

Success Factors of Green Supply Chain Management In Indian Manufacturing SMEs: A Literature Review

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Abstract— Endurability in manufacturing SMEs is the requirement of the environmental initiatives in the organization. It has been seen that green supply chain management (GSCM) is developing new and effective approach to improve the productivity, efficiency and performance of any organization to achieve endurability. The main goal of this paper is to find out the success factors which are responsible for implementation of GSCM in manufacturing SMEs from past 10 years. A list of success factors identified from extensive literature available is presented in this paper. This study includes literature review which is useful for expand understanding and knowledge of this research field.

Keywords— GSCM, success factors.

INTRODUCTION

Green issues are arises continuously so that they requires a continuous study to understand the problems. (Reza Rostan Zadeh etal.2014)Most of the manufacturers are recently focuses on GSCM due to pressure from the government and environmental knowledge among the customers. GSCM is a best concept for industries to achieve a hazard free environment. There are many definitions of GSCM as given by researchers. GSCM is one of the systematic ways to sustain our resources and surrounding environment to prevent our lives from deteriorating. There are number of factors which are affected to organizational supply chain either externally or internally. But from that we finds only the success factors which are useful for transmission of traditional supply chain to green supply chain. This paper presents a review on identifying success factors of GSCM in manufacturing SMEs. In literature various MCDM (Multi criteria Decision Making) methods are available but as per literature review most of the authors used AHP (Analytical Hierarchy Process) method for evaluation and ranking of them. Then validate the results with structural Questionnaire survey and data analysis. Questionnaire is useful for appropriate and descriptive data collection.

1.1 What is GSCM?

GSCM is an integrating environmental thinking into supply chain management, including product design, manufacturing processes, delivery of the final product to the consumers and end of life management of the product after its useful life (Thoo ai chin et al., 2015).

1.2 Why GSCM is required?

The government gives pressure on manufacturer to improve quality of life of their citizen. GSCM is useful for improving competitive advantage, performance of organization and company brand image.in present study we are finding the success factors of GSCM from successful companies and implementing in various industries who wants to implement GSCM which are generates harmful wastes and environmental issues.

1.3 Difference between traditional supply chain and green supply chain.

In traditional supply chain is defined as an integrating philosophy of the total flow of distributional channel from the point of origin to the point of consumption.so that in traditional supply chain only supply the material to the end user.

In green supply chain management is define as an environmental thinking into supply chain management including product design, manufacturing processes, delivery of the final product to the customers and end of life management of the product after its useful life. (Thoo ai chin at al., 2015).so that in GSCM environmental thinking is considered. GSCM is useful for improving the performance of organization and company brand image.

I. LITERATURE REVIEW

Due to increasing environmental issues and social problems organizations moves towards adoption of GSCM practices. The purpose of this study is to identify, analyse the success factors which are useful for implementation of GSCM.

Now a day's most useful way to carry out research is through the use of internet. However, there are so much information available on internet. Which is effective and

Non-effective, reliable and non-reliable, authenticated and non-authenticated, useful and non-useful. Therefor science direct is used to start the search for quality research papers. In this study articles are search by various key words.

In which "GSCM" and "success factors" are used. So that 25 articles were collected for literature review.

Table-1 shows the extensive literature review of 25 Research papers related to GSCM.

