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Sustainable Manufacturing Practices: A Nepalese Consumer Perspective to Purchase

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ABSTRACT

Green manufacturing also termed as sustainable manufacturing focuses on producing goods in a way that minimizes environmental impacts while maximizing resource efficiency and this practices influence purchase decision of the customers. This paper aims to examine the adoption of sustainable manufacturing practices by companies and its influence on consumer purchase decision. The study focuses on investigating the moderating effect of consumer inhibitors as well as how brand image mediates the relationship between independent and dependent variables. The research is basically descriptive and correlational covering 235 Nepalese consumers using purposive sampling method. Analysis was done using SPSS and Structural equation modeling (SEM) was used to examine the relationship among the variables. The findings indicated a significant positive influence of environmental and societal concern, authenticity of product on purchase decision however, no effect of quality of product on purchase decision was seen. Further, findings revealed no moderating effect on consumer inhibitors on within the relationship of environmental and societal concern, quality of product with purchase decision whereas, moderating effect of consumer inhibitor was found to exist in between authenticity of product and purchase decision. Partial mediating effect was found to be present of firm image in each established relationship between independent and dependent variable. Understanding of the mediating role of perceptual image of firm may allow the companies to tailor their marketing strategies to resonate with environmentally conscious consumers and ma involve market segmentation based on consumer beliefs and values related to sustainability. Researcher admits that the study has been carried out only on educated consumers residing in urban area limiting the generalization all over Nepal as well as in context of other countries. Use of purposive sampling procedure has been used limiting representativeness of the sample. Sample size could have been increased and conducted in rural areas too to facilitate comparison. Further, the study used self-reported behavior instead of actual behavior of the consumers which may change with time.

Keywords: Green Purchase Decision, Manufacturing Company, Sustainable practices.

1.Introduction

Humanity has placed a greater emphasis on environmental responsibility as we struggle to understand the close relationship between our activities and the condition of the earth we live on. Concept of sustainability has emerged as a guiding principle that intertwines social fairness, environmental responsibility and economic viability in the human experience. Sustainability is a significant prerequisite for human activity that makes sustainable development a key objective in development of humans (Rosen & Kishawy, 2012) and following the activity of green manufacturing of the products is an useful way mitigating burdens in environment (Saufi et al., 2016). According to Ali et al. (2021) wide recognition has been gained by sustainability in manufacturing sector with more calls for manufacturers to make a surety on preserving the environment and social alleviation besides economic growth.

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Since many countries entered in the era of industrialization society have made a great stride in economic growth however, industrial expansion and urbanization has caused a rise in depletion of resources and dispensation of disposal in environment. As stated by Ahmad, S. et al. (2023) as significant amount of energy, water, material and other resources are required in manufacturing industries it significantly influences environmental, economic and social dimensions of sustainability (triple bottom line). As stated by Chiou et al.(2011) cited as in Esmaeilpour and Bahmiary (2017) industrialization has added growth in environmental problems leading to the concerns of customers, communities as well as governments. So, this has led to realization and concern towards the environment and society providing emergence of sustainable development emphasizing need to promote sustainability with it sustainable development encourages eco innovation and green consumption (Joshi & Rahman, 2015). Sustainable manufacturing practices well known as green or eco-friendly manufacturing practices speak of the implementation of environmentally conscious approaches and principles in the manufacturing industry. Many fields as manufacturing, engineering and design has implemented sustainability and manufacturers are more concerned with the issue (Rosen & Kishaway, 2012 as cited in Nordin et al., 2014). Adoption of green manufacturing also helps with reduction in wastage and pollution (Hui, et al., 2001 cited as in (Saufi et al., 2016). Eco innovation has its focus in the incorporation of the environmental sustainability practices in every stage of creating goods and services (Veleva & Ellenbecker, 2001 cited as in Joshi & Rahman, 2015). Moreover, customers are more favorable to the products or services of the companies that can satisfy their environmental needs (Y. Chen, 2016) and consuming green by consumers refers to consideration of environmental influence of their purchase, usage and disposal of different products, or using various green services (Moisander, 2007 cited as in Joshi & Rahman, 2015). Furthermore, for a better image of organization in eyes of society and have a best relationship with customers implementation of customer relationships is efficiently needed in organization(Awan et al., 2022). So, if the companies are able provide an idea that their products and services are good enough it helps to build positive image about their brand in customers mind (Sallam, 2014). Many studies has been done in the sustainable manufacturing practices linking to purchase decisions(Joshi & Rahman, 2015)(Lee et al., 2010), further studies are linked with consumer inhibitors(Connell, 2010) (Gleim et al., 2013)(Suki, 2013), with product attributes and quality (J. Chen & Lobo, 2012)(Cerjak et al., 2010)(Chan & Wong, 2012), with brand trust (Kang & Hur, 2012) and with company image and consumer perception (Nordin et al., 2014)(Y. Chen, 2016).

