



# Building Sustainability Into The Heart Of Green Marketing

Prof. Banishree Sukla<sup>1\*</sup>, Prof. Jyoti Gupta<sup>2</sup>, Dr. Raghavendra Krishanappa<sup>3</sup>, Dr. Nijaguna G<sup>4</sup>

<sup>1\*</sup>Assistant Professor, Department of Management Studies, Sir. M. Visvesvaraya Institute of Technology, Yelahanka, Bengaluru-562157, Email: banishreesar@gmail.com, Mobile: 7760831207

<sup>2</sup>Assistant Professor, Department of Management Studies, REVA University, Kattigenahalli, Bengaluru-560064,

Email: jyoti.bwgs@gmail.com, Mobile: 7259615229

<sup>3</sup>Professor and Research guide, Sri Venkateshwara College of Engineering, Vidyanagar cross, Yelahanka, Bengaluru-562157,

Email: rags681@gmail.com, Mobile: 9900302387

<sup>4</sup>Professor, Department of MBA, Acharya Institute of Technology, Sol Devanahalli, Bengaluru-560107, Email: niju1972@gmail.com, Mobile: 9900944552

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## ARTICLE INFO

## ABSTRACT

Global warming, climate change, pollution, and unsustainable consumption patterns are just a few of the environmental challenges that have increased consumer sensitivity and awareness. Only when green products initially satisfy important customer requirements like affordability, convenience, performance, and quality consumers will purchase green products.

**Purpose:** The study's goal is to comprehend and evaluate the ways in which green supply chain management activities benefit all parties involved in the supply chain, including customers. For long-term outcomes, their purchasing habits regarding environmentally friendly goods are crucial. With the exception of the final supplier tier, which serves as the major source of supply, all parties involved in supply chain management are classified as either upstream or downstream consumers. To create sustainability through selfless behavior, it is the moral and collective duty of all stakeholders to act morally and with integrity. In order to maintain social norms the customers and companies should adopt cleaner production and pollution prevention techniques. Products, materials, and technologies should also be designed with sustainability principles in mind.

**Design/methodology:** Based on ongoing research, this study is exploratory as well as descriptive in character. In order to investigate the insights regarding green marketing sustainability, an attempt has been undertaken to gather data from environmentally conscious consumers. One hundred respondents who aim to purchase eco-friendly products are the source of the data. The ANOVA test and SPSS statistical software are used to evaluate the data as part of the descriptive analysis process. The mindset is closely related to green marketing techniques (4ps) and three levels of decision making for sustainability are studied. First, businesses operate independently; second, businesses operate throughout the sector; and third, businesses operate geographically. In order to achieve sustainability with improved economic performance and minimal environmental impact, the aforementioned theoretical framework supports several techniques or tactics for the "Green Supply Chain Initiative." Consumer behavior is found to be unaffected by the interplay between money and sustainability in green marketing. Over all levels of the marketing mix ingredients, it is discovered that there is a linear relationship between customer behavior and green marketing sustainability.

**Keywords:** Green Marketing, Sustainability, Marketing mix, consumer behavior.

## 1. INTRODUCTION

Sustainable business tactics that impact supply chains and customer psychological aspects including emotions, perception, and social norms must be tightly aligned with and integrated with green marketing strategies. Internal Alignment is another one of the biggest obstacles to the sustainability of green marketing. The commercial and sustainability objectives of supply management experts are sometimes at odds with one

another in many businesses. Organizing the flow of products from suppliers to consumers is known as supply chain management. The process of streamlining a business's internal procedures for engaging with suppliers and consumers in order to bring products to market more effectively in a sustainable manner is known as green supply chain management, or GSCM.