TABLE-I LITERATURE REVIEW

Sr No	Authors and year of Publication	Title of research paper
1	Raja Ariffin, Raja Ghazilla, et al.,(2015)	Drivers and barriers analysis for green manufacturing practices in Malaysian SMEs: preliminary findings.
2	Kanan Govindan&k madanshankar (2014)	Analyzing the drivers of green manufacturing with fuzzy approach.
3	Summit Gandhi et al., (2015)	Evaluating factors in implementation of successful green supply chain management using DEMATEL – A case study.
4	Ozlem Gruels et al., (2015)	Determinants of the green supplier selection.
5	Kai chen Goh et al.,(2017)	Barriers and Drivers of Malaysian BIPV application: Perspective of developers.
6	Niraj Kumar et al.,(2015)	Review of Green supply chain processes.
7	k.mithiyazhagan et al.,(2015)	Application of AHP to evaluates pressures to implement green supply chain management.
8	Thoo ai chin et al.,(2015)	Green supply Chain Management environmental collaboration and sustainability performance.
9	Wu-gan cai & Xiao-liang Zhou(2014)	On the Drivers of eco- innovation empirical evidence from china.
10	Manoj Hudnurkar et al.,(2014)	Factors affecting collaboration in supply chain: A literature Review.
11	Reza Rostanzadeh et al.,(2014)	Application of fuzzy vikor for evaluation of green supply chain management practices.
12	Larry c. Giunipero et al.,(2012)	Purchasing and supply management sustainability: Drivers and Barriers.
13	Niki Bey et al., (2013)	Drivers and Barriers for implementation strategies in manufacturing companies.
14	Katrina Lintukagas et al.,(2016)	Supply risks as drivers of green supply chain management adoption.
15	Sunil Luthra et al.,(2015)	An Analysis of interactions among critical success factors to implement green supply chain management towards sustainability: An Indian perspective.
16	Vaishali Sharma et al.,(2014)	Identification of major drivers & roadblocks for remanufacturing in India.
17	Vijay Sharma et al., (2017)	Green supply chain management related performance indicators in agro industries: A Review.
18	Ozer Uygun & ayse Dede (2016)	Performance evaluation of GSCM integrated using fuzzy multi criteria decision making techniques.
19	Guo-ciang wu et al.,(2012)	The effects of GSCM drivers and institutional pressures on GSCM practices in Taiwan's textile and apparel industry.

20	Varinder Kumar Mittal & kuldip Singh sang wan.(2014)	Prioritizing drivers for green manufacturing environmental, social and economic perspectives.
21	Kannan Govindan et al., (2014).	Barriers analysis for green supply chain management implementation in Indian industries using Analytic Hierarchy process.
22	Sunil luthra et al., (2016).	Impacts of critical success factors for implementing GSCM towards sustainability: An empirical investigation of automobile industry.
23	Kamalakanta Muduli et al., (2013).	Role of behavioral factors in GSCM implementation in Indian mining industries.
24	Ming-Lang Tseng et al., (2012).	Performance drivers of green innovation under incomplete information.
25	Mohit Tyagi et al.,(2015)	Parametric selection of alternatives to improve performance of green supply chain management.

II. OUTCOME OF LITERATURE REVIEW

There are many success factors by industries during implementation of GSCM. There are numbers of success factors are faced by each stage of a supply chain.

- MCDM model can be used for identifying success factors of green supply chain management.
- Questionnaire survey method is used to identify success factors of green supply chain management in various industries.
- GSCM is useful for
 - Find out reason of pollution of air, water and soil.
 - Minimization of natural resources, global warming, Waste management issues.
 - Industries for environmental protection.
 - Improve environmental performance.
 - Adopting brand image & to win trust of the customer.
- Developing environmental collaboration is useful for achieve sustainable performance.

[1] From this paper authors have identified drivers and barriers for implementation of green manufacturing practices in Malaysia by using Delphi method.

Drivers: ISO 14000, eco labelling, hazardous &toxic regulation, financial incentives,& penalties from govt. Social responsibility, good community,training,customer demand, company image, product quality, good environmental education.(Raja Ariffin et al.,2015).

[2] In this paper various drivers of green manufacturing were identified and analyzed by fuzzy approach. Identified drivers are listed belows.

Drivers: financial benefits, company image, environmental conservation, stake holders, green innovation, supply chain requirement, customers, compliance with regulations, employee demands, internal motivations, market trend, competitors, green innovation. (Kannan Govindan & k. Madanshankar, 2014).

[3] Identified factors: top management commitment, human technical expertise, financial factors, globalization, competitors, government regulations & standards, top management commitment, ISO 14001 certifications, customer requirement, role of supplier, employee involvement, role of stakeholders ,NGO & media, technical expertise, training of suppliers & employees, brand image building, adoption of new technology & processes,sustainability,reverse logistics. (Summit Gandhi et al., 2015).

