

Role of Green Marketing in Green Purchase Decision: Mediating Role of Environmental Concerns

Muhammad Shakeel Ahmed

Department of Commerce, Government College University, Faisalabad
Email: shakeelahmed196fsd@gmail.com.

Muhammad Adnan

Lecturer, Department of Commerce, Government College University, Faisalabad

Sajjad Haider Khan

Government College University, Faisalabad

Abstract

The aim of the study is to identify the link between green marketing, green purchase decision and consumer awareness about environmental issues. Further to find out the mediating effect of consumer environmental concerns between green marketing and green purchase decision. For this purpose quantitative technique and survey methodology was used. Questionnaire is used to collect data. Results of the study depict a positive relation between green marketing and green purchase decision, green marketing and consumer environmental concerns and consumer environmental concerns and green purchase decision. Green marketing can lead to increase in awareness about environmental issues and green product purchase. The study results also describe that consumer environmental concerns can mediate the link between green marketing and green purchase decision, so marketers should create more awareness about environmental issues to create more profitable green product consumers. This study will contribute to create more awareness among consumers about green products and environmental issues. It will also aware marketers about significance of green marketing to be successful.

Key Words: Green purchase, Environmental concerns, Purchase decision.

Introduction

People, wildlife, and agriculture are all suffering from environmental pollution caused by ever-increasing business operations and output. Human wants are limitless, but resources are scarce in this world. Consequently, marketers will inevitably need to make use of limited resources effectively and efficiently so that numerous resources are not wasted and that organizational and individual goals can be met (Nekmahmud and Fekete-Farkas 2020). Certain environmental problems in the twenty-first century, such pollution, emissions of greenhouse gases, global warming, and climate change, are directly tied to both agriculture and manufacturing and have an adverse impact on human behavior. The only way for solving these novel environmental issues is if

consumers take interest in decreasing the adverse impacts on the environment by using less harmful items. In order to meet consumer preferences and produce long-term corporate profits, many businesses have started implementing green production and marketing strategies (Dangelico and Vocalelli 2017; Sana 2020). People around the world are changing their traditional lives as a result of severe environmental problems including global warming and climate change caused by unsustainable consumption practices. It is evident that consumer choices have an impact on the environment and the general well-being of society, both directly and indirectly (Gruber and Schlegelmilch 2014).

Reusable, ozone-friendly, nutritious food, phosphate-free, recyclable, and other eco-friendly items are all encouraged by green marketing. Additionally, green marketing can be used to meet consumer requirements, wants, and expectations in an eco-friendly manner while safeguarding society and the environment (Martínez, et al. 2020; Welford 2013). One of the major advancements in contemporary business is green marketing, which is used more in wealthy nations than in lower- and middle-income ones (Hasan, et al. 2019). Green marketing is the practice of promoting goods that are thought to be ecologically friendly (Delafrooz and Goli 2015).

Green development prioritizes efficiency, coordination, and sustainability, with citizens, businesses, and the government serving as its primary stakeholders (Lee 2008). Young people are very interested in purchasing eco-friendly goods (Chekima, et al. 2016; Yadav and Pathak 2017). Green marketing orientations (Papadas, et al. 2017), environmental concerns (Jaiswal and Kant 2018), and product care are some of the aspects that have been studied in relation to green purchases (Esmaeilpour and Bahmiary 2017).

By providing green products, companies may participate in the green movement and establish a green brand image (Xu, et al. 2021). Green product purchases are still comparatively low, even as consumers' attitudes regarding them are becoming more positive (Kamalanon, et al. 2022). Marketers of green products should concentrate on the company's positive green image in addition to sales volume, which is the business's immediate goal, since consumer choice of green products is greatly influenced by perceived green brand image and producer reputation (Papista, et al. 2018). Customers are more inclined to go above and above and pay more to act responsibly and practice green consumerism when the business sector supports sustainable marketing strategies and successful green marketing concepts (Polonsky and Rosenberger III 2001). Reduced consumption, green purchasing, and reduced pollution are all examples of ecologically conscious consumption, which is known as green consumerism (Hoffmann and Schlicht 2013; Lai 2000). Green products and green consumption practices are becoming more and more common, particularly in urban areas. It is crucial for marketers, scholars and researchers to understand the factors that influence consumers' intentions to make green purchases because it encourages the proper development of strategies for green products (Yadav and Pathak 2016).

A number of marketing academics have previously investigated consumers' intentions to purchase green products in industrialized nations, such as the USA, Canada,

Australia, and Europe. However, in rapidly expanding nations like Pakistan, there is a dearth of empirical study. However, in comparison to other developing nations, Pakistan is still in the primary phases of study on ecological challenges, green goods, and green buying choices (Akehurst, et al. 2012; Hossain and Khan 2018). The marketing mix in emerging countries in relation to customer approaches toward green marketing has not been well studied (Adrita 2020; Hossain and Khan 2018).

Pakistan is the focus of this investigation due to the country's rapidly expanding environmental problems (Abid, et al. 2021). Emissions that are detrimental to the environment are at an all-time high (Centobelli, et al. 2020). Harmful emissions have increased in Pakistan, and the country's industrial sector alone produced 41.8 MT of pollutants, which is quite concerning to us (Ritchie, et al. 2023).