Different manufacturing companies around the globe have now realized the importance of going green which is seen in their strategy of adopting sustainability for example Patagonia a retailer known for active wear have invested in repair centers around world to increase longevity of their products and lower carbon footprint, Unilever sets target for sustainable living plan for sourcing supply chain and production on everything from energy and water use to treatment of suppliers and communities where they operate. Well known manufacturing brand like Philips focus on reducing consumption of energy, water, hazardous substances, waste, emission, Toyota focuses on measuring energy consumption of production equipment at different stages of production, Mercedes Benz implement recycling system (Rehman & Shrivastava, 2013). Market features of organic products in Nepal shows that it is still in the formative stage of the product life cycle (Bhatta et al., 2008 cited as in Shrestha, 2018). However, movement towards adoption of sustainable practices by companies has been seen for example, Industry as Nepali Paper has been planting of trees, Fujima Oil is expanding green areas in industry and NEEK, Khajurico, Hulas, Nepali Paper has been using less water(Chambers & Fncci, 2012). New company, Kolpa is a Nepali brand focusing on using all natural materials and the items are bio degradable producing products as bowls, home décor, bags, wallets etc. Similarly, Eco-Sathi Nepal is involved in producing everyday needed items in eco-friendly way. Despite the efforts made by companies it seems that consumers are not purchasing green goods and services with the regularity expected (Gleim et al., 2013) which shows that customers think and show behavior otherwise. Unplanned purchasing instead of environmentally responsible purchasing can have a serious effect on the environment(Joshi & Rahman, 2015). As stated by Nogueira et al. (2023) consumers purchasing green products and brands consider environmental issues in their purchase decisions that can minimize damage to environment and society. Compliance with environmental pressures, obtaining competitive advantage, improving corporate images, seeking new market and enhancing product value as green marketing by companies makes consumers willing to pay higher price for green products (Chen, 2008b cited as in Y. Chen, 2016). Peattie (1999) as cited in William et al. (2009) implicates that the clearest way to understand green consumption is by viewing each individual's consumption behavior as a series of purchase decisions which may

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be inter-related and reinforced by common values or might be distinct and situational. Further, Chen (2016) also indicates that even though previous studies have paid great attention to explore the relevant issues of brand image, satisfaction, trust and brand equity non have explored about the green or environmental issue. Following the notion, this study aims to analyze the sustainable manufacturing practices that are adopted by entrepreneurs and its impact on the purchase decision among consumers in Nepal. This study contributes to the exploration green purchase decision that will provide an overview of Nepalese consumer attitude, perception, belief and culture towards the sustainable products. Findings of the study will help the manufactures to explore the preference of consumers in green products and managers will be able to form policies accordingly.

2. Statement of Problem

Sustainable consumption and its production is concerned about promoting resource and energy efficiency, sustainable infrastructure and providing with the access to basic services, green and decent jobs and a better quality of life for all. Further, its implementation helps to achieve the overall development plans, reduce future economic, environmental and social costs strengthen economic competitiveness and reduce poverty(Ülkü & Hsuan, 2017). Industries are considered to be the backbone of economic development of any country and provides employment opportunities for general public, revenue to the government and profit to shareholders. Contradictorily, industries with production activities are main cause of pollution to the surrounding environment that adversely affect public health of people in and around the industry(Chambers & Fncci, 2012). Further, study of Ijomah et al. (2007) also supports by stating that almost 60% of annual hazardous waste is generated by manufacturing industry and there is an increasing demand for the reduction of manufacturing processes and products in environment. This shows the importance of addressing the use of sustainable practices by manufacturing companies. However, much recent works have revealed that there is a lack of consensus among the researchers on the core understanding of sustainable manufacturing that rages from varied interpretations of sustainability concept to specific terms that is used to define and to set focus of domains for implementation of sustainable manufacturing (Alayón et al., 2022). As per Gupta and Ogden (2009) industry for green products has been estimated at over $ 200 billion in 2006 which particularly means that an increasing number of individuals are willing to purchase and consume products that are presented in an eco-friendly manner (Hosseini and Ziaee Bideh, 2014 cited as in Esmaeilpour & Bahmiary, 2017). However, research also revealed that despite the concerns for environment the consumers were unwilling to pay a higher price for environmentally friendly products (Jay, 1990; Ottman, 1992; Schlossberg, 1991 cited as in Gupta & Ogden, 2009). Similarly, even if it seems that individuals are willing to purchase green products market share of green products remained confined just to 1-3% (Bray et al., 2011). Moreover, the extent of consumers environment friendly behaviors can be facilitated or inhibited by acts of marketers or other contextual barriers(Tanner & Kast, 2003) and there has not been depth study on the different factors with its influence on environmentally responsible purchasing (Memery et al., 2005 cited as in Joshi & Rahman, 2015).

Research till date has failed to answer the question as why despite of the concern towards the environment(attitude) consumers failed to purchase environmentally friendly or green products (behavior)(Gupta & Ogden, 2009). Difference are found to exist in the knowledge available, as per Tanner & Kast (2003) actual purchase in practices and consumers expressed attitudes are different and in contrast as stated by Aryal et. al (2009) cited as in Shrestha (2018) consumers are willing to pay the premium price. Whereas, Nordin et al. (2014) states the discrepancy between consumers favorable attitude towards and actual purchase behavior of green products referring as green purchasing inconsistency or green attitude behavior gap signifying that consumer positive attitude towards green produces does not always translate into action. Lack of consumer acceptance of green products, is likely due to existence of many barriers to green consumption. However, in spite of consumers' expressed concern for the environment, and the growing prevalence of green products on retail shelves, consumers' are not purchasing green goods and services with the regularity expected. Further, Kotler and Gertner (2002) as cited in (Lee et al., 2010) states no research efforts have focused on examining the image of a green hotel from the perspective of customers. Similarly, Ukenna et al. (2019) also has highlighted paradox that in contrast of growing global concern for environment and behavior at individual and firm levels, sustainable consumption is clearly in its infancy stage which shows that lesser has been done in the context. Bray et al. (2011) argues that despite of the increase in the number of persons willingness to purchase green products in last few years there is little evidence to support that purchase has increased. Similarly

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Stern, Dietz, Rut- tan, Socolow, & Sweeney, 1997 as cited in Tanner & Kast (2003) states that environmentally significant activities such as the production, trade and consumption of food products are crucial contributors to numerous environmental problems.