[4] In this paper is useful for find out the criteria which affect the environment to build a better relationship with partners. This criteria is analyze by the AHP approach. Criteria: cost, quality, delivery, service, strategic alliance, pollution control, green product, environmental management. (Ozlem Gruels et al., 2015).

[5] From this research findings will be particularly important for manufacturing companies in developing environmental collaboration to achieve sustainable performance. DRIVERS: green procurement, green manufacturing, green distribution, green logistics, environmental collaboration, eco design, industrial network, green information systems, green purchasing, cooperation with customers, investment recovery, corporate strategy, operational strategy, reuse, recycle, reduce, Eco labelling of products.(Thoo ai chin et al.,2015).

[6] Identification of the drivers of eco innovation in firms is a popular topic in literature. This study aims to determine drivers of eco-innovation implementation in Chinese firms. Conceptual model is developed & tested by a questionnaire survey by using hierarchical regression Analysis results are specific to china. Drivers: external pressures from environmental regulations, customers green demands, competitors, organizational capabilities, technological capabilities, corporate social responsibility. (Wu-gan cai & Xiao-liang Zhou, 2014).

[7] Green issues are arises continuously so that they requires a continuous study to understand the problems. We take an example of laptop manufacturing company in Malaysia. In this paper VIKOR method is used to solve green issues. Main criteria of the research ranked as follows respectively. Eco design, green production, green purchase, green recycling, green transportation, green warehousing, etc. then it is analyse.in future this type of work is carried out by various methods indifferent industries. Criteria: green purchasing, green production, green design, green warehousing, green transportation, green recycling. (Reza Rostanzadeh et al., 2014).

[8] The purpose of this study was to identify the drivers and barriers currently facing purchase & supply management sustainability implementation efforts. This research is based on Delphi Analysis of 21 leading supply management executives from national to multinational companies in United States. Sustainability is defined as "using resources to meet the needs of the present without compromising the ability of future generations to meet their own needs".

Drivers: top management initiatives compliance with laws & regulations, competitive differentiators, cost savings, increased resource utilization, customer requirement, competitive adopted reduce carbon footprint ISO 14000, government incentives. (Larry c. ginnipero et al., 2012).

[9] This paper identified major drivers for implementation of environmental strategies in manufacturing companies. Data collection was taken by questionnaire survey method. Authors were concluded for check & improve information flows and information sharing regarding environmental impacts within the company. Drivers: Legislation, Pressure from stakeholder, Customer demand Management's idea, Brand image, Product innovation. (Niki Bey et al., 2013).

[10] This paper explores the improvements of critical success factors to implement GSCM in automobile industry in india.26 factors to implementation GSCM were identified by literature review further study may be required to research on customer management csf to motivate GSCM in Indian automobile industry. Internal management and competitive ness factors playing an important role for achieving expected performance. The present paper also give information to the practitioners/managers regarding various GSCM implementation issues & to improve their practices and performances. (Sunil Luthra et al., 2015).

[11] Remanufacturing is a process that utilizes the used components coming from disassembly of end of life or used products to manufacture. Remanufacturing is important for improving environmental performance & reused the adverse environmental effects. The aim of this study is to find out major drivers & roadblocks for remanufacturing in India. A questionnaire based survey was conducted to identify economic, social, and environmental drivers of remanufacturing. Lack of government supports the major roadblock of remanufacturing. Drivers: economic drivers, social drivers, environmental drivers. (Vaishali Sharma et al., 2014).

[12] GSCM has gained special attention of many industries are now interested in adopting brand image, capturing more market share, & to win trust of the customer. The purpose of this study is to find out performance indicators responsible for GSCM implementation to give rank them using AHP. Questionnaire base survey can be used for data collection. Performance indicators: internal environmental management, environmental design, govt. regulatory pressure, green purchasing, cooperation with suppliers and customers. Green transportation, competitive pressures, reverse logistics, operational performance, economic performance, green manufacturing, market share. (Vijay Sharma et al., 2017).