Research Objectives

Research objectives of the study are:

To identify the effect of green marketing on green purchase decision

To identify the effect of green marketing on consumer environmental concerns

To identify the effect of consumer's environmental concerns on green purchase decision

To identify the mediating role of consumers environmental concerns between green marketing and green purchase decisions

Problem Statement

Pakistan is facing severe environment issues in the form of environmental pollution which results in different climate change and weather instability issues. Polluted environment is causing serious threats for human survival. Currently most of production processes and products are not environment friendly. There is a need to create awareness among business leaders and customers to produce and use environment friendly production processes and to use environment friendly products. If attention was not given for environment friendly production and consumption it will enhance the risk of different diseases and conditions will not be suitable for living.

Significance of the study

This study will contribute to understand the role of different environment friendly marketing activities in environment friendly products purchase decisions. It will also contribute how knowledge about environmental issues will mediate the green marketing and green purchase decision. Results of this study will also help out policy makers how by creating awareness among customers can affect their green purchase decisions.

Literature Review and Theoretical Framework

Green Marketing and Green Purchase Decision

Efforts to create and promote environmentally friendly products and services that meet human needs or desires are referred to as green marketing (Polonsky 2011). The

step of the purchasing decision process where customers decide to buy a product is called the purchase decision (Kotler, et al. 2010). In order to lessen or completely eradicate any negative environmental effects, it encourages the use of green labeling and promotion for products and services. Product functions, manufacturing procedures, packaging and promotion, and supply chain processes all differ in how green marketing promotes the items (Cherian and Jacob 2012; Polonsky 2011). Green marketing includes eco-friendly designs, products, and promotions (Chang, et al. 2019; Papadas, et al. 2019). Green marketing seeks to reduce the negative effects on the environment at every stage of the life cycle, including the procurement, production, distribution, use, and disposal of raw materials (Dangelico and Vocalelli 2017).

The terms ecological marketing and environmental marketing are combined to form green marketing. At the end of 1980s and start of 1990s saw the beginning of its journey. In 1975, the American Marketing Association (AMA) declared that "green marketing" refers to the promotion of goods that are thought to be ecologically safe and friendly. There isn't a single, accepted definition of green marketing but defined in the ways like ecological marketing, eco-marketing, societal marketing, organic based marketing, and maintainable marketing. However, most definitions include ecological awareness, which refers to the commitment of businesses to promote, design, distribute, and price environmentally friendly products (Martínez, et al. 2020; Zhu and Sarkis 2016). By using the Green marketing Organizations are dedicated to pricing, distributing, designing, and promoting environmentally friendly products.

Buying green items, endorsing green businesses, and endorsing sustainable consumption behaviors and paying more for eco-friendly goods are all examples of green purchasing decisions (Carfora, et al. 2019; Hamzaoui Essoussi and Linton 2010; Schlegelmilch, et al. 1996). To reduce pollution and lessen the effects of the global environmental crisis, green consumers may decide to buy green products (Tseng, et al. 2021). Conventional customers prioritize short-term self-benefits, but green consumers think about how their choices will affect the environment and other people in the long run (White, et al. 2019a).

From an organizational perspective, workers are retrained to support and implement green marketing, green research and development, and green lifestyles and concepts. From a strategic perspective, a company's actions are based on its clients: Green advertising, awarding franchises for environmental improvement, and brand loyalty that is environmentally beneficial (Papadas, et al. 2017; Papadas, et al. 2019). By encouraging consumers to buy green products, green marketing innovation promotes green consumption through marketing initiatives that integrate environmental criteria such as voluntary eco-labeling, franchising, licensing, and pricing actions (Lai and Cheng 2016; Lin, et al. 2017). Innovation in green marketing, which successfully comprehends the interests of stakeholders and conveys key signals, is essential to a company's environmental performance and affects how consumer behavior and consumption are related (Dangelico and Vocalelli 2017; Groening, et al. 2018).

Consumer attitudes, perceptions, and sense of duty regarding the current state of the environment and urgent environmental issues are greatly influenced by green marketing. Because consumers are becoming increasingly conscious of ecologically

conscious products, good green brand management and wise marketing techniques could predict their points of view. In general, businesses' attempts to promote eco-friendly products through green marketing strategies do have the ability to change consumers' perceptions of environmental responsibility, seriousness, and attitudes about green product purchases (Cherian and Jacob 2012).

The components of a green marketing mix enable a business to reach its target audience and accomplish its objectives without endangering the environment (Mukonza and Swarts 2020). Comprehensive manufacturer responsibility, life-cycle investigation, factual use, source flows, and ecological effectiveness are some of the industrial ecology and environmental sustainability issues that are significantly related to green marketing (Prakash 2002). Presenting to customers the value of preserving the environment while using the product is the main objective of green marketing (Moravcikova, et al. 2017). Green marketing promotes consumer awareness and offers environmental benefits (Fliegelman 2010).

One of the most significant emerging driver motivating green marketing and strategy is the green consumer (Peattie and Charter 2012; Polonsky 2011). Green customers actively seek out products that meet their needs and are not detrimental to the environment, or they willingly consume them (Peattie 2001; Sana 2020). The company's use of a green marketing strategy will improve purchase decisions. The more effectively the green marketing plan is applied, the more consumers will understand their rights to buy eco-friendly items, which will influence their decision to buy (Asyhari and Yuwalliatin 2021).

