

A Study on Green Supply Chain Management In Restaurants With Special Reference To Trichirappalli

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Abstract- *The study examined green supply chain management in restaurants at Tiruchirappalli. Green supply chain management is a concept with several connotations and varied consequences within and among different restaurants. A study on green supply chain management in the seems to be needed in this recent time, taking into consideration the high work and time which demands upon workers, thus creating a necessary environment to green practices and personal interests. A study on green supply chain management of restaurant was conducted in an industry in Tirucharappalli and the objective of the study is to find out the causes of environmental effects of waste generated by the hotel industry. This study also recommends few suggestions on green supply chain management practices that can be implemented by the organizations for better results. The research design adopted was descriptive as the study required both primary and secondary data. The problem is identified through extensive study of the hypothesis collecting all relevant information using primary data and secondary data. There were 102 respondents selected from a restaurants. Questionnaires were circulated and data was collected and analyzed by using by appropriate statistical tools. Based on the analysis, the present study concluded that the green supply chain practices are good effective.*

manufacturers. As a result, Green Supply Chain Management (GSCM) emerges as a new systematic environmental approach in supply chain management and has been increasingly accepted and practices by forward-thinking organization. The current changing in environmental requirements that influenced manufacturing activities had increased attention in developing environmental management (EM) strategies for the supply chain. Thus, the concept of GSCM arises as a new systematic approach and becoming an important factor for business activities today. Zhu et al. also claimed GSCM can be regarded as an environmental innovation. By integrating the 'green concept to the supply chain' concept, it has created a new research agenda where the supply chain will have a direct relation to the International Journal of Managing Value and Supply Chains (IJMVSC) Vol. 3, No. 1, March 2012 2 environment. Thus, it becomes interesting issue because the past literatures showed these two paradigms were related each other. The purpose of this paper is to discuss an overview of the development of GSCM literature in a developed countries and developing countries. This study also is performed to determine the new research area of issues related GSCM's implementation. This paper will then provide a thorough review from previous studies. At the end, this paper will propose the research direction framework for the study.

I. INTRODUCTION

Green supply management

The economic growth increases the level of energy and material consumption, which contribute to the environmental issues and resource depletion problems. It has become increasingly significant for organizations facing competitive, regulatory, and community pressures to balance economic and environmental performance. Nowadays, most organizations are starting to go green in their business as concern to environmental sustainability. They have realized the greater benefit of the green technology adoption in business operation, which also affected suppliers and customers. Environmental issues under legislation and directives from customer especially in the US, the European Union (EU), and Japan become an important concern for

II. RESEARCH METHODOLOGY

It is a systematic & scientific process of conducting research. It gives the researcher a framework within which the research has to be carried out.

RESEACH DESIGN:

A Research design is purely and simply the framework or plan for a study that guides the collection and analysis of data. In fact, the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data.

- Title of research
- Area of research
- Period of research

- Sampling techniques
- Data collection methods
- Tools used for analysis
- Problem Statement
- Limitations on the study

- Percentage
- Average
- Chi Square
- ANOVA
- Correlation

Type of research:

The research is descriptive in nature. It includes surveys and fact finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present.

Title of the research:

A study on green supply chain management in restaurant with special reference to Tiruchirappalli.

Area of research:

The study is conducted in Tiruchirappalli District

Period of research:

The study period is 5 months.

Sampling techniques:

Sample size for the study was selected on the basis of simple random sampling method, 102 employees are randomly selected as sample from different places of Tiruchirappalli.

Data collection methods:

Data are collected from both primary & secondary sources. Primary data are collected through structured questionnaire and secondary data are collected from official website of the company, journals, articles, textbooks, etc..

Questionnaire Design:

Questionnaire contains Demographic and socio economic profile of the respondents, various attributes & factors related to product awareness is used in the Questionnaire, some open ended, close ended& rating questions were used to know awareness level of consumers`

Tools used for analysis:

The following statistical tools are used for data analysis

III. OBJECTIVE OF THE STUDY

- To study the green supply chain management practices in hotel industry.
- To identify the waste generation by the hotel industry.
- To know environmental effects of waste generated by the hotel industry.
- To know the reverse logistics practices in hotel industry.
- To provide suggestion for implementing green supply chain management in hotel industry.