[13] GSCM is useful for minimizing or eliminating negative effects of supply chain operations on the Environment. GSCM requires MCDM techniques for evaluation. In this paper fuzzy DEMATEL is used.

Criteria : green design, green purchasing, green transportation, green logistics, green manufacturing recycling, remanufacturing, reusing, disposal, reverse logistics, supplier – customer collaboration, quality regulations, quality of service, quality of technology, green packaging, regulations, environmental performances, economic performances.(Ozer vygun & Ayse Dede, 2016).

[14] This paper investigates the relationships between GSCM drivers and GSCM practices. GSCM increase companies' reputation and performance.

Drivers: organizational supports, social capital, govt. involvement, green purchasing, cooperation with customers, eco design, investment recovery, market pressure, regulatory pressure, competitive pressure.

(Guo-Ciang wu et al., 2012).

[15] The governments gives pressure on manufacturers to improve quality of life of their citizen. Manufacturing sectors consumes lots of energy & other resources and emits large amount of greenhouse gases which arises environmental problems like climate change and global warming.so that for solution of this problem is green manufacturing implementation in industry is useful. This paper aim's at identifying this motivating factors based on fuzzy TOPSIS method using environmental, social & economic perspectives. drivers : incentives, public pressure, future legislation current legislation, public image, top management commitment, cost savings, customer demand, technology, competitiveness, organizational resources, supply chain pressure.(Varinder Kumar Mittal & Kuldeep Singh sang wan).

[16] Due to increasing environmental problems& social issues, organizations moves towards adoption of GSCM practices. The purpose of this study is to identify, analyze and model the critical success factors to implement GSCM in industries. A solution methodology based on the interpretive structural modelling technique is used to propose a structural model to implement GSCM.

Factors : top management commitment, central government legislation, societal issues, organizations policy, strategic planning, encouragement from customers, support from customers, information sharing & quality, pressures from NGO,s societal issues motivation of suppliers, cost of disposal of hazardous materials, workplace management , motivation of suppliers, brand image, information technology, scarcity of natural resources, economic benefit, firm's competitiveness.(Sunil Luthra et al.,2015).

[17] GSCM is useful for minimization of energy, material & to reduce adverse impacts on environment. GSCM implementation in mining industries depends on certain factors which are arises by human behaviors. Human behaviors is dynamic in nature & continuous changing. So that identifying & ranking the behavioral factors which affects GSCM implementations become essential.in this study interpretive structural modelling is used to Analyze this factors. Investigation of the behavioral factors which is useful for transmission of any traditional supply chain into a green supply chain.

Factors: top management support, performance appraisal, communication, green training, employee empowerment, team work, work culture, mutual trust & respect, green innovation, green motivation, strategic planning.

(Kamalakanta Muduli et al., 2013).

[18] This study identified the appropriate green innovation criteria. The study prevents theoretical & empirical evidence of green innovating drivers in the domains of environmental management.

Drivers:

Redefine operation, & production processes, redesigning & improving product, reduction of hazardous wastes, less consumption of water electricity, gas, petrol, provides environmental seminar's & trainings.

(Ming-Lang Tseng et al., 2013).

[19] GSCM is becoming an important subject in globalization. In this research work 7 green criteria have been identified from Indian Automobile industries located at Delhi region.

Criteria:

Saving energy, design for environment, waste minimization, reuse of hazardous wastes, awareness about green concept, information sharing regarding environmental regulations, proper mode of transport.

(Mohit Tyagi et al., 2015).