The potential of the green product market and the actual state of its execution differ greatly. The disparity between the availability of green products on e-commerce platforms and consumer interest in eco-friendly products is the phenomenon that takes place. Locally, despite growing awareness of sustainability issues, there is still a lack of diversity and quantity of environmentally friendly products available, making it challenging for customers to obtain items that meet their needs (Hasan and Ivarada).

On the basis of literature review following hypothesis can be assumed:

Hypothesis 1: Green marketing positively effects the green purchase decisions.

Hypothesis 2: Green marketing creates environmental issues awareness among consumers.

Environmental Concern and Green Purchase Decision

The degree to which people are aware of problems regarding the environment and support efforts to solve them and/or indicate the willingness to contribute personally to their solution is the definition of environmental concern (Dunlap and Jones 2002). The term "purchase intention" reflects the consumer's capability to plan or ask to purchase a good or service in the future (Erdil 2015). Remanufactured or recycled goods can be chosen by eco-conscious consumers to support green development and global sustainability (Li, et al. 2021).

Consumers' views on issues about the significance of the environment for the country's welfare might be driven by environmental concern (Bickart and Ruth 2016). Concerned consumers have a favorable view of green products and are very inclined

to purchase them in order to maintain a healthy lifestyle(Magnier and Crié 2015; Tompa, et al. 2020). Researchers discovered that consumers' decision to buy is influenced by environmental concerns, particularly when it comes to eco-friendly products(Bashir, et al. 2019; Chen and Peng 2012; Cheung and To 2019; Nekmahmud 2020; Yadav and Pathak 2016). Young, well-educated customers are currently concerned about the environment. They have strong feelings for their nation and are extremely sensitive to the amount of money required to preserve the situation(Nekmahmud and Fekete-Farkas 2020). It has been also observed that purchase intention could not be significantly impacted directly by environmental consciousness. Still, through perceived behavioral control, it may indirectly affect the reason for the purchase(Xu, et al. 2020). Previous studies found that ecological shopping behavior and environmental-social benefits (attitudes) that positively influence their green purchasing behavior were significantly correlated with environmental concerns(Arisal and Atalar 2016; Kim and Choi 2005).

The consumer's view and, consequently, their purchase and purchase intention are influenced by two main ideas and structures. These include so-called 'environmental concerns' and "environmental citizenship"(Stern and Dietz 1994). 'Environmental concerns may be defined as engagement in nature-based activities with the aim of being environmentally amiable(Leonidou, et al. 2015). Environmental citizenship may be defined as the readiness to join an "environmental, conservation, or wildlife organization or give money to one of these groups"(Markle 2013).

The purchasing decisions of green consumers are primarily influenced by two factors. One is inherent to the consumer, such as self-interest, environmental obligations, learning and being willing to conserve resources, and lessening the influence on the environment(Nekmahmud and Fekete-Farkas 2020). The theory of consumption value states that green products have a high social value that influences consumers to make greener purchases. Green purchasing decisions are now hampered by the cost of purchasing green products. Furthermore, past studies have demonstrated that organic food is natural, nutrient-dense, healthful, and environmentally beneficial (Lin, et al. 2020; Qi and Ploeger 2019). It's time to use green advertising's effectiveness while highlighting the product's environmental advantages, encouraging a sustainable way of living, enhancing the brand's green image, and minimizing the flaws that distinguish green products(D'Souza, et al. 2007; Peano, et al. 2015). The majority of customers react favorably to green advertisements which forecast their intention to buy(Huq, et al. 2015; Huq, et al. 2016). Complete, accurate, and understandable information on a lifelong environment must be provided by producers and suppliers(Dangelico and Vocalelli 2017). The production of goods that can enhance environmental quality will undoubtedly influence consumers' decisions to buy(Asyhari and Yuwalliatin 2021).

Although elderly consumers are the primary buyers of green products, younger people are more interested in purchasing them(Magnusson, et al. 2003). An increasing percentage of customers assert that environmental protection is crucial, and the majority of them think they can contribute to this(Eurobarometer 2008). The rise of items with sustainable claims is higher than that of other brands, indicating that

consumers are increasingly choosing sustainable brands as compared to contemporary alternatives in a few categories(White, et al. 2019b).