Sustainable manufacturing practices should address the integration of all indicators as environmental, social and economic that are known as triple bottom line of sustainability. Rise in industrial activities has led to global problem of adverse environmental impact and to protect world it is necessary to adopt preventive approach to environmental problems(Rehman & Shrivastava, 2013). Consumer household purchases were responsible for 40% of the environmental damage which further justifies that consumers have the ability to decrease the environmental damage (Grunert, 1995 as cited in Joshi & Rahman 2015). This signifies that environmental friendly purchase from consumers can help in reduction in the environment damages that has been created by the manufacturing companies. Further, environmental friendly practices if adopted by the manufacturers consumer's faith in their brand also increases. Environmental friendly practices increases market share as well as leads to customer loyalty (Chan, 2001 cited as in Jayaraman et al., 2012) and helps companies to achieve profit, increase market share by lowering environmental impact as well as enhance efficiency(Zhu et al., 2012).

Environment concerns is growing among the consumers due to the awareness regarding it and as a result the firms are emphasizing more on manufacturing sustainable products and identify the factors that influences green purchase behavior of consumer. As stated by Firdaus (2023) environmental damage and pollution is caused by management and production of non-ecofriendly products have begun to threaten the human life. Use of fossils fuels and plastics as well as soil pollution, causes greenhouse emissions and groundwater deficits, as well as the use of hazardous chemicals in food and beverages, textiles, packaging and other matters widely used for household purposes. Major problems of the environment and depletion in natural resources has forced human civilization to focus on environmentally responsible consumption. Now most organizations are producing environmentally friendly products and consumers are also showing willingness to purchase such products(Joshi & Rahman, 2015).

3. Literature Review

Green production promotes sustainable practices that can minimize the harm to environment by reducing carbon emissions, conserving natural resources, minimizing waste generation. Further, most of the countries are also concerned with sustainability by adopting green production methods companies can ensure compliance with these regulations. Green products are defined as the industrial products that are produced through environmentally friendly technology and don't cause harm to the environment. Environmentally friendly products are a new market potential that various companies in the world are intensifying (Rath, 2013 cited as in Firdaus, 2023).

According to Chen (2016) environmental pressure is not negotiable because of which companies should develop models which can secure the commencement of green trends. In recent years green marketing is one of the emerging notions in the field of marketing and its concept has been widely accepted and applied in practice. Moreover, preserving the natural habitats in today's scenario have become a serious issue and these critical environmental issues urge manufacturing firms to comply with environmentally friendly measures (Al-Hakimi, Mohammed A., et al 2023). A study conducted by Isa and Yao (2013) to investigate consumer preference for green packaging in consumer's product choices found product design to have effect on purchase decision but no effect was found by price and image. Handriana (2016)conducted a study to identify perception of public towards green purchase in Indonesia among professionals, young people and housewives showing that in general, young people have a great desire to behave green if they are earning enough to buy green products that are more expensive than the regular products. Inhibitors such for green technology products as high prices, lack of information, cognitive effort for each purchase as well habits and desires (brand appearance) was found as factors for green consumption (Young et al.(2009) as cited in (Ukenna et al., 2019).

Moreover, preserving natural habitats has recently become a serious issue. These critical environmental issues urge manufacturing firms to comply with environmentally friendly measures. Specifically, manufacturing firms have been working so hard towards reducing waste and making their manufacturing processes cleaner and greener, which results in better organizational performance (Al-Swidi and Saleh, 2021)

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Why sustainable manufacturing practices?

Sustainable manufacturing is the method of creating products through economical means and using the components that minimizes the wastage and reduce negative environmental impact. To be sustainable, manufacturing must take into account of intangible metrics that are linked to basic human rights, societal issues and environment (Adel, 2022). As stated by Wu et al. (2017) sustainable manufacturing practices have a positive relationship on performance and those benefits can be analyzed in a balance and systematic way through multiple factors. Sustainable manufacturing requires to make a balance integrating economic, environmental societal objectives, supportive policies and practices. Similarly, suitable trade-offs are more often a compulsion given the diverse interests of manufacturers and society. As stated by S. S. Ali et al. (2023) manufacturing strategies that are driven by environment concerns must focus on product, process and practices.