TABLE II. SUCCESS FACTORS OF GSCM AS FOUND IN RESPECTIVE RESEARCH PAPER

S.No.	Year	Author	Success factors
1	2015	Raja Ariffin et al.,	ISO 14000, eco labelling, hazardous & toxic regulation, financial incentives,& penalties from govt. Social responsibility, good community, Training, customer demand.
2	2014	Kannan Govindan & k. Madanshankar	financial benefits, company image, environmental conservation, stake holders, green innovation, supply chain requirement, customers, compliance with regulations, employee demands, internal motivations, market trend, competitors, green innovation.
3	2015	Summit Gandhi et al.,	top management commitment, human technical expertise, financial factors, globalization, competitors, government regulations & standards, top management commitment, ISO 14001 certifications, customer requirement, role of supplier, employee involvement, role of stakeholders ,NGO & media, technical expertise, training of suppliers & employees, brand image building, adoption of new technology & processes, sustainability, reverse logistics.
4	2015	Ozlem Gruels et al.	Cost, quality, delivery, service, strategic alliance, pollution control, green product, environmental management.
5	2015	Thoo ai chin et al.	green procurement, green manufacturing, green distribution, green logistics, environmental collaboration, eco design, industrial network, green information systems, green purchasing, cooperation with

			customers, investment recovery, corporate strategy, operational strategy, reuse, recycle, reduce, Eco labelling of products.				organizational resources, supply chain pressure
6	2014	Wu-gan cai & Xiao-liang Zhou	External pressures from environmental regulations, customers green demands, competitors organizational capabilities, technological capabilities, corporate social responsibility.	16	2015	Sunil Luthra et al.	top management commitment, central government legislation, societal issues, organizations policy, strategic planning, encouragement from customers, support from customers, information sharing & quality, pressures from NGO,s societal issues motivation of suppliers, cost of disposal of hazardous materials, workplace management , motivation of suppliers, brand image, information technology, scarcity of natural resources, economic benefit, firm's competitiveness.
7	2014	Reza Rostanzadeh et al.	Green purchasing, green production, green design, green warehousing, green transportation, green recycling.				
8	2012	Larry c. ginnipero et al.	Top management initiatives compliance with laws & regulations, competitive differentiators, cost savings, increased resource utilization, customer requirement, competitive adopted reduce carbon footprint ISO 14000, government incentives.	17	2013	Kamalakanta Muduli et al.	top management support, performance appraisal, communication, green training, employee empowerment, team work, work culture, mutual trust & respect, green innovation, green motivation, strategic planning.
9	2013	Niki Bey et al.	Legislation, Pressure from stakeholder, Customer demand Management's idea, Brand image, Product innovation.	18	2013	Ming-lang Tseng et al.	Redefine operation, & production processes, redesigning & improving product, reduction of hazardous wastes, less consumption of water Electricity, gas, petrol, provides environmental seminars & trainings.
10	2015	Sunil Luthra et al.	Internal management and competitive ness factors playing an important role for achieving expected performance. The present paper also give information to the practitioners/ managers regarding various GSCM implementation issues & to improve their practices and performances.	19	2015	Mohit Tyagi et al.	Saving energy, design for environment, waste minimization, reuse of hazardous wastes, awareness about green concept, information sharing regarding environmental regulations, proper mode of transport.
11	2014	Vaishali Sharma et al.	Economic drivers, social drivers, environmental drivers.				
12	2017	Vijay Sharma et al.	Internal environmental management, environmental design, govt regulatory pressure, green purchasing, cooperation with suppliers and customers. Green transportation, competitive pressures, reverse logistics, operational performance, economic performance, green manufacturing, market share.				
13	2016	Ozer vygun & Ayse Dede	green design, green purchasing, green transportation, green logistics, green manufacturing recycling, remanufacturing, reusing, disposal, reverse logistics, supplier – customer collaboration, quality regulations, quality of service, quality of technology, green packaging, Regulations, environmental performances, economic performances.				
14	2012	Guo-Ciang wu et al.	Organizational supports, social capital, govt. involvement, green purchasing, cooperation with customers, eco design, investment recovery, market pressure, regulatory pressure, competitive pressure.				
15		Varinder Kumar Mittal & Kuldip Singh sang wan	incentives, public pressure, future legislation current legislation, public image, top management commitment, cost savings, customer demand, technology, competitiveness,				

III. TYPES OF SUCCESS FACTORS

Identified success factors of GSCM from Literature review resulted by sorting out according to its type as listed in Table 3

Types of Success Factors are as under.