## 2. LITERATURE REVIEW AND GAP ANALYSIS:

- Green and colleagues (1996). The term "green supply chain" describes how advances in industrial purchasing and supply chain management may be taken into account when protecting the environment. No particular variables were listed in the study. The above-mentioned study identified several research gaps, including a lack of operationalization and quantification, a lack of investigation into implementation issues, and a lack of industry-specific factors.
- The qualities of green value chain techniques were proposed by Handfield et al. (1997). A few of these are environmental responsibility, customer expectations, strategic manufacturing initiatives, shareholder value, and regulatory environments. Strategic manufacturing initiatives, environmental responsibilities, and shareholder value were the variables included in this study. Time-specific dynamics, stakeholder perspectives, and industry-specific analysis are not covered in this work.
- In 1998, Narasimhan and Carter One aspect of environmental supply chain management is the purchasing function's participation in material substitution, recycling, reduction, and reuse initiatives. The study's factors included purchasing function involvement, reduction actions, recycling initiatives, reuse techniques, and material substitution. The study identified a research deficit in that it failed to provide a thorough quantitative assessment of the purchasing function's involvement, potential obstacles to the purchasing function's implementation of environmental supply chain practices, and lifecycle assessment.
- Messelbeck and Whaley (1999). In supply chain management, GSCM includes the processes of studying, developing, manufacturing, storing, transporting, using, and disposing of product waste. The variables in this study were purchasing function involvement, reduction efforts, recycling initiatives, reuse techniques, and material replacement. The study's research gap was that it did not give a precise quantitative analysis of the purchasing function's involvement, potential constraints faced by the purchasing function in implementing environmental supply chain practices, and lifecycle assessment.
- Melnyk et al. (2003) discovered that firms that have gone through environmental management standards (EMS) accreditation have a stronger impact on their performance. This study's factors were business performance, environmental management standards, and the impact on performance. The study did not particularly investigate longitudinal effect evaluation and how the influence grows over time.
- Zhu and Sarkis(2004) They claim that SMEs are not technologically equipped with the most up-to-date information and innovation on how to minimize carbon footprint and enhance energy efficiency. Environmental performance is increasingly being viewed as part of a company's basic corporate social responsibility. This study's variables include technological capabilities, carbon footprint reduction, energy efficiency improvement, and environmental performances, which indicate how well SMEs perform in terms of environmental sustainability. The prior research did not investigate the unique technological constraints confronting SMEs, nor did it provide a complete study of the numerous characteristics of environmental performance such as waste management, resource efficiency, and emission reduction.
- Handfield et al., 2005. GSCM is a formal system that includes strategic, functional, and operational procedures and processes for employee training as well as monitoring, summarizing, and reporting environmental supply chain management information to company stakeholders. The documenting of this environmental information is primarily focused on supplier performance, audits, design, waste minimization, training, reporting to top management, and target setting. The preceding study did not investigate the balanced integration of environment, social, and economic factors in supply chain management.

## 3. NEED OF THE STUDY

The recent surge in interest in integrating environmental practices into operations management has altered supply chain management research and practice into a new terrain. A wide frame of reference for green supply-chain management (GSCM) has not been effectively developed. Its absence also affects regulatory agencies that develop regulations to address societal and environmental concerns in order to promote corporate and economic growth. A concise classification is required to assist academics, researchers, and practitioners in comprehending integrated GSCM from a broader perspective. Local optimization of environmental elements is no longer sufficient in tackling the growing concerns. Consider the complete supply chain, including energy production, sourcing, transportation, production, green marketing and consumption, customer service, and product disposal. The current state of knowledge about the environmental impact of supply chains and green marketing is insufficient.

The need for such understanding is widely recognized at company-level (e.g. Wal-Mart recently called a major conference of its suppliers in China in order to begin to address greening its supply chains), and at

government and intergovernmental level (e.g. the European Union and China agreed at their 2005 Summit to establish a Partnership on Climate Change with a specific focus in terms of development and deployment of clean energy technology).

There is an increasing need to include environmentally friendly options into supply-chain management research and practice. There is an upsurge in product offerings in the market. This should result in shorter product life cycles. It has thus become critical for retail enterprises to effectively manage their supply chain processes in order to better control the supply and demand components of their product portfolio. It is critical to create a high-quality information system that is controlled and maintained by skilled and trained individuals. Creating a supply chain that is flexible to the changing business environment would benefit new market developments and allow them to effectively manage the problems of capturing full green supply chain mapping. It is difficult to do an analysis without a comprehensive understanding of the true influence of CO<sub>2</sub>, packaging, labeling, consumer perception, and psychological behavior. Green initiatives will now be implemented across the entire supply chain, with recommendations based on limited analysis, resulting in a non-systemic view, increased risk, and no sustainability. The Internet era has altered not just the way we conduct business, but also the methods used to manage the supply chain, such as how firms communicate with one another and how each component of the supply chain is influenced.