Furthermore, relevant, meaningful, consistent and robust information on sustainable manufacturing must be available and used by the companies and their managers if sustainability is to be improved in manufacturing(Rosen & Kishawy, 2012). Greening of the industry is rapidly becoming a vibrant and a desirable trend among companies in emerging economies (Jayaraman et al., 2012). As stated by Sarkis (2001) relation between manufacturing and its operations with natural environment is steadily being recognized. Progress, profitability, productivity and environmental stewardship are now seen as needing consideration by manufacturing organizations. It is to be noted that cost advantages can result by adopting best practices that focus on firm's production processes (Hart 1995, Stead and Stead 1995 cited as in Jayaraman et al., 2012). These practices includes redesigning production processes to reduce pollution, substituting less-polluting inputs, recycling by-products and incorporating less-polluting processes (Hart 1995, Porter and Van Der Linde 1995 cited as in Jayaraman et al., 2012).

Environmental and Societal Concern and Purchase Decision

Environmental concerns are associated with biophysical environment and its problems. Barr and Gilg (2006) cited as in Mohd Suki (2016) states that committed individuals or mainstream environmentalists skewed and put forward a significant impact on environmental issues where they develop a high level of concern and express a personal responsibility and moral obligation to play their role to help environment. Consumer's purchasing behavior is influenced by environmental concerns and they are termed as green consumers (Shrum et al. 1995 cited as in (Suki, 2013). As stated by Hosseini and Ziaee Bideh (2014) cited as in Esmaeilpour and Bahmiary (2017) many people tend to purchase and consume products which are presented in an environment friendly way. Social dimension is concerned with many range of issues as safety, equity, human health etc. and from manufacturing perspective social impacts may be thought of as direct or indirect effects felt by stakeholders because of manufacturing enterprises (Sutherland et al., 2016). So, a socially responsible customer avoids buying the products from companies that can harm society and actively seek out products from companies that helps society as well as their purchasing decision is based on these factors too(Jermsittiparsert et al., 2019). Further, to add C. C. Chen et al. (2021) cited as in Feil et al. (2020) states that consumers' sustainable consumption behavior is positively influenced by motivation to protect the environment stressing that manufacturing companies social concern impacts the purchase by consumer. To satisfy the customers and to increase satisfaction there is a need to meet customers social and environmental demand(Awan et al., 2022).

H1: Environment and Societal Concern of manufacturers influences positively on the consumer purchase decision.

Quality and Purchase Decision

Perceived quality refers to the judgement of the overall product superiority compared to an alternative (Zeithaml, 1988). Consumer green perceived quality positively influences the consumer's decision making which makes them choose one brand over the other(Nekmahmud & Fekete-Farkas, 2020) and significant factor influencing consumers decision making to prefer one brand over others (Ng et al., 2014). This refers that quality of the product is a significant factor that consumers see to buy a product and makes choice. Further, Mahesh, N. (2013) cited as in Nekmahmud and Fekete-Farkas, (2020) refers that many customers have a belief of green products to have reliable quality, standards of quality and provides value for money.

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H2: Quality of the product produced by manufacturing companies using sustainable practices influences the purchase decision of consumers.

Authenticity of products and Purchase Decision

Authenticity is believed to be a central factor for success for any brand as it signifies unique brand image (Beverland 2005; Keller 1998 cited as in Becker et al., 2019). Authentic products are perceived as made using natural ingredients (Carroll, 2000), committed to quality(Napoli et al., 2014) and has significant impact on brand trust increasing firms growth(Eggers et al., 2013). Further, Starr, (2011) describes authenticity as having string direct effect on purchase intent as well as stated that it is linked to greater liking, value perceptions, quality perceptions and likelihood to purchase. This shows that authentic products also influence the green purchase decision.

H3: Authenticity of product has significant positive influence on the purchase decision of consumers.

Moderating effect of Consumer Inhibitor

Consumer inhibitors are something that prevents or inhibits consumer purchase decision and factors as price sensitivity, trust, availability of products (Tandon et al., 2021) are among the major influencer. As stated by (Ukenna et al., 2019) inhibitors as usage, risk, value barriers, insufficient product information, exposure to consumer temptations, lack of time for searchers, high prices, lack of information, habit, desires inhibits the purchase decision of green products. Similarly, price has been one of the important factor in the adoption of green products (Yadav & Pathak, 2017) and consumers that are sensitive to price perceive that product price is most prominent factor influencing the purchase decision (Eze & Ndubisi, 2013).

H4a: Consumer inhibitors moderates the relationship between environmental concern and consumer purchase decision such that higher consumer inhibitors weaken the relationship between environment and societal concern and purchase decision.

H4b: Consumer inhibitors moderates the relationship between quality of product and purchase decision such that higher consumer inhibitors weaken the relationship between quality of product and purchase decision.

H4c: Consumer inhibitors moderates the relationship between the authenticity of product and purchase decision of consumers such that higher consumer inhibitors weaken the relationship between authenticity of product and purchase decision.

Mediating Effect of Perceptual Image of Firm

Consumers today are increasingly conscious of environmental impact of the products and services they are using and by embracing the green production, companies can differentiate themselves from competitors, attract environmentally-minded consumers and build a positive brand image associated with sustainability and social responsibility(Ukenna et al., 2019). Consumers are less likely to purchase green products if they are unfamiliar to the brand(Glegg, 2005) and brand image which becomes common to a consumer's eye can help a company to introduce new brands and improve sales of existing brands (Markwick and Fill 1997 cited in as (Suki, 2013). So the companies that focuses more on eco-friendly image can influence customers purchasing decisions. Moreover as stated by Mohd Suki (2016) users like to associate themselves with the companies that have a brand image that is associated with environment.