1. Environmental Perspectives
2. In-house Development Factors
3. Green Practices
4. Customer Relation Factors
5. Social Perspectives
6. Regulatory Norms
7. Green Strategic Factors
8. Others

TABLE III IDENTIFIED SUCCESS FACTORS OF GSCM FROM LITERATURE REVIEW

Environmental Perspectives	In-house Development	Green Practices	Customer Relation
1.eco labelling	1.training of employees	1.green manufacturing	1.customer requirement
2. pollution control	2. top management commitment	2.green packaging	2.co-operation with customer
3. waste reduction	3.adoption of clean technology	3. green purchasing	3.customer awareness
4. reduction of hazardous wastes	4.enviromental management system	4. green transportation	Regarding GSCM
5.enviromental friendly materials	5.training of suppliers	5.green design	4.competitiveness
		6. green information system	5.customer enviromental collaboration
		7. green innovation	6.supplier enviromental collaboration
Social Perspectives	Regulatory Norms	Green Strategic factors	others
1.conservaion of natural resources	1. ISO 14001	1.reuse	1.green operation
2.social responsibility	2.government regulation & standards	2.recycling	2.competitive pressure
3.environmental related training and seminar	3. hazardous and toxic regulations	3.reverse logistic	3.globalization
		4.remanufacturing	4.green procurement
		5.reduce	5.investment recovery
			6.reuse of packaging
			7.waste management
			8.minimize carbon footprint

IV CONCLUSION

In this study we have found the success factors that influence the implementation of GSCM in Indian manufacturing SMEs. Also, we review the literature on GSCM with a focus on identifying success factors of GSCM in different manufacturing organizations that have been utilized to expand understanding and knowledge of this search field. There are more opportunities for future research and investigation in analyzing the success factors using various MCDM methods like ISM, AHP, and ANP etc. There are much of the literature on GSCM research has been relatively recent. We will say that in future this type of environmental research will be takes place.