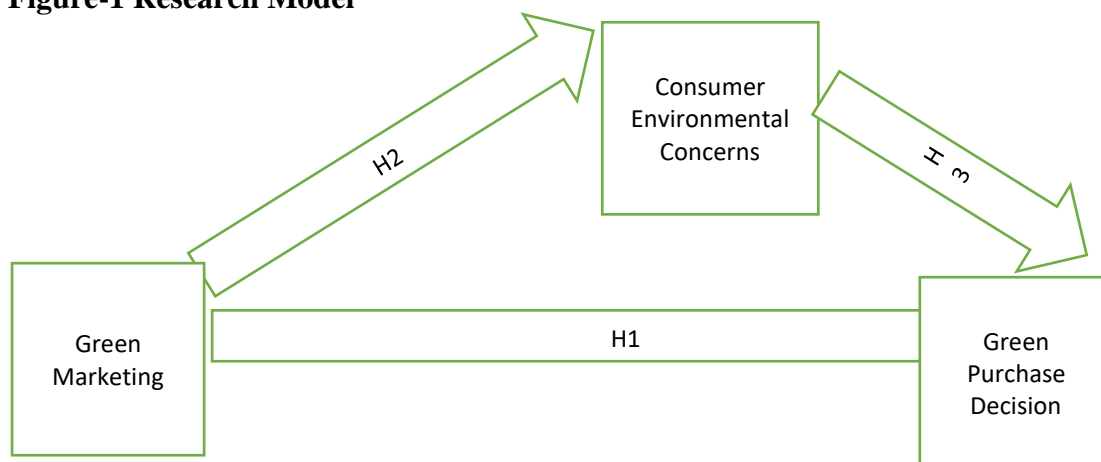
A number of studies indicate that pro-environmental intention and behavior are positively impacted by environmental concern Purchasing green products is positively impacted by environmental concern (Alzubaidi, et al. 2021). Green purchasing and intentional green habits are positively impacted by environmental concern(Lee, et al. 2014). Individuals' willingness to look for environmental information has a positive and indirect impact on the purchasing of circular packaging(Testa, et al. 2020). Consumers' intention to purchase and frequency of purchase of green items had a positive association with environmental concern(Mostafa 2006).

On the basis of literature review following hypothesis can be assumed:

Hypothesis 3: Environmental concern has a positive effect on green purchase decisions.

Hypothesis 4: Consumers Environmental concerns have a mediating role between green marketing and green purchase decisions.

Figure-1 Research Model



Research Methodology

The quantitative research methodology was used in this study. The target population was graduation level consumers. Total sample size was 340. Overall 293 responses were received which are 86% of the sample. Other studies have also used survey methodology to collect the required information in quantitative research methodology(Sekaran and Bougie 2016). Convenience sampling used to collect the data(Etikan, et al. 2016; Golzar, et al. 2022; Sedgwick 2013). For data collection scale items related to green marketing were adopted from (Bhatia and Jain 2013), scale items related to environmental concerns were adopted from (Nekmahmud and Fekete-Farkas 2020), scale items related to green purchase decision were adopted from (Ha and Janda 2012; Khare 2015).

Data Analysis and Results:

Regression, and correlation techniques were used in the statistical analysis of the data. The relationship between Green marketing, Environmental concerns and Green purchase decision was examined using correlation analysis. These systematic quantitative methods allowed this study to provide accurate data regarding the contribution of Green marketing in environmental concerns of consumers and Green purchase Decision, environmental concerns of consumers in green purchase decision and, mediating role of environmental concerns of consumers in green marketing and green purchase decision.

Table-1

Gender Profile		
Gender	Frequency	Percent
Male	141	48
Female	152	52
Total	293	100

Table-1 provides detail about respondent gender profile. Male respondents are 48% while female respondents are 52%

Reliability Statistics

Table-2

Total Scale Reliability Statistics	
Cronbach's Alpha	No. of Items
0.781	15

Table 2 shows reliability statistics of scale. The consistency of a study or evaluation instrument is referred to as reliability. Research findings are regarded reliable if they can be reliably reproduced. Because participants and circumstances differ, it is frequently not possible to produce the same results. On the other side, reliability is shown if there is a high positive correlation between the same test findings (Balkin 2017). Reliability is the extent to which a test, questionnaire, observation, or other measurement procedure produces consistent results after several attempts (Bolarinwa 2015). In simple terms, it describes the stability or consistency of scores across time or between raters (Miller 2015). One of the most popular approaches for assessing the internal consistency of reliability is the Cronbach's coefficient alpha (Dimitrov 2002). The value of Cronbach's Alpha is 0.781 which is considered acceptable (George and Mallery 2024).

Correlations:

The amount of linear relationship between two variables is assessed by the Pearson correlation coefficient. The Pearson correlation coefficient, sometimes called the product moment correlation coefficient, is represented as r in samples and ρ in the

corresponding population that the sample comes from. This coefficient is a number on a unit-less scale that ranges from -1 to +1. There would have been a positive link if the correlation coefficient's sign had been positive. If the correlation coefficient's sign had been negative, there would have been a negative relationship (Sedgwick 2012). Table-3 represents data related to correlation of different variables. Pearson correlation between Green marketing and environmental concerns is 0.775, Green marketing and Green purchase decision is 0.718, Environmental concern and Green purchase decision is 0.714 which shows a strong correlation between the variables.

Table-3

Correlations				
		Green Marketing	Environmental Concerns	Green Purchase Decision
Green Marketing	Pearson Correlation	1	.775**	.718**
	Sig. (2-tailed)		.000	.000
	N	293	293	293
Environmental Concerns	Pearson Correlation	.775**	1	.714**
	Sig. (2-tailed)	.000		.000
	N	293	293	293
Green Purchase Decision	Pearson Correlation	.718**	.714**	1
	Sig. (2-tailed)	.000	.000	
	N	293	293	293

**, Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis

Green Marketing Effect on Green Purchase Decision

Table-4

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.685 ^a	.645	.621	1.48891	.645	111.035	1	292	.000

a. Predictors: (Constant), Green Marketing

The R square value of 0.645 which is presented in the Model Summary table suggests that while there is a relationship between the independent variable green marketing and dependent variable green purchase decision. We can conclude that green marketing causes 64% of changes in green purchase decision. Additionally, we can infer from this data that the green marketing and green purchase decision are positively correlated.