H5a: Perceptual image of firm mediates the relationship between environmental societal concern and purchase decision.

H5b: Perceptual Image of firm mediates the relationship between quality of products and purchase decision among consumers.

H5c: Perceptual Image of firm intervenes between the authenticity of products and purchase decision of consumers

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4. Research Methodology

4.1 Sample and Data Collection

The study used quantitative approach using structured questionnaire survey to test hypothesized relationship and research framework. To achieve the objective of the study descriptive and correlational research design was used. Descriptive study design are useful for describing the desired characteristics of the sampled that is being studied (Omair, 2015). Correlational research design has a conception in which the direction and strength of the relationship between two or more variables with no influence from any extraneous factor is intended to be found (Creswell, Christensen, 2010 2012; Johnson and as cited in Şentürk & Zeybek, 2019). The study concentrates on Nepalese consumers residing in urban area particularly in Kathmandu and Chitwan and the reason behind it is high literacy rate, knowledge regarding sustainability as well as experience in use of green purchase. Self-administered questionnaire survey was used to collect the data using purposive sampling method. Purposive sampling involves deliberate choice of the informants as they possess the qualities as knowledge or experience (Sekaran, 2006). A pilot study was conducted to check for the understandability and validity of questionnaire beforehand considering the suggestions and some of the wordings and construction of sentences were changed to make it simple and understandable to the respondent. During survey with self-administered questionnaire a valid response of only 235 respondents were recorded. Respondents consisted of male (55.7%), female (44.3 %), age group up to 25 years (39.6%), age group of 26 to 35 years (46.4%), 11.1% from 36 to 45 years (11.1%) and least (3%) were within the age group of 46 and older. Masters level education (60%), bachelor's degree (31.1%), high school level (5.1%) and lowest was respondents having education of MPhil or PhD (3.8%). Annual income level of respondents below 100000 (30.2%), 100000 to 500000 (43.4%) and above 500000 (26.4 %).

4.2 Measures

The measures used for the constructs in the study: environment and societal concern, quality of the product, authenticity of the product, consumer inhibitors, perceived image of the firm and purchase decision were based on the previous literature available in the field of sustainable practices. The measures used for the constructs used in study: quality of product, authenticity of product, environmental and societal concern, consumer inhibitors, perceptual image of firm and purchase decision were based on the validated measure of previous literature available in the field (Mishal et al., 2017)(Cerjak et al., 2010)(Smith & Paladino, 2010)(Gaur et al., 2015)(Tandon et al., 2021)(Zhu et al., 2012)(Y. S. Chen, 2013). All responses on items were recorded on a five pointed rating Likert scale ranging from 1(strongly agree) to 5(strongly disagree) and responses on demographic variables were recorded using closed ended questions.

4.3 Data Analysis

The data were analyzed using SPSS 23 and AMOS 23 following the guidelines of Anderson and Ginberg (1988) two step model was used: measurement model (to perform confirmatory factor analysis and for reliability and validity checking among items and constructs) and structural model (for assessing the model fit and hypothesis testing. Different indicators such as chi-square (x2), chi-square to degree of freedom ratio (x2/df), Tucker–Lewis index (TLI), comparative fit index (CFI), goodness-of-fit index (GFI) and root mean square error of approximation (RMSEA) and standardized root mean squared residual (SRMR) were used to measure model fit. An EFA was performed using a principal component analysis and varimax rotation. The minimum factor loading criteria was set to 0.50. The communality of the scale, which specifies the amount of change in each aspect, were also calculated to ensure acceptable levels of clarification. The results showed that all the communalities were over 0.50. An important step involved weighing the overall significance of the correlation matrix is through Barlett's Test of Sphericity, which provides a measure of the statistical probability that the correlation matric has substantial correlations among some of its components. The results were significant, x^2 (n=235) =5073.334(p<0.000), which indicates its suitability for factor analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy (MSA), which indicates the appropriateness of the data for factor analysis was 0.886 as the data with MSA values above 0.80 are considered appropriate for the factor analysis. Finally, the factor solution derived from this yielded factors for the scale, which accounted for 62.61% of variation in the data. Nonetheless, in this initial EFA some items were removed due to low factor loading and not fall on same construct. Further, 62.61% variance was explained by the factors, Bartlett's Test of sphericity proved to

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be significant for all communalities were over the required value of 0.50. Assessment of the standardized loading showed factor loading and its value between 0.501 to 0.806 which are beyond the suggested value of 0.5 (Hair Jr. et al., 2014). (Table 1, Table 2).

Table 1

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.886
Bartlett'3s Test of Sphericity	Approx. Chi-Square	5073.334
	df	820
	Sig.	.000

KMO assesses sampling adequacy for determining whether the data is suitable for factor analysis or not whereas, Barlett's test checks for correlation among variables.