The study will examine how to build sustainability in green supply chain management or green marketing by referring to past trends, current operations, and future techniques in which consumers participate and exhibit green and sustainable behavior by purchasing green goods in its supply chain. Except for the original source of supply, all stakeholders in supply chain management are classified as either upstream or downstream customers. It is the collective and moral obligation of all stakeholders to act ethically and value action in order to promote sustainability through altruistic conduct.

This study addresses the changes that occur as a result of the rapid adoption of green products based on customer demographic characteristics such as age, income, gender, and sustainable behavior toward green product purchasing. This also includes the entire gamete of supply chain functions at the business and industry levels across the provided geographies, as well as recycling, reuse, and waste reduction approaches at all levels for sustainability. This research focuses not only on the recognition of technology advancements in green supply chain management or green marketing, but also on the changes that have occurred in the sector since the implementation of supply chain management under green initiatives. Previously, corporations sought to control all aspects of their supply chain. From an economic standpoint, we can explain that e-Business is a significant new means of conducting business under green initiatives and expanded firms all over the world. It poses cost issues with previous transactions. This study also explores sustainable development practices using the following methods.

- Integrating principles of sustainability into commercial considerations responsible use of natural resources
- Adoption of pollution avoidance and cleaner production to attract and motivate consumers based on social norms
- Designing and developing products, materials and technologies in accordance with principles of sustainability.

Businesses now place a greater emphasis on this. In order to get a competitive advantage in terms of services and brand distinctiveness, manufacturers need to properly integrate their total green and sustainable operations.

#### **4. STATEMENT OF THE PROBLEM:**

The current globalization process cannot be sustained in the long run without the introduction of novel green marketing techniques and regulations, and it is hard to control given the heightened level of market rivalry. A lack of internal alignment can have detrimental effects on suppliers and supply chain sustainability, turning it into a pipe dream. There is also uncertainty about consumers' attitudes and purchasing behaviors regarding environmentally friendly products. At the same time, industries face shortages of materials, labor, and machine capacity, as well as problems with quality and delivery. The insufficient investigation of elements like consumers' cognition, stakeholders' ethics, and green washing is the other problem. When incorporating sustainability into the core of a green supply chain or green marketing strategy, these research gaps need to be filled.

#### **5. OBJECTIVES:**

- To explore the insights of Green SCM for sustainable developments in green marketing.
- To identify the green marketing strategies which motivates the customers to purchase the ecofriendly products.