Table-5

Coefficients			
Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1 (Constant)	3.366	.754	
Green Marketing	.772	.064	.713

Dependent Variable: Green Purchase Decision

Table-5 explains coefficient of correlation. Value of coefficient of Correlation B is 0.713 which indicates that 1 unit change in green marketing will cause a 0.713 unit change in consumer green purchase decision.

Hence hypothesis H1: Green marketing positively effects the green purchase decisions is proved.

Green Marketing Effect on Consumer Environmental Concerns:

Table-6

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.704 ^a	.686	.592	1.48392	.686	132.645	1	292	.000

Predictors: (Constant), Green Marketing

The R square value of 0.686 which is presented in the Model Summary table suggests that while there is a relationship between the independent variable green marketing and dependent variable consumer environmental concern. We can conclude that green marketing causes 68% of changes in consumer environmental concern. Additionally, we can infer from this data that the green marketing and consumer environmental concerns are positively correlated.

Table-7

Coefficients			
Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1 (Constant)	3.112	.664	
Green Marketing	.612	.054	.598

a. Dependent Variable: Green Purchase Decision

Table-7 explains coefficient of correlation. Value of coefficient of Correlation B is 0.598 which indicates that 1 unit change in green marketing will cause a 0.598 unit change in consumer environmental concerns.

Hence hypothesis H2: Green marketing creates environmental issues awareness among consumers is proved.

Consumer Environmental Concerns Effect on Green Purchase Decision

Table-8

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.678 ^a	.538	.455	1.48384	.538	112.983	1	292	.000

Predictors: (Constant), Consumer Environmental Concerns

The R square value of 0.538, which is shown in the Model Summary table indicates that 53 % of change in green purchase decision is explained by consumer environmental concerns. We can also conclude from this data that there is a favorable correlation between the consumer environmental concerns and green purchase decision.

Table-9

Coefficients			
Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1 (Constant)	3.681	.568	

Consumer Environm ental concerns	.682	.052	.617
---	------	------	------

Dependent Variable: Green Purchase Decision

Table-9 explains coefficient of correlation. Value of coefficient of Correlation B is 0.617 which indicates that 1 unit change in consumer environmental concerns will cause a 0.617 unit change in green purchase decision.

Hence hypothesis H3: Environmental concern has a positive effect on green purchase decisions is proved.

Mediating Effect of Consumer Environmental Concerns:

The method described by (Sobel 1982) was used to calculate the indirect effect or mediating effect. The approach created by (Preacher and Hayes 2004) was also used to confirm the mediating impact. The SPSS program was utilized for this purpose, and the results shown in the table were verified.

Table-10

Independent Variable	Dependent Variable	Mediating Variable	Mediating Effect
Green Marketing	Green Purchase Decision	Consumer Environmental Concerns	$0.598 \times 0.617 = 0.3689$

Table shows that when consumer environmental concerns are considered effect of green purchase decision on green purchase decision is significantly reduced which shows that consumer environmental concerns mediates the relation between green marketing and green purchase decision

Discussion

The aim of the study was to identify the link between green marketing, consumer environmental concerns and green purchase decision. The results of the study describe that green marketing can create more awareness about environmental issues among consumers hence they will tend to buy those products which are more environment friendly (Green products). Our study is supported by previous studies. The results of study conducted by (Kamalanon, et al. 2022) shows that green marketing creates awareness among consumers about environment issues which leads to green purchase decisions. (Wijekoon and Sabri 2021) identified green marketing and awareness about environment issues determinants of green purchase decision. A Study conducted by (Wandosell, et al. 2021) noted that consumers are concerned about environmental issues so they prefer to buy environment friendly products. (Nekmahmud and Fekete-Farkas 2020) identified a positive relation between consumers environmental

concerns and green purchase decisions.(Casalegno, et al. 2022) concluded a positive relation between consumer environmental concerns and green purchase decisions.

Conclusion

The results of current study depict that green marketing can lead to more green purchase decision by consumers. It will also create more awareness about environment issues among consumers which will also cause more green purchase decision. As a result different environment issues faced by country can be managed in a better way which will result a better place to live. Policy makers should adopt policies to encourage green marketing and green products. Marketers should consider to target green product consumers because they have limited options currently, so it will result in more profits for business.

