International Journal of Management, IT & Engineering
Vol. 7 Issue 2, February 2017,
ISSN: 2249-0558 Impact Factor: 7.119
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage as well as in Cabell's Directories of Publishing Opportunities, U.S.A

A STUDY ON THE PERCEPTION OF EXPORTERS ON GREEN SUPPLY CHAIN PRACTICES WITH SPECIAL REFERENCE TO COIMBATORE

K.BAGYALAKSHMI*

P.MYTHILI**

Abstract

Supply chain management is the coordination and management of a complex network of activities involved in delivering a finished product to the end-user or customer. All stages of a product's life cycle will influence a supply chain's environment burden, from resource extraction, to manufacturing, use and reuse, final recycling, or disposal. Beyond this definition with adding the "green" component, it refers to green supply chain management (GSCM) which is defined as "green procurement+ green manufacturing+ green
Distribution+ reverses logistics". The idea of GSCM is to eliminate or minimize waste (energy, emissions, and chemical/hazardous, solid wastes) along supply chain.

Keywords: Green supply chain, consolidation, sustainability, green innovation, tax breaks.

* **Assistant Professor, Department of International Business, Dr.N.G.P Arts and Science College,Kalapatti road,Coimbatore,Tamilnadu**

** **Research Scholar- Commerce,Dr. N.G.P Arts and Science College,Kalapatti Road, Nehru Nagar West, Coimbatore, Tamil Nadu**

Introduction

Green Supply Chain Management has appeared as an environmental innovation with integrates environmental concerns into supply chain management. The main objective of this study is to correlate the term Supply Chain Management with the Green Supply Chain Management.. The main purpose of this study is to demonstrate the new innovative areas of this emerging field. The study is focused on application of GSCM in the exporters firms including all those innovations that are relevant to environmental and social sustainability towards operation management and supply chain management.

OBJECTIVES OF THE STUDY

- To find out the exporters perception towards green supply chain practices.
- To observe the existing users of green supply chain practices.
- To create awareness about the benefits of green supply chain practices.
- To know about the problems faced by green supply chain users and to offer valuable suggestions to them.

NEED FOR THE STUDY

As far as Indian small scale industries are considered, their concern towards environment is very low and the knowledge on GSCM is also considerably less. The industries pollute the environment to great extent knowingly and unknowingly, if knowingly they pollute what would be the reason behind it and why they are forced to do so. The industries experiences lean wastes in their manufacturing process, so how could they identify the lean wastes in their process and eliminate it.

METHODOLOGY OF THE STUDY

AREA OF THE STUDY

The research study was done only in Coimbatore district.

RESEARCH DESIGN

Descriptive research

This study was conducted on the basis of descriptive research methods. A descriptive study involves formulating the objectives of the study, defining the population, selecting a sample and designing the methods of data collection and analyse of the data and result.

This research is descriptive in nature. Descriptive as the name implies a complete and accurate description of a situation. For this study the researcher used both primary and secondary data.

PERIOD OF THE STUDY

The survey to know about **"The Perception of Exporters on Green Supply Chain Practices"** lasted for the period of six months.

METHOD OF DATA COLLECTION

The data has used which is collected through questionnaire and reports and internet. The researcher has used both primary as well as secondary data. The research was conducted only in Coimbatore.

PRIMARY DATA

The primary data are those which are collected freshly and for the first time and thus happen to be original in character. These primary data were collected through questionnaire.

A structured questionnaire was distributed to 50 exporting companies in Coimbatore.

SECONDARY DATA

Secondary data have been collected from various sources namely outside from research journals, magazines, other research works and valuable websites.

SAMPLING DESIGN

Sampling is the process of dividing the whole universe into number of subunits for research since it is difficult to make study on whole population it may involve more time and cost.

SAMPLE SIZE

Out of total population,50 samples were taken for the study.

STATISTICAL TOOLS USED FOR THE STUDY

The statistical tools have been used to analyze the primary data.

- ❖ Weighted average method
- ❖ Ranking method
- ❖ Chi- square

REVIEW OF LITERATURE

The role of government in promoting green logistics *Alan McKinnon, published 2014*

Governments have a range of policy instruments that they can deploy to reduce the environmental impact of freight transport/logistics. These can be divided into six broad categories:

• Taxation: this comprises mainly fuel taxes, vehicle excise duty (VED) and road-user charges.

• Financial incentives: these can take various forms. For example, they can support capital investment by companies in new equipment or infrastructure, or subsidize the use of greener freight modes or urban consolidation depots.