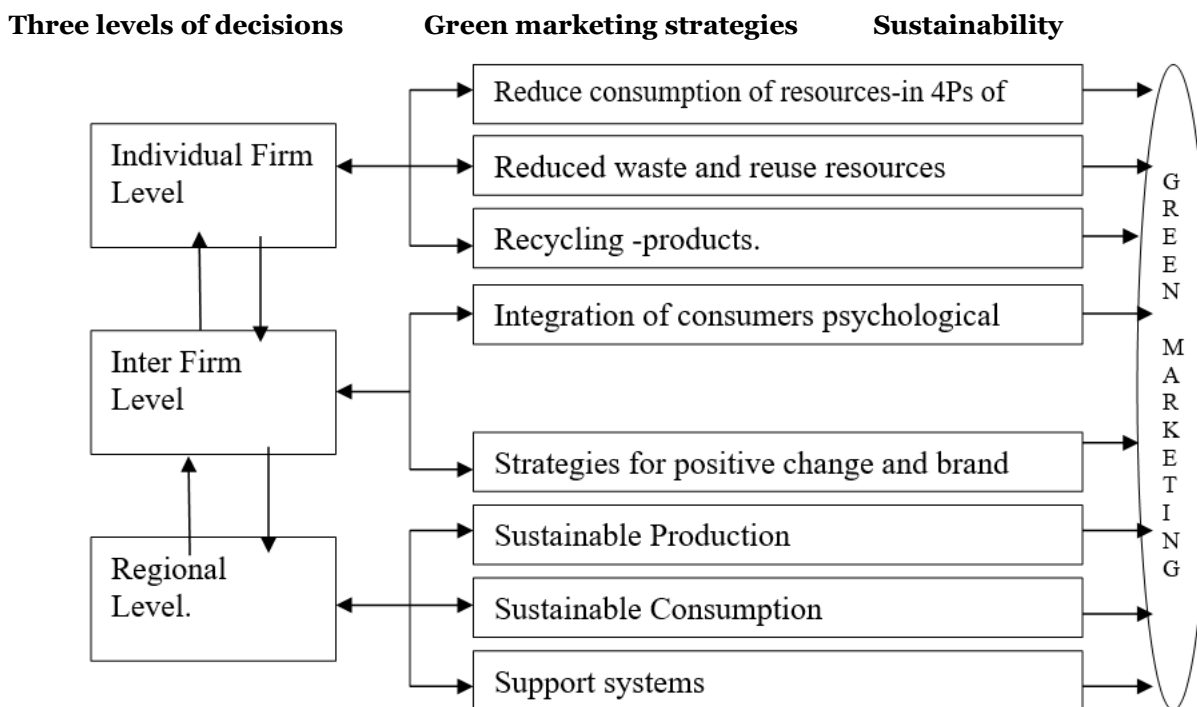
**6. HYPOTHESES:**

**1<sup>st</sup> hypothesis**

H0: There is no significant impact of level of consumers income on green marketing sustainability  
 H1: There is a notable impact of level of consumers income on green marketing sustainability

**2<sup>nd</sup> hypothesis:**

H0: There is no significant impact of marketing mix strategies on green marketing sustainability  
 H1: There is a significant impact of marketing mix strategies on green marketing sustainability



**Figure: 1: The proposed theoretical Framework for Green marketing**

**Firm level:** At the individual firm level, managers are to seek much higher efficiency through the criteria such as reduce consumption of resources and emission of pollutants and waste, reuse resources, and recycle by-products under green supply chain perspective.

**Inter firm level:** The second level is to optimizing resource efficiency within industrial parks and clustered or chained industries, which can be larger than the sum of improvements made by unconnected individual stakeholders in supply chain. These interconnected firms have to integrate the psychological behavior of consumers towards green purchase in their supply chain functions.

**Regional level:** The third level is to integrate different production, consumption and its support systems in a region so the resources circulate among industries and urban systems. This level requires development of social norms and government policies on the process like collection, storage, processing, and distribution systems. The above theoretical framework fosters the approaches or strategies on Green Supply chain initiative towards sustainability with higher economic performance and low environmental impacts. It is categorized in the following manner, as traditional approach and Alternative approach

**Traditional approach :** (high economic performance and high environmental impacts)

The resource and environment in India are exploited to greater extent to provide a growing population with higher standards in a traditional lifestyle of consumption, which means the increase in resources throughput and the increased wellbeing without proper analysis. Whereas the other approach, says high economic performance and low environmental impacts.

**Alternative approach :** (high economic performance and low environmental impacts)

The challenge is to create an alternative one than a traditional development mode which would meet the needs for development while maintaining and even improving the health of ecosystem in the country. Below figure shows these two approaches with clear factors.