Table 2

Rotated Component Matrix

	Component										
	1		2		3		4	5			6
ESC3	.501	QOP1	.600	AOP1	.674	CI4	.697	PI1	.736	PD1	.711
ESC4	.733	QOP2	.665	AOP2	.667	CI5	.641	PI2	.733	PD2	.700
ESC5	.786	QOP3	.787	AOP3	.732	CI6	.738	PI3	.703	PD3	.700
ESC6	.639	QOP5	.681	AOP4	.706	CI7	.802	PI4	.806	PD4	.635
ESC7	.722	QOP6	.545	AOP5	.726	CI8	.650	PI5	.692	PD5	.603
ESC8	.666			AOP6	.633			PI6	.773	PD6	.584
ESC9	.784							PI7	.793		
ESC10	.768							PI8	.690		
								PI9	.678		
								PI10	.529		

Internal reliability was assessed by using Cronbach alpha value which ranged from 0.807 to 0.923, that exceeded the threshold of 0.7. Construct Reliability was assessed using Composite reliability, and values ranged from 0.766 to 0.919 of 0.70 to 0.90 representing high reliability (Sideridis et al., 2018), values of composite reliability/Cronbach alpha between 0.60 to 0.70 are acceptable (Ab Hamid et al., 2017). Hence, construct reliability was established for each construct. Convergent validity of scale items was estimated using Average Variance Extracted (Fornell-Larcker criterion) which shows in an average how much variations in the items can be explained by the construct. AVE greater than 0.50 provides empirical evidence for convergent validity (Bagozzi & Yi, 1988). The average variance extracted only for two constructs perceived image and purchase decision meet the threshold of 0.50 explaining variance of 53.5% by perceived image and 50.1 % by purchase decision. Other constructs as environmental societal concern, quality of product, authenticity of product and consumer inhibitors showed the lack of convergent (Table 3).

Table 3

Internal Reliability and Convergent Validity

Construct	Item Number(34)	Factor Loading Range	Average Variance Extracted(AVE)	Composite Reliability(CR)	Internal Reliability Cronbach Alpha
Environmental and Societal Concern (ESC)	8	0.501 – 0.784	0.456	0.869	0.456
Quality of Product(QOP)	5	0.545– 0.787	0.398	0.766	0.398

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Authenticity of Product(AOP)	6	0.633 – 0.732	0.490	0.851	0.490
Consumer Inhibitor(CI)	5	0.641 – 0.802	0.476	0.818	0.476
Perceived Image of Firm(PI)	10	0.529 – 0.806	0.535	0.919	0.535
Purchase Decision(PD)	6	0.584– 0.711	0.501	0.800	0.501

Note. Average variance extract, composite reliability and Cronbach alpha values for the constructs.

Source: Authors' calculation

Table 4

Descriptive Statistics and Discriminant Validity using HTMT Ratio

Construct	Mean	SD	ESC	QOP	AOP	CI	PI	PD
ESC	12	4.176						
QOP	9.85	2.894	0.294					
AOP	12.03	4.202	0.326	0.661				
CI	11.94	4.059	0.258	0.310	0.417			
PI	20.93	6.942	0.322	0.353	0.255	0.504		
PD	7.91	2.648	0.417	0.366	0.515	0.577	0.554	

Note. Hetrotrait monotrait ratio calculation for discriminant validity

Discriminant validity in the study was assessed using Heterotrait- Monotrait (HTMT) Ratio. Table 4 presents descriptive statistics like mean and standard deviation are also provided in where, lowest mean value was seen for purchase decision and highest for perceived image of firm. The lowest and highest standard deviation was for purchase decision and perceived image of firm respectively. Further, Discriminant Validity when using HTMT ratio, all ratios for constructs were less than the threshold of 0.85 or 0.90 (Henseler et al., 2015) confirming the discriminant validity. (Table 4)

4.4 Measurement and Structural Modeling

Confirmatory Factor Analysis (CFA) was calculated using AMOS to test the measurement models. Due to low factor loading two items ESC1, ESC2 and ESC11 from environmental and societal concern, QOP4 from quality of product, from green trust, CI1, CI2 and CI3 from consumer inhibitors, PD4 from purchase decision were removed. The model fit measures were used to measure the model's overall goodness of fit. CMIN, df =1.528, RMR =0.043, GFI = 0.828, AGFI = 0.800, CFI = 0.920, TLI =0.912, RMSEA = 0.048, SRMR =0.057. The model fit for the construct yielded a moderate fit. (P.M. Bentler, 1990; Bentler & Hu, 1998; Hair Jr. et al., 2014; Mia et al., 2019