References

- Abid, Nabila, et al. (2021) Towards environmental sustainability: exploring the nexus among ISO 14001, governance indicators and green economy in Pakistan. *Sustainable Production and Consumption* 27:653-666.
- Adrita, Ummul Wara (2020) Consumers' actual purchase behaviour towards green product: a study on Bangladesh. *International Journal of Business Innovation and Research* 21(3):311-323.
- Akehurst, Gary, Carolina Afonso, and Helena Martins Gonçalves (2012) Re-examining green purchase behaviour and the green consumer profile: new evidences. *Management decision* 50(5):972-988.
- Alzubaidi, Hawazin, Emma L Slade, and Yogesh K Dwivedi (2021) Examining antecedents of consumers' pro-environmental behaviours: TPB extended with materialism and innovativeness. *Journal of Business Research* 122:685-699.
- Arisal, İbrahim, and Tarık Atalar (2016) The exploring relationships between environmental concern, collectivism and ecological purchase intention. *Procedia-Social and Behavioral Sciences* 235:514-521.
- Asyhari, Asyhari, and Sitty Yuwalliatin (2021) The influence of green marketing strategy on purchasing decision with mediation role of brand image. *Jurnal Aplikasi Manajemen* 19(3):535-546.
- Balkin, Richard S (2017) Evaluating evidence regarding relationships with criteria. *Measurement and Evaluation in Counseling and Development* 50(4):264-269.
- Bashir, Shahid, et al. (2019) Extension of planned behavioral theory to consumer behaviors in green hotel. *Heliyon* 5(12).
- Bhatia, Mayank, and Amit Jain(2013) Green marketing: A study of consumer perception and preferences in India. *Electronic Green Journal* 1(36).
- Bickart, Barbara A, and Julie A Ruth (2016) Green eco-seals and advertising persuasion. *In Green Advertising and the Reluctant Consumer*. Pp. 44-60: Routledge.
- Bolarinwa, Oladimeji Akeem (2015) Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. *Nigerian postgraduate medical journal* 22(4):195-201.

- Carfora, Valentina, et al. (2019) How to reduce red and processed meat consumption by daily text messages targeting environment or health benefits. *Journal of Environmental Psychology* 65:101319.
- Casalegno, Cecilia, Elena Candelo, and Gabriele Santoro (2022) Exploring the antecedents of green and sustainable purchase behaviour: A comparison among different generations. *Psychology & Marketing* 39(5):1007-1021.
- Centobelli, Piera, Roberto Cerchione, and Emilio Esposito (2020) Pursuing supply chain sustainable development goals through the adoption of green practices and enabling technologies: A cross-country analysis of LSPs. *Technological Forecasting and Social Change* 153:119920.
- Chang, Kuo-Chien, et al. (2019) How green marketing, perceived motives and incentives influence behavioral intentions. *Journal of Retailing and Consumer Services* 49:336-345.
- Chekima, Brahim, et al. (2016) Sustainable consumption: the effects of knowledge, cultural values, environmental advertising, and demographics. *International Journal of Sustainable Development & World Ecology* 23(2):210-220.
- Chen, Annie, and Norman Peng (2012) Green hotel knowledge and tourists' staying behavior.
- Cherian, Jacob, and Jolly Jacob (2012) Green marketing: A study of consumers' attitude towards environment friendly products. *Asian social science* 8(12):117.
- Cheung, Millissa FY, and Wai Ming To (2019) An extended model of value-attitude-behavior to explain Chinese consumers' green purchase behavior. *Journal of Retailing and Consumer Services* 50:145-153.
- D'Souza, Clare, et al. (2007) Green decisions: demographics and consumer understanding of environmental labels. *International Journal of Consumer Studies* 31(4):371-376.
- Dangelico, Rosa Maria, and Daniele Vocalelli (2017) "Green Marketing": An analysis of definitions, strategy steps, and tools through a systematic review of the literature. *Journal of Cleaner production* 165:1263-1279.
- Delafronz, Narges, and Armin Goli (2015) The factors affecting the green brand equity of electronic products: Green marketing. *Cogent Business & Management* 2(1):1079351.
- Dimitrov, Dimitar M (2002) Error Variance of Rasch Measurement with Logistic Ability Distributions.
- Dunlap, Riley E, and Robert Emmet Jones (2002) Environmental concern: Conceptual and measurement issues. *Handbook of environmental sociology* 3(6):482-524.
- Erdil, T Sabri (2015) Effects of customer brand perceptions on store image and purchase intention: An application in apparel clothing. *Procedia-Social and Behavioral Sciences* 207:196-205.
- Esmailpour, Majid, and Elahe Bahmiary (2017) Investigating the impact of environmental attitude on the decision to purchase a green product with the