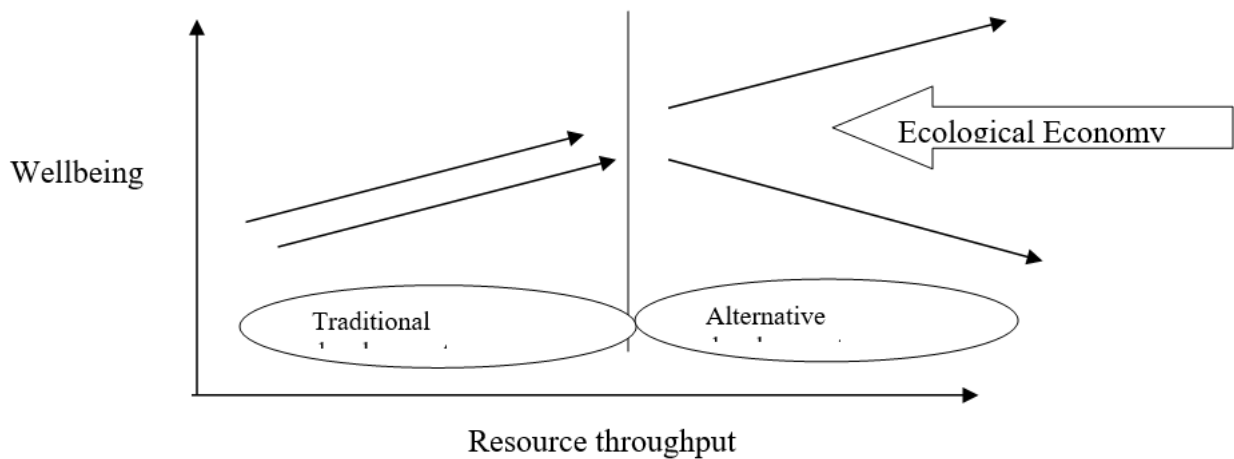


Figure: 2: Decoupling of Economic Growth from Green marketing for sustainability

The target for sustainable development is to reduce the flow of endangering resources causing pollution in the country (India), by 50% in the next 25 years of time as our honorable Prime Minister Shri Narendra Modi addressed in UK climate change summit-2022 in a view to the importance of sustainability in the production and consumption. Therefore e-business for green SCM or green marketing for sustainability across value chain of the business is considered as alternative development approach. Below section emphasize on digital technology for green supply chain sustainability.

**7. GREEN SUPPLY CHAIN SUSTAINABILITY AND DIGITAL TECHNOLOGY**

New networks and information products have been the emphasis of digital technology. The Internet and related technologies can save money when conducting business, which has an impact on internal management, transaction costs, and green product promotion. This has been highlighted by e-business. The business environment has been impacted in every way by responses to the opportunities and challenges presented by the Internet.