• Regulation: this can be applied to vehicle design and operation, the status of the Freight operators, the tariffs they charge and even the capacity of the freight sector.

• Infrastructure and land-use planning: this includes the construction and management of network infrastructure and terminals, controls on vehicle access to infrastructure and the zoning of land uses for logistics related activity.

• Advice and exhortation: governments have a role in identifying and promoting best environmental practice in freight transport, often working closely with trade associations.

Study of Green Supply Chain Management practices in the Indian Manufacturing Industries

Manufacturing Companies in India are also fairly well advanced in the types of green transportation focused initiatives they have adopted. Similar to their production and warehousing initiatives, there is a crossover between implementation of green and levels of efficiency. Almost

half of companies surveyed are already periodically services of the vehicles at service stations along reducing empty miles, truck idle time and increasing cube utilization to create efficiency. Adoption of more sophisticated green transportation measures

which have less direct relation to efficiency and cost savings are not in wide practice. These more advanced green transportation measure such as using more aerodynamic trucks [9%] and more alternative fuel powered trucks are all adopted by [11%] or less of companies.

Operations Research for Green Logistics – An Overview of Aspects, Issues

Contributions and Challenges

Closely related to the choice of transport mode is the use of a single transport load unit, like a container, over multiple transport modes, which is called intermodal transport. One of the main inefficiencies in transport is the handling of the goods at transhipment points. The introduction of containers has significantly reduced this inefficiency. Many goods shipped through intercontinental chains are shipped nowadays in containers. The land part of such a chain occurs by truck, rail or inland barge. The rise of new (inland) container terminals to facilitate inland ship-rail-road combinations can save thousands of truck kilometres in congestion-sensitive areas and thus reduce the environmental impact. This also pertains for continental chains. The downside of intermodal transport is that it requires more coordination than single mode transport.

WEIGHTED AVERAGE MEAN

TABLE 1

THE OPINION ABOUT THE MAJOR CONSTRAINT FACED BY THE INTERNATIONAL TRADERS.

PERFORMANCE	**N**	**R**	**S**	**O**	**VO**	**TOTAL**	**MEAN SCORE**	**RANK**
DEFECTS	**5**	**4**	**3**	**2**	**1**			
cost of transport	8	16	12	8	6	50	1.64	V
	40	64	36	16	6	82		

Non availability of supply chain practices	8	6	12	14	10	50	2.76	III
	40	24	36	28	10	138		
Non efficiency of ports and harbours	8	10	12	14	6	50	3	II
	40	40	36	28	6	150		
Lack of technical workers	10	12	16	8	4	100	2.6	IV
	50	48	48	16	4	130		
Lack of Government support	20	8	16	6	0	50	3.72	I
	100	32	48	12	0	186		

INTERPRETATION

The table exhibits the weighted average mean scores. The table highlights weighted score, which help to decide the most important factor, and opinion on the constraint faced by international traders . The highest score (3.72) lack of government support and the lowest score (1.64) cost of transport .

RANKING METHOD

In this method the respondents were asked to rank their opinion about the benefits of Green supply chain practices in their concern. The order of the merit given by the respondents was converted into rank.

TABLE NO : 2

THE BENEFITS OF GREEN SUPPLY CHAIN PRACTICES

FACTOR	10	9	8	7	6	5	4	3	2	1	TOTAL	MEAN SCORE	RANK
Increases International trade	2	14	8	6	0	8	6	2	2	2	50	5.76	IV
	20	126	24	42	0	40	24	6	4	2	288		
Improves profit	10	0	12	6	8	12	0	2	0	0	50	7.04	I
	100	0	96	42	48	60	0	6	0	0	352		
Reduce waste	4	6	6	4	8	2	4	6	4	6	50	5.52	V
	40	54	48	28	48	10	16	18	8	6	276		
Reduce emission	8	8	8	4	4	4	6	4	0	4	50	6.96	II
	80	72	64	28	24	40	24	12	0	4	348		
Higher production	6	4	4	6	12	6	2	4	6	0	50	6.08	III
	60	36	32	42	72	30	8	12	12	0	304		
Increases goodwill	10	2	4	6	2	4	10	6	2	4	50	5.08	VI
	100	18	32	42	12	20	40	18	4	4	290		
Increases customers	2	6	6	2	4	6	6	6	6	4	50	4.96	VII
	20	54	48	14	24	30	24	18	12	4	248		
Time saving	2	6	4	4	2	4	6	12	8	2	50	4.88	VIII
	20	54	32	28	12	20	24	36	16	2	244		
Safety of products	0	4	0	6	4	4	4	4	12	12	50	3.72	X
	0	36	0	42	24	20	16	12	24	12	186		
Government support	2	4	0	8	4	2	2	4	8	16	50	3.96	IX
	20	36	0	56	24	10	8	12	16	16	198		

INFERENCE:

From the above table shows that it is inferred that by using weighted average mean it finds that the benefits of green supply chain practices in their concern.Improves profits is stated as Rank and safety of products is stated as Rank X.

