, gender and educational qualification of the entrepreneur as the problem varies according to these demographic factors.

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