- mediating role of environmental concern and care for green products. *Management & Marketing* 12(2):297.
- Etikan, Ilker, Sulaiman Abubakar Musa, and Rukayya Sunusi Alkassim (2016) Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics* 5(1):1-4.
- Eurobarometer, Special (2008) Attitudes of European citizens towards the environment. European Commission 295.
- Fliegelman, Jessica E (2010) The next generation of greenwash: diminishing consumer confusion through a national eco-labeling program. *Fordham Urb. LJ* 37:1001.
- George, Darren, and Paul Mallery (2024) *IBM SPSS statistics 29 step by step: A simple guide and reference*: Routledge.
- Golzar, Jawad, Shagofah Noor, and Omid Tajik (2022) Convenience sampling. *International Journal of Education & Language Studies* 1(2):72-77.
- Groening, Christopher, Joseph Sarkis, and Qingyun Zhu (2018) Green marketing consumer-level theory review: A compendium of applied theories and further research directions. *Journal of cleaner production* 172:1848-1866.
- Gruber, Verena, and Bodo B Schlegelmilch (2014) How techniques of neutralization legitimize norm-and attitude-inconsistent consumer behavior. *Journal of business ethics* 121(1):29-45.
- Ha, Hong-Youl, and Swinder Janda (2012) Predicting consumer intentions to purchase energy-efficient products. *Journal of Consumer Marketing* 29(7):461-469.
- Hamzaoui Essoussi, Leila, and Jonathan D Linton (2010) New or recycled products: how much are consumers willing to pay? *Journal of Consumer Marketing* 27(5):458-468.
- Hasan, Golan, and Reyhan Agustival Ivarada: The Impact Attitudes towards Green Products, Perceived Behavioral Control, and Environmental Concern on Green Purchase.
- Hasan, Md Morshadul, et al. (2019) Green business value chain: A systematic review. *Sustainable Production and Consumption* 20:326-339.
- Hoffmann, Stefan, and Julia Schlicht (2013) The impact of different types of concernment on the consumption of organic food. *International Journal of Consumer Studies* 37(6):625-633.
- Hossain, Afzal, and Md YH Khan (2018) Green marketing mix effect on consumers buying decisions in Bangladesh.
- Huq, Sheikh Majedul, et al. (2015) Customer's attitude towards mobile advertising in Bangladesh. *International Journal of Business and Economics Research* 4(6):281-292.
- Huq, Sheikh Majedul, Md Nekk Mahmud, and Mst Shuly Aktar (2016) Unethical practices of advertising in Bangladesh: A case study on some selective products. *International Journal of Economics, Finance and Management Sciences* 4(1):10-19.

- Jaiswal, Deepak, and Rishi Kant (2018) Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *Journal of retailing and consumer services* 41:60-69.
- Kamalanon, Piyanoot, Ja-Shen Chen, and Tran-Thien-Y Le (2022) "Why do we buy green products?" An extended theory of the planned behavior model for green product purchase behavior. *Sustainability* 14(2):689.
- Khare, Arpita (2015) Antecedents to green buying behaviour: a study on consumers in an emerging economy. *Marketing Intelligence & Planning* 33(3):309-329.
- Kim, Yeonshin, and Sejung Marina Choi (2005) Antecedents of green purchase behavior: An examination of collectivism, environmental concern, and PCE. *Advances in consumer research* 32:592.
- Kotler, Philip, Gary Armstrong, and Gary M Armstrong (2010) *Principles of marketing*: Pearson Education India.
- Lai, Carman KM, and Eddie WL Cheng (2016) Green purchase behavior of undergraduate students in Hong Kong. *The Social Science Journal* 53(1):67-76.
- Lai, On Kwok (2000) Greening of Hong Kong? Forms of manifestation of environmental movements. *The dynamics of social movement in Hong Kong*:259-295.
- Lee, Kaman (2008) Opportunities for green marketing: young consumers. *Marketing intelligence & planning* 26(6):573-586.
- Lee, Yong-ki, et al. (2014) Antecedents and interrelationships of three types of pro-environmental behavior. *Journal of Business Research* 67(10):2097-2105.
- Leonidou, Leonidas C, et al. (2015) Drivers and outcomes of green tourist attitudes and behavior: Sociodemographic moderating effects. *Psychology & Marketing* 32(6):635-650.
- Li, Xingwei, et al. (2021) Research on the evolutionary game of construction and demolition waste (CDW) recycling units' green behavior, considering remanufacturing capability. *International Journal of Environmental Research and Public Health* 18(17):9268.
- Lin, Jiabao, et al.(2020) Purchasing organic food with social commerce: An integrated food-technology consumption values perspective. *International Journal of Information Management* 51:102033.
- Lin, Jialing, Antonio Lobo, and Civilai Leckie (2017) The role of benefits and transparency in shaping consumers' green perceived value, self-brand connection and brand loyalty. *Journal of Retailing and Consumer Services* 35:133-141.
- Magnier, Lise, and Dominique Cri   (2015) Communicating packaging eco-friendliness: An exploration of consumers' perceptions of eco-designed packaging. *International Journal of Retail & Distribution Management* 43(4/5):350-366.
- Magnusson, Maria K, et al. (2003) Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behaviour. *Appetite* 40(2):109-117.