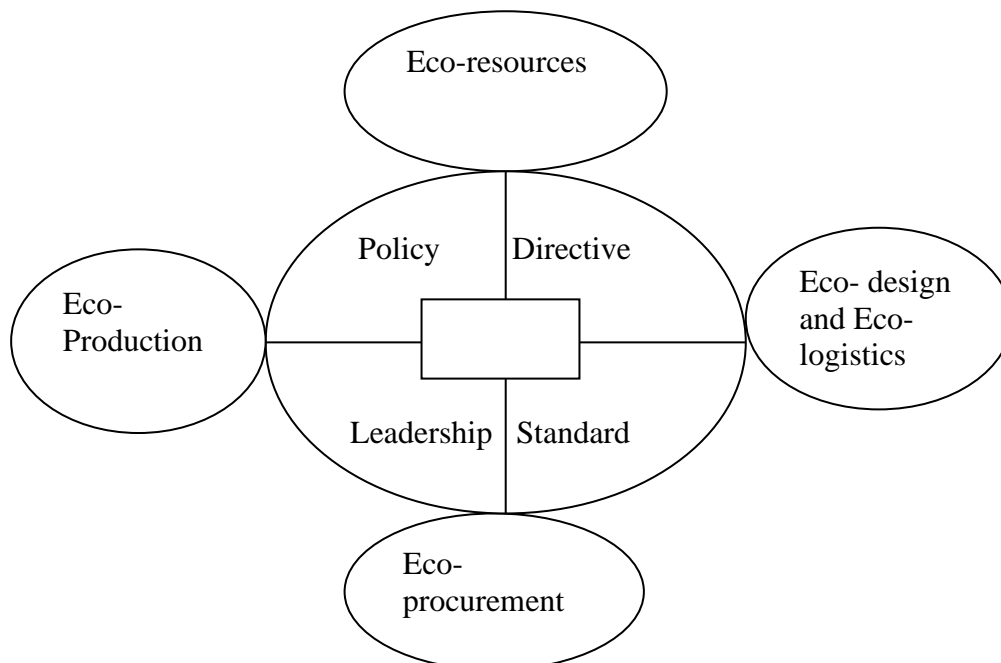


Figure 3: Green marketing Sustainability at firm level of business process

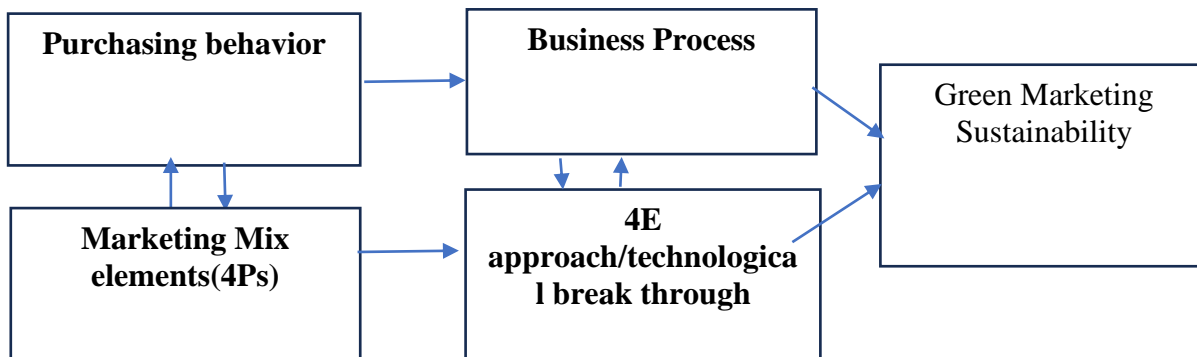
**8. RESEARCH METHODOLOGY:**

This research is both explorative and descriptive in nature, undertaken from ongoing research. Few variables as part of independent variables and the green marketing sustainability is only the dependent variables as shown in the below mentioned research framework. The data has been collected data from ecofriendly consumers to explore the insights towards green marketing sustainability in the country, and as part of descriptive analysis, business process (e-business) green marketing 4Ps and strategies for sustainable results



are analyzed using SPSS statistical software and ANOVA test. This section presents the research framework encompassing independent variables (Purchasing behaviour, Green marketing Mix 4ps) , moderating variables ( e-business process, 4E approaches as explained below) and the dependent variable, green marketing sustainability.

**9. Research framework:**



**10. Data Collection:** Data was gathered through questionnaire, which was designed and administered to customers who visited FMCG stores to buy the green products (ecofriendly consumers) who are aware through the advertisements. A total of 100 respondents selected based on non-probabilistic convenient sampling with the specific criteria that they are fully conscious of green products and social norms. The secondary data was collected as part of literature review to understand the research gap and to finetune the research problem.

**11. Analysis and interpretation:**

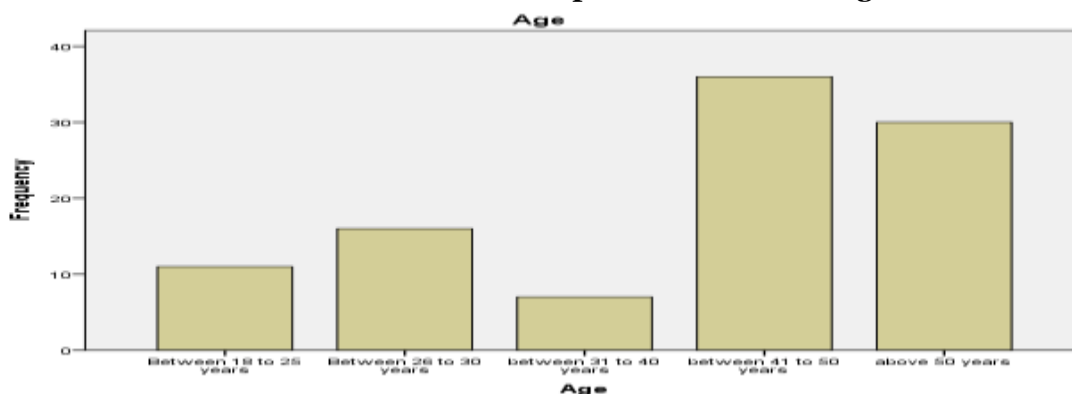
**Table:1 Classification of respondents based on Age**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Between 18 to 25 years	11	11.0	11.0	11.0
Between 26 to 30 years	16	16.0	16.0	27.0
between 31 to 40 years	7	7.0	7.0	34.0
between 41 to 50 years	36	36.0	36.0	70.0
above 50 years	30	30.0	30.0	100.0
Total	100	100.0	100.0	

**Analysis:** The frequency table found that the distribution of respondents based on their age. The largest age group is 41-50 years old, followed by 26-30 years old, above 50 years old, 18-25 years old, and 31-40 years old. The median age is 45 years old, as the cumulative percent for the 41-50 age group is 70%, meaning that 50% of the respondents are younger than 45 years old and 50% are older than 45 years old.

**Interpretation:** The age distribution could be used to devise marketing strategies and product development decisions. For instance advertisers could concentrate on developing ecofriendly products and services that appeal to the largest age group, the 41–50-year-olds. And also, for sustainable green marketing companies need to conduct more advertisement campaign aimed at raising awareness about green or ecofriendly products among all age groups

**Chart: 1 Classification of respondents based on Age**



**Table 2: Classification of respondents based on Gender and their awareness**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	65	65.0	65.0	65.0
	female	35	35.0	35.0	100.0
	Total	100	100.0	100.0	

**Analysis:** It is found that 65 percent of the male respondents aware of ecofriendly products and 35 percent of the female respondents aware of ecofriendly products.