Scope of the study:

- The scope of study is only applicable for specified area Tiruchirappalli only.
- By reviewing the recent literatures of green supply chain management, the implementation of GSCM practices regarding both internal and external environmental systems are analyzed.
- The relationship between the barriers of GSCM and its influence on internal and external GSCM practices are studied with the help of structured questionnaire responded by the respondents in restaurants at Tiruchirappalli.

Limitations on the study:

- Data collected may have responds biased.
- The Study was restricted to Tiruchirappalli district.
- The research result is applicable only to the selected organization or company
- Respondents would have hidden some fact due to the fear of management.

IV. CHI SQUARE

IMPLEMENTING	Level of star rating				Total
	3 Star	5 Star	7 Star	Others	
Strongly Agree	4	4	0	0	8
Agree	30	22	16	4	72
Indifferent	8	8	4	2	22
Disagree	0	0	0	0	0
Strongly Disagree	0	0	0	0	0
TOTAL	42	34	20	6	102

Hypothesis

Null hypothesis-: There is no relationship between techniques using to overcome the competition and SCM is the backbone of management.

Null hypothesis-: There is no relationship between years of implementing and rating of the respondents.

Anova: Single Factor

Group	Observed Frequency	Expected Frequency	O-E	(O-E) ²	(O-E) ² /E
Aa	4	3.294	0.706	0.498	0.151
Ab	4	2.666	1.334	1.779	0.667
Ac	0	1.568	-1.568	2.458	1.568
Ad	0	0.470	-0.470	0.220	0.468
Ba	30	29.647	0.353	0.124	0.004
Bb	22	24	-2	4	0.166
Bc	16	14.117	1.883	3.545	0.251
Bd	4	4.235	-0.235	0.055	0.012
Ca	8	9.058	-1.058	1.119	0.123
Cb	8	7.333	0.667	0.444	0.060
Cc	4	4.313	-0.313	0.097	0.022
Cd	2	1.294	0.706	0.498	0.384
Da	0	0	0	0	0
Db	0	0	0	0	0
Dc	0	0	0	0	0
Dd	0	0	0	0	0
					3.876

Calculated value of $\chi^2 = 3.876$

Degree of freedom $= (R - 1) \times (C - 1) = (5 - 1) \times (4 - 1) = 12$

The table value of χ^2 for 4 degree of freedom at 5 per cent level of significance is 21.03

Conclusion-: calculated value is 3.876 and it is less than the table value, so the null hypothesis is accepted. Hence it is concluded that there is no significant relationship between techniques using to overcome the competition and SCM is the backbone of management.

ANOVA

IMPLEMENTING		RATING	
Strongly Agree	8	3 Star	42
Agree	72	5 Star	34
Indifferent	22	7 Star	20
Disagree	0	Others	6
Strongly Disagree	0		
TOTAL	102	Total	102

Hyphothesis

SUMMARY

Groups	Count	Sum	Average	Variance
Column 1	102	218	2.137255	0.278004
Column 2	102	194	1.901961	0.841778

ANOVA

Source of Variation	SS	df	MS	F	P-value	Fcrit
Between Groups	2.823529	1	2.823529	5.042996	0.025809	3.887906
Within Groups	113.098022	202	0.559891			
Total	115.9216	203				

Conclusion-: calculated F value is 5.0429 and F critical value 3.88 so calculated value is more than the table value so Null is rejected .hence it is concluded that there is a relation between implementing and rating.

CORRELATION

Gender		Staff Getting Training	
Male	64	Strongly Agree	24
Female	38	Agree	60
		Indifferent	14
		Disagree	4
		Strongly Disagree	0
Total	102	TOTAL	102
		Column 1	Column 2
Column 1	1		
Column 2	0.634113		1

Conclusion

The calculated value is 0.6341 so I concluded that backbone of the business and age of the respondents are positively correlated

V. FINDINGS

- Based on the findings of the study 63 percent of respondents are male and 37 percent of respondents are female.