- Markle, Gail L (2013) Pro-environmental behavior: Does it matter how it's measured? Development and validation of the pro-environmental behavior scale (PEBS). *Human ecology* 41(6):905-914.
- Martínez, Marta Pagán, et al. (2020) Fuzzy inference system to study the behavior of the green consumer facing the perception of greenwashing. *Journal of cleaner production* 242:116064.
- Miller, MJ (2015) Graduate research methods. Available from:(Last accessed on Oct. 10, 2015).
- Moravcikova, Dominika, et al. (2017) Green Marketing as the Source of the Competitive Advantage of the Business. *Sustainability* 9(12):2218.
- Mostafa, Mohamed M (2006) Antecedents of Egyptian consumers' green purchase intentions: A hierarchical multivariate regression model. *Journal of international consumer marketing* 19(2):97-126.
- Mukonza, Chipo, and Ilze Swarts (2020) The influence of green marketing strategies on business performance and corporate image in the retail sector. *Business strategy and the Environment* 29(3):838-845.
- Nekmahmud, Md (2020) Environmental marketing: Tourists' purchase behaviour response on green products. *In Tourism marketing in Bangladesh*. Pp. 273-295: Routledge.
- Nekmahmud, Md, and Maria Fekete-Farkas (2020) Why not green marketing? Determinates of consumers' intention to green purchase decision in a new developing nation. *Sustainability* 12(19):7880.
- Papadas, Karolos-Konstantinos, George J Avlonitis, and Marylyn Carrigan (2017) Green marketing orientation: Conceptualization, scale development and validation. *Journal of Business Research* 80:236-246.
- Papadas, Karolos-Konstantinos, et al. (2019) The interplay of strategic and internal green marketing orientation on competitive advantage. *Journal of Business Research* 104:632-643.
- Papista, Erifili, et al. (2018) Types of value and cost in consumer–green brands relationship and loyalty behaviour. *Journal of Consumer Behaviour* 17(1):e101-e113.
- Peano, Cristiana, et al. (2015) Green marketing tools for fruit growers associated groups: Application of the Life Cycle Assessment (LCA) for strawberries and berry fruits ecobranding in northern Italy. *Journal of Cleaner Production* 104:59-67.
- Peattie, Ken (2001) Golden goose or wild goose? The hunt for the green consumer. *Business strategy and the environment* 10(4):187-199.
- Peattie, Ken, and Martin Charter (2012) Green marketing. *In The marketing book*. Pp. 756-786: Routledge.
- Polonsky, Michael Jay (2011) Transformative green marketing: Impediments and opportunities. *Journal of business research* 64(12):1311-1319.
- Polonsky, Michael Jay, and Philip J Rosenberger III (2001) Reevaluating green marketing: a strategic approach. *Business horizons* 44(5):21-21.

- Prakash, Aseem (2002) Green marketing, public policy and managerial strategies. *Business strategy and the environment* 11(5):285-297.
- Preacher, Kristopher J, and Andrew F Hayes (2004) SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers* 36(4):717-731.
- Qi, Xin, and Angelika Ploeger (2019) Explaining consumers' intentions towards purchasing green food in Qingdao, China: The amendment and extension of the theory of planned behavior. *Appetite* 133:414-422.
- Ritchie, Hannah, Pablo Rosado, and Max Roser (2023) CO₂ and greenhouse gas emissions. *Our world in data*.
- Sana, Shib Sankar (2020) Price competition between green and non green products under corporate social responsible firm. *Journal of retailing and consumer services* 55:102118.
- Schlegelmilch, Bodo B, Greg M Bohlen, and Adamantios Diamantopoulos (1996) The link between green purchasing decisions and measures of environmental consciousness. *European journal of marketing* 30(5):35-55.
- Sedgwick, Philip (2012) Pearson's correlation coefficient. *Bmj* 345.
- Sedgwick, Philip (2013) Convenience sampling. *Bmj* 347.
- Sekaran, Uma, and Roger Bougie (2016) *Research methods for business: A skill building approach*: John Wiley & sons.
- Sobel, Michael E (1982) Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology* 13:290-312.
- Stern, Paul C, and Thomas Dietz (1994) The value basis of environmental concern. *Journal of social issues* 50(3):65-84.
- Testa, Francesco, Roberta Iovino, and Fabio Iraldo (2020) The circular economy and consumer behaviour: The mediating role of information seeking in buying circular packaging. *Business Strategy and the Environment* 29(8):3435-3448.
- Tompa, Orsolya, et al. (2020) Is the sustainable choice a healthy choice?—water footprint consequence of changing dietary patterns. *Nutrients* 12(9):2578.
- Tseng, Ming-Lang, et al. (2021) Assessing sustainable consumption in packaged food in Indonesia: Corporate communication drives consumer perception and behavior. *Sustainability* 13(14):8021.
- Wandosell, Gonzalo, et al. (2021) Green packaging from consumer and business perspectives. *Sustainability* 13(3):1356.
- Welford, Richard (2013) *Hijacking environmentalism: Corporate responses to sustainable development*: Routledge.
- White, Katherine, Rishad Habib, and David J Hardisty (2019a) How to SHIFT consumer behaviors to be more sustainable: A literature review and guiding framework. *Journal of marketing* 83(3):22-49.
- White, Katherine, David J Hardisty, and Rishad Habib (2019b) The elusive green consumer. *Harvard Business Review* 11(1):124-133.
- Wijekoon, Rusitha, and Mohamad Fazli Sabri (2021) Determinants that influence green product purchase intention and behavior: A literature review and guiding framework. *Sustainability* 13(11):6219.

- Xu, Xiaoping, et al. (2020) Determinants of consumer's intention to purchase authentic green furniture. *Resources, Conservation and Recycling* 156:104721.
- Xu, Yuhuan, et al. (2021) Untying the influence of green brand authenticity on electronic word-of-mouth intention: a moderation–mediation model. *Frontiers in Psychology* 12:724452.
- Yadav, Rambalak, and Govind S Pathak (2017) Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. *Ecological economics* 134:114-122.
- Yadav, Rambalak, and Govind Swaroop Pathak (2016) Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of cleaner production* 135:732-739.
- Zhu, Qingyun, and Joseph Sarkis (2016) Green marketing and consumerism as social change in China: Analyzing the literature. *International Journal of Production Economics* 181:289-302.