**Interpretation:** The less of female respondents are exposed the advertisements of green products and therefore the business organisations have to undertake more ecofriendly /green initiatives for creating awareness among female buyers through advertisement campaigns.

**Chart:2 Classification of respondents based on Gender and their awareness**



**Table:3 Selected factors considered for Green Supply chain /green marketing sustainability**

	Raw		Rescaled	
	Initial	Extraction	Initial	Extraction
Purchasing behaviour	.691	.249	1.000	.360
Marketing mix elements	.781	.770	1.000	.986
4P business process	.369	.008	1.000	.021
technological breakthrough	.735	.697	1.000	.948
Green marketing sustainability	.735	.697	1.000	.948

Extraction Method: Principal Component Analysis.

**Analysis:** It is found from the above table the key factors such as purchasing behaviour, marketing mix strategies, technology and business process are highly important factors for achieving green marketing sustainability. No factors are not having any negative value when checked the reliability.

**Interpretation:** Overall, the principal component analysis (PCA) results that green supply chain and green marketing sustainability can be conceptualized along with three main dimensions such as Green marketing mix, Green business processes, Green technological breakthrough. This information can be used by managers to develop and implement more effective green supply chain and green marketing strategies.

**12. Hypotheses1 Testing:**

**Table: 4 Green marketing sustainability \* Income (ANOVA Table)**

		Sum of Squares	df	Mean Square	F	Sig.
Green marketing sustainability *Income	*Between Groups	1.940	3	.647	.877	.456
	Linearity	1.399	1	1.399	1.896	.172
	Deviation from Linearity	.542	2	.271	.367	.694
	Within Groups	70.810	96	.738		
Total		72.750	99			

**Analysis:** The above ANOVA table shows the results of a test for the interaction between green marketing sustainability and income on consumer behavior. The interaction effect is not significant ( $F(3, 96) = .877, p = .456$ ), which means that the relationship between green marketing sustainability and consumer behavior does not vary depending on income level. However, the effect of linearity is significant ( $F(1, 96) = 1.896, p = .172$ ). This means that the relationship between green marketing sustainability and consumer behavior is linear, meaning that it can be represented by a straight line. The effect of deviation from linearity is not significant ( $F(2, 96) = .367, p = .694$ ). This means that the relationship between green marketing sustainability and consumer behavior is linear across all income levels. Therefore, alternative hypothesis is rejected and null hypothesis is accepted.

**Interpretation:** The ANOVA table's findings indicate that consumer behavior and green marketing sustainability have a linear relationship that is independent of income level. This implies that regardless of economic level, consumers who are more concerned about green marketing sustainability are more likely to buy eco-friendly product.

### 13. Hypothesis 2 testing using ANOVA

**Table :5 Green marketing sustainability \* Marketing mix elements 4p**

	Sum of Squares	df	Mean Square	F	Sig.
Green marketing sustainability *Marketing mix elements 4p	1.596	4	.399	.533	.712
Between Groups					
Linearity	.019	1	.019	.025	.875
Deviation from Linearity	1.577	3	.526	.702	.553
Within Groups	71.154	95	.749		
Total	72.750	99			

**Analysis:** The ANOVA table found the results of a test for the interaction between green marketing sustainability and the marketing mix elements 4P. The interaction effect is not significant ( $F(4, 95) = .533, p = .712$ ), which means that the relationship between green marketing sustainability and consumer behavior does not vary depending on the marketing mix elements. However, the effect of linearity is significant ( $F(1, 95) = .025, p = .875$ ). This means that the relationship between green marketing sustainability and consumer behavior is linear, meaning that it can be represented by a straight line. The effect of deviation from linearity is not significant ( $F(3, 95) = .702, p = .553$ ). This means that the relationship between green marketing sustainability and consumer behavior is linear across all levels of the marketing mix elements. Therefore, alternative hypothesis is rejected and null hypothesis is accepted .

**Interpretation:** The results of the ANOVA table interpreted that green marketing sustainability has a linear relationship with consumer behavior, but that this relationship does not vary depending on the marketing mix elements. This means that consumers who are more concerned about green marketing sustainability are more likely to purchase eco-friendly products, regardless of the marketing mix strategies used.