- 53 percent of respondents are in between 20-30 years , 14 percent of respondents are in between 30-40 years,25 percent of respondents are 30-40 years,25 percent of respondents are 40-50 years and 6 percent of respondents are 25 percent and 50 and above respondents are 6 percent. Based on the survey most them are between 20-30 years
- This table shows marital status of the respondents . In the above specified table 71 percent of respondents are married, 29 percent of respondents are single. Based on the survey most of them are married.
- This table shows level of education of respondents .In the above table 49percent of respondents are primary level,8percent of respondents are secondary level,37percent of respondents are college level and 6 percent of respondents are university level. **Based** on the survey most them are primary level
- The above table shows availability of GSCM in Restaurants. Majority of respondents are have GSCM on their Restaurants.
- The above table shows implementation of GSCM. Majority of respondents are have implemented GSCM on their Restaurants.
- The above table shows an importance of GSCM. Majority of respondents are giving importance to GSCM.
- The above table shows the usage of low energy bulbs .In the above table 48 percent of respondents are strongly agree,44 percent of respondents are agree,6 percent of respondents are indifferent,2percent of respondents are disagree and 2percent of respondents are strongly disagree. Based on the survey most them are strongly agree.
- The above table shows the solar power water facilities in restaurants. In the above table 65 percent of respondent are strongly agree,16percent of respondents are agree and 19 percent of respondents are indifferent. Based on the survey most them are strongly agree.
- The above table shows the rainwater harvesting in restaurants. In the above table 33percent of respondents are strongly agree,40percent are agree,23percent are indifferent,2percent are disagree and 2percent are strongly disagree. Based on the survey most them are agree.
- The above table shows the usage of eco friendly soaps at restaurants. In the above table shows 41 percent of respondents are strongly agree,43percent are agree,10percent are indifferent,4percent are disagree and 2 percent are strongly disagree. Based on the survey most them are agree.
- The above table shows the usage of shower heads. In the above table 31 percent of respondents are strongly agree,49percent are agree and 20percent are indifferent. Based on the survey most them are agree.
- The above table shows the disposal and composting of garbage.In the above table 32percent of respondents are strongly agree,52 are agree and 16 are indifferent. Based on the survey most them are strongly agree.
- The above table shows that the garbage was separated before disposal. In the above table 46percent of respondents are strongly agree,36percent are agree,8percent are indifferent,8 percent are disagree and 2 percent are strongly disagree. Based on the survey most them are strongly agree.
- The above table shows that the staffs get training on GSCM. On the above table 24percent of respondents are strongly agree,60percent are agree,10 percent are indifferent and 6percent are disagree. Based on the survey most them are strongly agree.
- The above table shows that the opinions about green purchasing in restaurants .In the above table 22percent of respondents are strongly agree,48percent are agree and 34percent are indifferent. Based on the survey most them are agree.
- The above table shows the usage of eco friendly goods. In the above table 26percent of respondents are strongly agree,64percent are agree and 12percent are indifferent. Based on the survey most them are agree.
- The above table shows the effectiveness of GSC at restaurants .In the above table 36percent of respondents are strongly agree,48percent are agree,16 are indifferent, and 2 are disagree.Based on the survey most them are agree.
- The above table shows the involvement of management in GSC at restaurants .In the above table 36percent of respondents are strongly agree,64percent are agree and 4 are indifferent. Based on the survey most them are agree.
- The above table shows the usage of environmental friendly products.In the above table 4 percent of respondents are strongly agree,74 percent are agree, 24 percent are indifferent and 2 percent are disagree. Based on the survey most them are agree.
- The above table shows the effectiveness of GSCM practices. In the above table 16 percent of respondents are strongly agree, 72 percent are agree and 12 percent are disagree. Based on the survey most them are agree.
- The above table shows the effectiveness of cost. In the above table 14 percent of respondents are strongly agree, 55 percent are agree, 31percent are indifferent. . Based on the survey most them are agree.
- The above table shows adapting to GSCM. In the above table 24 percent of respondents are strongly agree, 50

percent are agree and 26 percent are indifferent. . Based on the survey most them are agree.