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Figure 1

Structural Equation Modeling

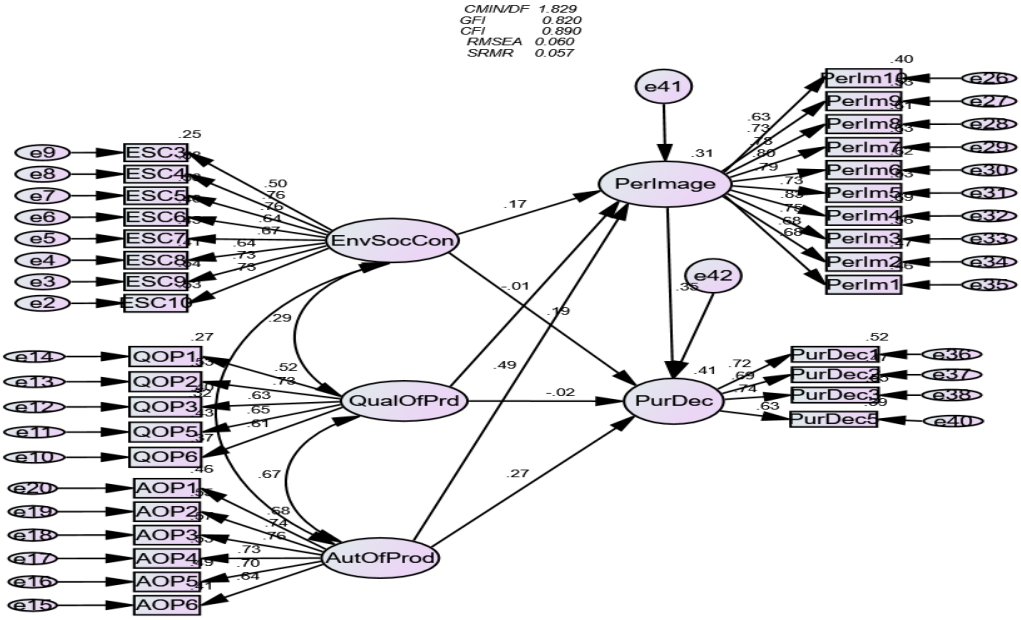

Table 5

Structural Model and Goodness of Fit Model

Model	p-value	χ2/df≤ 5.00	GFI ≥ 0.80	AGFI ≥ 0.80	CFI ≥ 0.90	TLI ≥ 0.90	RMSEA ≤ 0.05 -0.08	SRMR ≤ 0.08
Measurement	0.00	1.528	0.828	0.800	0.920	0.912	0.048	0.057
Structural	0.00	1.829	0.820	0.792	0.890	0.881	0.060	0.057

Note. Adjusted Goodness-Of-Fit statistic; CFI = comparative fit index; TLI = Tucker-Lewis index; IFI = Incremental Fit Index; RMSEA = Root Mean Square Error of Approximation

Source: Authors' calculation.

A structural equation model generated through AMOS was used to test for the relationships. A good fitting model is accepted if the value of the CMIN/df is < 5, the goodness of fit (GFI) indices is >0.90, the Tucker and Lewis index(TLI), Confirmatory Fit Index(CFI) is >0.90, an adequate fitting model is accepted if the AMOS computed value of the standardized root mean square residual (RMR), 0.05 and the root mean square error approximation (RMSEA) is between 0.05 and 0.08 (Hair Jr. et al., 2014;Bentler & Hu, 1998).The fit indices for the given model were within their respective common acceptance levels. The model for the fit indices yielded an adequate fit for the data: CMIN/df = 1.829, GFI = 0.820, AGFI=0.792, CFI =0.890, TLI=0.881, SRMR = 0.057 and RMSEA = 0.060. The squared multiple correlation was 0.41 for purchase decision which shows 41% variance in the purchase decision accounted by environment and societal concern, quality of product and authenticity of product with mediation of perceived image of firm. The structural model in the study was a good fit but not a perfect fit which may be due to inadequate sample size. For a chi square to be valid the most important assumption is sample size (N) should be sufficiently large and it is believed that fitting a large SEM model (with many observed variables) to moderate or small samples results in biased estimate for chi-square i.e Type I error rate further, chi square test is not always the final world in assessing fit (Shi et al., 2019). It is difficult to get a non-significant chi-square for sample sizes over 200 or so even other indices suggest a decent fitting model(Usp & Winter, 2012) . Table 6 presents the hypothesis testing of different independent variables on purchase decision. The influence of environment and societal concern on purchase decision was positive and significant (b = 0.195, t = 2.652, p =0.008<0.005) supporting hypothesis1, impact of quality of product on

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purchase decision was non-significant (b=-0.017, t=-0.154, p=0.877>0.05) thus rejecting hypothesis 2 and authenticity of product on purchase decision was positive and significant (b=0.275, t=2.322, p=0.020<0.05) supporting hypothesis 3.

Table 6

Hypothesis testing

Relationship	Standardized estimates	t stats	P-value	Decision
Environmental and Societal Concern	0.195	2.652	0.008	Accepted
Quality of product influences purchase decision	-0.017	-0.154	0.877	Rejected
Authenticity of product influences purchase decision	0.275	2.322	0.020	Accepted

R Square

Purchase Decision 0.41

Model Fit

CMIN/df = 1.829, GFI = 0.820, AGFI=0.792, CFI =0.890, TLI=0.881, RMR=0.045, SRMR = 0.057 and RMSEA = 0.060.

Source: Author

4.3 Moderation and Mediation Analysis

A moderation test was run with consumer inhibitor(CI) as a moderator, environment and societal concern(ESC), quality of product(QOP), authenticity of product (AOP) as predictor and purchase decision(PD) as dependent variable. For the purpose zstandardized value was calculated in spss and interaction product term between predictor and moderators were calculated. The analysis showed direct significant positive effect of ESC on PD(b=0.187, t=3.282, p=0.001), similarly, direct significant effect of CI on PD on seen (b=0.332, t=5.706, p =0.000) and significant interaction positive effect found by CI on ESC and PD(b=0.116, t=3.282, p=0.001) rejecting hypothesis H4a. There was direct insignificant effect of QOP on PD (b=0.033, t=0.517, p=0.606), similarly, direct significant positive effect of CI on PD was seen (b=0.332, t=5.706, p =0.000) and insignificant interaction effect found by CI on QOP and PD (b=0.101, t=1.479, p=0.141) rejecting hypothesis H4b. The analysis showed direct significant positive effect of AOP on PD (b=0.187, t=3.282, p=0.001), similarly, direct significant effect of CI on PD was seen (b=0.245, t=3.630, p =0.000) and significant negative interaction effect found by CI on AOP and PD (b=-0.240, t=-3.760, p=0.000) accepting hypothesis H4c (Table 7).