### 14. FINDINGS:

- The median age is 45 years old, as the cumulative percent for the 41-50 age group is 70%, meaning that 50% of the respondents are younger than 45 years old and 50% are older than 45 years old.
- It is found that 65 percent of the male respondents aware of ecofriendly products and 35 percent of the female respondents aware of ecofriendly products.
- Green marketing mix, Green business processes, Green technological breakthrough. This information can be used by managers to develop and implement more effective green supply chain and green marketing strategies.
- It is found that interaction between green marketing sustainability and income on consumer behavior and the effect is not significant.
- It is found that the relationship between green marketing sustainability and consumer behavior is linear across all levels of the marketing mix elements.

### 15. SUGGESTIONS:

- It is suggested that marketers could focus on developing ecofriendly products and services that appeal to the largest age group, the 41–50-year-olds. And also, for sustainable green marketing companies need to conduct more advertisement campaign for creating awareness about green or ecofriendly products among all age groups.
- It is suggested to the organizations to develop and implement more effective green supply chain and green marketing strategies for sustainability across all age groups and all levels of income groups of ecofriendly consumers.



## 16. IMPLICATIONS OF THE STUDY:

The marketers should focus on developing green marketing strategies that appeal to a wide range of consumers, regardless of their income level. Marketers should also emphasize the linear relationship between green marketing sustainability and consumer behavior. This means that consumers who are more concerned about green marketing sustainability are more likely to purchase eco-friendly products, even if they are more expensive.

**Implication from technology investments:** Lack of funding may make it difficult for small and medium-sized businesses to make significant investments in technology. Business outcomes and sustainability are directly impacted by technology decisions. Consequently, it is the duty of all parties involved in the e-business of green marketing to bring up with pertinent parties the topic of developing a sustainability program within the company, which includes creating a sustainability strategy and implementing numerous enterprise initiatives woven throughout the green marketing.

## 17. LIMITATIONS OF RESEARCH AND SCOPE FOR FUTURE RESEARCH

Notably, this study was carried out in Bengaluru, and it's possible that the findings can't be applied to other cultural contexts. Furthermore, a convenience sample that might not be typical of the overall population was used in the study. More extensive and representative studies should be carried out in the future to validate the results of this investigation.

**CONCLUSION:** In light of environmental problems including global warming, ozone depletion, pollution, biodiversity loss, and deforestation, the passage's meaning is that ecological awareness and environmental conservation have grown in significance in recent decades. Customers' interest in sustainable development and environmental preservation has grown as a result, and there is now a greater need for items that are healthy and safe for the environment. Businesses now have more opportunities, and the idea of green marketing has gained traction. Promoting goods and services in a way that emphasizes their positiveThis can be done through a variety of strategies, such as using sustainable materials in packaging, reducing energy consumption in manufacturing, and donating a portion of profits to environmental organizations.

## REFERENCE:

1. Angell, L.C. and Klassen, R.D. (1999): "Integrating Environmental Issues into the Mainstream: An Agenda for Research in Operations Management", *Journal of Operations Management*, Vol. 17, n. 5, pp. 575-598.
2. Ball, D., & McCulloch, W. (1999). *International business: the challenge of global competition*. Boston, MA: Irwin.
3. Green, K.; Morton, B. and New, Steve (1996): Purchasing and environmental management: interactions, policies and opportunities. *Business Strategy and the Environment*, 5 (1996), 188-197.
4. Girard, K. (2003). How Levi's got its jeans into Wal-Mart. *CIO Magazine* July 15, 2003. Retrieved November 10, 2003.
5. Handfield, R.B.; Walton, S.V.; Seegers, L.K. and Melnyk, S.A. (1997): 'Green' value chain practices in the furniture industry, *Journal of Operations Management*, 15 (1997), 293-315.
6. Messelbeck, J., and Whaley, M., "Greening the health care supply chain: triggers of change, models for success.", *Corporate Environmental Strategy*, 6(1), pp. 39-45, 1999.
7. Melnyk, S.A., Sroufe, R. P., & Calantone, R. (2003a). Assessing the impact of environmental management systems on corporate and perceived environmental performance. *Journal of Operations Management*, 21, 329-351.
8. R. Narasimhan and J. C. Carter, *Environmental Supply Chain Management*, Research Monograph, Center for Advanced Purchasing Studies, Tempe, AZ (1998).
9. Zhu, Q. and Sarkis, J. Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises, *Journal of Operations Management*, 2004, 22: 265-289.