- The above table shows the adapting the customer demand. In the above table 21 percent of respondents are strongly agree, 60percent are agree and 19 percent are indifferent. Based on the survey most them are agree.
- The above table shows the GSCM resource saving. In the above table 19 percent of respondents are strongly agree, 60percent are agree and 21 percent are indifferent. Based on the survey most them are agree.
- The above table shows the customr requirements to lead GSCM. In the above table 16 percent of respondents are strongly agree, 64percent are agree and 20 percent are indifferent. Based on the survey most them are agree.
- The above table shows the compliance management in GSCM. In the above table 10 percent of respondents are strongly agree, 44 percent are agree, 42 percent are indifferent and 4 percent are disagree. Based on the survey most them are agree.
- The above table shows the success rate of GSCM. In the above table 24 percent of respondents are strongly agree, 50 percent are agree and 26 percent are indifferent. Based on the survey most them are agree. Based on the survey most them are agree.
- The above table shows competitive advantage of firm going in green. In the above table 14 percent of respondents are strongly agree, 62 percent are agree, 22 percent are indifferent and 2 percent are disagree. Based on the survey most them are agree.
- The above table shows the role of government in hotel to go green. In the above table 20 percent of respondents are strongly agree, 38 percent are agree, 42 percent are indifferent and 2 percent are disagree. Based on the survey most them are agree.
- The above table shows the stress from GSCM. In the above table 14 percent of respondents are strongly agree, 51 percent are agree and 36 percent are indifferent. Based on the survey most them are agree.
- The above table shows the social responsibility leads to go green. In the above table 16 percent of respondents are strongly agree, 61 percent are agree and 24 percent are indifferent. Based on the survey most them are agree.
- The above table shows the cost effectiveness of GSCM. In the above table 8 percent of respondents are strongly agree, 70 percent are agree and 22 percent are indifferent. Based on the survey most them are agree.
- The above table shows complexity of GSCM. In the above table 16 percent of respondents are strongly agree, 44 percent are agree, 40 percent are indifferent and 2 percent are disagree. Based on the survey most them are agree.
- The above table shows the lack on personnel training on GSCM. In the above table 10 percent of respondents are strongly agree, 73percent are agree and 27 percent are indifferent. Based on the survey most them are agree.
- The above table shows the competitions in GSCM. In the above table 26 percent of respondents are strongly agree, 48 percent are agree and 24 percent are indifferent. Based on the survey most them are agree.
- The above table shows the Challenges on implementation of GSCM .In the above table 6 percent of respondents are strongly agree, 54 percent are agree, 38 percent are indifferent and 2 percent are disagree. Based on the survey most them are agree. Based on the survey most them are agree.

VI. SUGGESTIONS

- Exchange plastic material for reusable cups and containers.
- Reduced the smokes bu theuse of machines.
- Musd pots are used for alternatives of plastic bags.
- Banana leaf.
- Provides some benefits for customers those who are bring vessels from their home.
- They need a permanant place to copose the food wastage and other wastage.
- For attracting the customers we need to introduce organic products in the restaurants.
- Provides candle light dinner for reduce the power.
- Invest in energy efficient appliances.
- Go local and grow your own produce.
- Replace your facilities with water saving toilets to reduce the quantity of water used with every flesh
- Monitoring on perishable goods.

VII. CONCLUSION

This study investigated crucial green supply chain management (GSCM) practice dimensions and firm performance based on restaurants firms in Tiruchirappalli. On the basis of a factor analysis, four green supply chain management dimensions were identified: Corporate environment policy, green packing, green product, and economic transport. This study investigated crucial GSCM practice dimensions (including corporate environment policy, packaging waste, economic transport, and product recycling), green capability and organizational performance. The results shown: First, green practices in restaurants in Tiruchirappalli have an indirect effect on firm performance through green capability; second, when the ability of suppliers of green and green capability is at a higher degree, it will contribute to

organizational performance, namely environmental and economic performance. Finally, green practices could be a key driver of green capability and it should be a priority in restaurants.

REFERENCE

- [1] Hair, J.F.; Anderson, R.E.; Tatham, R.L.; Black, W.C. *Multivariate Data Analysis*, 5th ed.; Prentice-Hall
- [2] International, Inc.: Upper Saddle River, NJ, USA, 1998.
- [3] Edwards, J.; Bagozzi, R. On the nature and direction of relationships between constructs and measures.
- [4] *Psychol. Methods* 2000, 5, 155–174.
- [5] Diamantopoulos, A.; Siguaw, J.A. Formative versus reflective indicators in organizationcal measure
- [6] development: A comparison and empirical illustration. *Br. J. Manag.* 2006, 17, 263–282.
- [7] Chin, W.W. How to Write Up and Report PLS Analyses. In *Handbook of Partial Least Squares*; Esposito Vinzi, V.,
- [8] Chin, W.W., Henseler, J., Wang, H., Eds.; Springer-Verlag: Heidelberg, Germany, 2010; pp. 655–690.
- [9] www.tn.gov.nic.in