CHI-SQUARE TEST

TABLE 3

TABLE SHOWING THE OBSERVED VALUE

The table showing the total number of workers and green logistics specialist in their concern

Null Hypothesis (H0): "There is no significant difference between the total number of workers and Green Logistics specialist in their concern.

Alternative Hypothesis (H1): "There is significant difference between the total number of workers and Green Logistics specialist in their concern.

Test statistics:

X^2= (Oi-Ei)/Ei

Oi= Observed Frequency

Ei=Expected Frequency

Calculation:

GREEN LOGISTICS SPECIALIST	**TOTAL NUMBER OF WORKERS**				**TOTAL**
	More than 100	Between 50-100	Between 25-50	Less than 25	
YES	4	5	2	3	14
NO	7	6	15	8	36
TOTAL	11	11	17	11	50

OBSERVED(O)	**EXPECTED(E)**	**(O-E)**	**(O-E) ²**	**(O-E) ²/E**
4	3.08	0.92	0.8464	0.2748
5	3.08	1.2	1.44	0.4675
2	4.76	-2.76	-76.176	-16.0033

3	3.08	-0.08	-6.4	-2.0779
7	7.92	-0.92	-0.8464	-0.1068
6	7.92	-0.92	-0.8464	-0.1068
15	12.24	2.76	7.6176	0.6223
8	7.92	0.08	6.4	0.8080
ΣO=50	**ΣE=50**	**Σ(O-E)=0**	**Σ(O-E) ²=** -67.9648	**Σ(O-E) ²/E= -16.1222**

Table Value:

Table value at 5% level for degrees of freedom= **(R-1)*(C-1)**

= (4-1)*(2-1)

= (3)*(1)

= **3**

Level of significance: α=0.05

Table value= 7.82

Calculated value = -16.1222

Inference:

The calculated value is (-16.1222) is less than the table value (7.82) .Hypothesis is accepted. Hence there is a significant relationship between the age of proprietor and training has improved your skill.

FINDINGS

- The study reveals that 36% of the respondents face **accidents** as their major environmental risk for their organization.
- Majority 32% of the respondents prefers reverse logistics as an area of green logistics which added more value to their firm.
- The study indicates 52% of the respondents agree that the cash flow position of the firm has been increased by using green logistics.

- Majority 32% of the respondents reveals technical advice from the government as a major incentive for their firm.
- High cost is a big pressure in GSCM as compared to conventional SCM.
- Implementing GSCM practices initially involves high investment, financial constraints also leads to resistance to implementing green practices.

SUGGESTIONS

- Environmental issues had become more relevant in India .So export companies need to focus on energy and resources for making environmentally sound supply chain.

Economic, environmental or legislative reasons have increased the requirement of GSCM practices in India.

- The government should introduce incentive schemes to encourage exporters to implement GSCM.
- The exporters must know innovative green practices involves hazardous solid waste, disposal, energy conservation, reusing and recycling of materials.
- The government has to create awareness among exporters to protect environment and to conduct more awareness program like workshops and conferences.
- Top management should have more interest to implement green practices and train their employees to implement green supply chain practices.
- The government should strengthen the policies regarding green practices.

CONCLUSION

Logistics focuses on transfer of goods, information and coordination of this process. Green logistics focuses how to reduce environmental impact of logistics processes, how to switch to greener transport modes. Logistics process focuses on optimization, reducing costs, increasing delivery speed, and gaining maximal revenue. Not always it focuses if the achieved result was using environmentally friendly solutions or transport modes. Green logistics focuses on all logistics fields where appear emissions, waste, inefficient use of resources. Some of green solutions may be not useful for business, as it may reduce flexibility of logistics process

The government should provide financial incentives, pilot projects, and tax breaks to stimulate the adoption of green practices for logistics industry. This paper only studies the factors

influencing the adoption of green innovations for logistics service providers and export companies. A study on the relationships among the adoption of green innovations, environmental performance and supply chain performance can also be conducted in the future. Moreover, other possible influential factors on the adoption of green innovations can also be taken into considerations in further study.