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REFERENCES

- [1] Raja Ariffin Raja Ghazilla1, Novita Sakundarini1, Salwa Hanim Abdul-Rashid1,Nor Syakirah Ayub1, Ezutah Udoncy Olugu1, S. Nurmaya Musa2,2015, “ Drivers and barriers analysis for green manufacturing practices in Malaysian SMEs: preliminary findings.”
- [2] Kannan govindan & Madanshankar, 2014, “Analysing the drivers of green manufacturing with fuzzy approach.”
- [3] Sumeet Gandhia, Sachin Kumar Manglab*, Pradeep Kumar, Dinesh Kumard,2015, “ Evaluating factors in implementation of successful green supply chain management using DEMATEL- A case study.”
- [4] Ozlem Gruel□, A. Zafer Acar, Ismail Onden, Islam Gumus, 2015, “Determinants of the green supplier selection.”
- [5] Kai Chen Goha,*, Hui Hwang Gohb, Aaron Boon Kian Yapa, Md Asrul Nasid Masroma,Sulzakimin Mohameda,2017, “Barriers and drivers of Malaysian BIPV application: perspective of developers.”
- [6] Niraj Kumar** Ravi P. Agrahari*. Debjit Roy*,2015, “Review of green supply chain processes.”
- [7] K. Mathiyazhagan, Ali Diabat, Abbas Al-Refaie, Lei Xu,2015, “Application of AHP to evaluates pressures to implement green supply chain management.”
- [8] Thoo Ai China,*, Huam Hon Tatb, Zuraidah Sulaimana, 2015, “ Green supply chain management environmental Collaboration and sustainability performance.”
- [9] Wu-gan Cai*, Xiao-liang Zhou 1, 2014, “On the drivers of eco innovation empirical evidence from china.”
- [10] Manoj Hudnurkar *a, Suresh Jakhar a, Urvashi Rathod b, 2014, “Factors affecting collaboration in supply chain: A literature Review.”
- [11] Reza Rostamzadeh a, Kannan Govindan b,*, Ahmad Esmaeili c, Mahdi Sabaghi d, 2014, “Application of fuzzy VIKOR for evaluation of green supply chain management practices.”
- [12] Larry C.Giunipero a,n, RobertE.Hooker b,1, DianeDenslow c,2,2012, “ Purchasing and supply Management sustainability: Drivers and Barriers.”
- [13] Niki Bey a,*, Michael Z. Hauschild (1) a, Tim C. McAlloone b, 2013, “drivers and Barriers for implementation strategies in manufacturing companies.”
- [14] Katrina Lintukangas, Anni-Kaisa Kähkönen, Paavo Ritala2016, “ Supply risks as drivers of green supply chain management adoption.”
- [15] Sunil Luthra a,n, DixitGarg a,1, AbidHaleem b,2, 2015, “An Analysis of interactions among critical success factors to implement green supply chain management towards sustainability: An Indian perspective.”
- [16] Vaishali Sharma*, Suresh K. Garg, P.B. Sharma 2014, “Identification of major drivers & roadblocks for remanufacturing in India.”
- [17] Vijay Sharma, Pankaj Chandna, Arvind Bhardwaj, 2017, “Green supply chain management related performance indicators in agro industries: A Review.”
- [18] Özer Uygun †, Ays_e Dede 1, 2016, “Performance evaluation of GSCM integrated using fuzzy multi criteria decision making techniques.”
- [19] Guo-Ciang Wua, n, Jyh-HongDing b, Ping-ShunChen c, 2012, “The effects of GSCM drivers and institutional pressures on GSCM practices in Taiwan’s textile and apparel industry.”
- [20] Varinder Kumar Mittala,*, Kuldeep Singh Sangwanb, 2014, “Prioritizing drivers for green manufacturing environmental, social and economic perspectives.”
- [21] Kannan Govindan a, n, MathiyazhaganKaliyan a,c, Devika Kannan B, A.N.Haq c, 2014, “Barriers analysis for green supply chain management implementation in Indian industries using Analytic Hierarchy process.”
- [22] Sunil Luthra, Dixit Garg, Abid Haleem, 2016, “Impacts of critical success factors for implementing GSCM towards sustainability: An empirical investigation of automobile industry.” “Role of behavioral factors in GSCM implementation in Indian mining industries.”
- [23] Kamalakanta Mudulia, Kannan Govindanb,d,*, Akhilesh Barvea, Devika Kannanc, Yong Gengd, 2013,
- [24] Ming-Lang Tsenga, Fei-hsin Huang a*, Anthony SF Chiub, 2012, “Performance drivers of green innovation under incomplete information.”
- [25] Mohit Tyagi*, Pradeep Kumar, Dinesh Kumar, 2015, “Parametric selection of alternatives to improve performance of green supply chain management.”
- [26] Satty, T.L., 1980. “The Analytic hierarchy Process.” McGraw Hill, New York

- [27] Shah et al., 2017 “A fuzzy AHP approach to select and prioritize strategic knowledge management enablers in manufacturing organization.”(International conference NIT SURAT 2017).
- [28] K.Muduli, K.Govindan, A. Barve, D. Kanan, and Y. Geng “, Role of behavioral factors in green supply chain Management implementation in Indian mining industries.”
- [29] Ahi,P.,and searcy,c.comprative literature Analysis of Definitions for Green and Sustainable Supply Chain Management. Journal of Cleaner Production 2013.
- [30] Dashore, K. and Sohani, N. Green Supply Chain Management – Barriers and Drivers: A Review. International Journal of Engineering Research and Technology 2013, 2(4): 2021-2030.
- [31] Fahimnia, B., Sarkis, J., and Davarzani, H. Green Supply Chain Management: A Review and Bibliometric analysis, International Journal of Production Economics 2015.
- [32] Luthra, S. Grag, D.,and Haleem, A. Identifying and Ranking of Strategies to implement Green Supply Chain Management in Indian Manufacturing Industries using analytical Hierarchy Process, Journal of Industrial Engineering and Management 2013.