Table 7

Moderation Analysis summary

Relationship	Beta	CR	p-value
ESC->PD	0.187	3.282	0.001
ESC*CI->PD	0.116	2.384	0.018
QOP->PD	0.033	0.517	0.606
QOP*CI->PD	0.101	1.479	0.141
AOP->PD	0.245	3.630	0.000
AOP*CI->PD	-0.240	-3.760	0.000
CI->PD	0.332	5.706	0.000

Note. Moderation effect of consumer inhibitors

The study analyzed the mediating role of perceived image of firm on the relationship between quality of product and purchase decision as well relationship between authenticity of product and purchase decision and also the

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relationship between environmental societal concern and purchase decision. Partial mediating effect of environmental societal concern through perceived image to purchase decision was established (b=0.0842, Lower bound = 0.0352 and Upper bound = 0.1461, VAF=39.23%) accepting hypothesis H5a. Partial mediating effect quality of product on purchase decision via perceived image of firm was found (b=0.1296, Lower bound = 0.0551 and Upper bound = 0.2305, VAF=48.10%) accepting hypothesis H5b. Similarly, partial mediating effect of perceived image of firm from authenticity of product to purchase decision was found (b=0.1122, Lower bound = 0.0544 and Upper bound = 0.1867, VAF=41.00%) supporting hypothesis H5c. To be a mediation there should be no zero in between upper bound and lower bound confidence interval and a VAF value more than 0.80 is regarded as full mediation, a VAF value between 0.20 and 0.80 is partial mediation and a value less than 0.20 is regarded as no mediation (Hair Jr. et al., 2014) . Partial mediation effect of perceptual image of firm was seen to mediate between all the independent variables and the purchase decision suggesting that the image created by the manufacturers a sustainable product producer have an impact over the buying decision of consumers. This implies that risk as perceived by consumers while buying green products are important but if companies create an environment of trust among consumers it has an impact over the buying decision similarly perceived value that is overall evaluation of net value of purchase is also effected by green trust created. (Table 8)

Table 8

Mediation Analysis

Relationship	Total Effects	Direct Effects	Indirect Effects	VAF	Confidence Interval		Conclusions
					Lower bound	Upper bound	
ESC->PI->PD	0.2146 (0.0000)	0.1304 (0.0005)	0.0842	0.3923	0.0352	0.1461	Partial Mediation
QOP->PI->PD	0.2694 (0.0000)	0.1398 (0.0107)	0.1296	0.4810	0.0551	0.2305	Partial Mediation
AOP->PI->PD	0.2736 (0.0000)	0.1614 (0.0001)	0.1122	0.4100	0.0544	0.1867	Partial Mediation

Note. Mediation analysis of green trust (GT), VAF (Indirect effect/Total Effect)

Source: Authors' calculation.

5. Discussion and Conclusion

This paper examined sustainable manufacturing practices that are adopted by entrepreneurs and its impact on the purchase decision among consumers in Nepal. Environmental and societal concern influence on purchase decision was found to be positively significant consistent with the work of Balderjahn, I. (1988), Chase and Smith (1992), Mainieri et al.(1997) but inconsistent with the study conducted by Hume(1991). A consumer's inclination towards the environment and concern towards the society influences what they purchase and the manufacturers adopting sustainable practices as per the study have positive effect in the mind of the consumers. Quality of product didn't show positive effect on purchase decision which was in contrast with study of Cinelli and LeBoeuf (2020), Brata H et al.(2017), Lopes et al. (2024). Capabilities of the product as durability, reliability, accuracy, ease of operation etc refers to quality of product and should have influenced purchase decision however, as per study findings product quality didn't have significant positive effect which might be due to other factors as price and promotion done by companies that shapes purchase decision in consumers. Authenticity of the product showed positive significant influence on purchase decision consistent with the findings of Morhart et al. (2015), Napoli et al. (2014), Cinelli and LeBoeuf (2020). Authentic products are associated with transparency, honesty and a brand's commitment to ethical considerations that positively influences consumer purchase decisions. Consumers prefer products that have authentic attributes and are willing to pay more for authentic products. Consumer inhibitors didn't show any moderating effect in relationship between environmental societal concern, quality of product with purchase decision consistent with the result of Budi and Silintowe (2023) showing that other factors rather than price and availability

of product as habit, skepticism can also inhibit consumers from making green product decision. Authenticity of product with a moderating effect of consumer inhibitor proved to be having significant impact on purchase decision. Manufacturing companies following sustainable practices seem to have a partial mediating effect between relationship of environmental societal concern, quality of product, authenticity of product and purchase decision with brand image as a mediator. Partial mediating effect shows that it plays an important role not a sole reason for purchasing products.

Green manufacturing addresses a number of manufacturing matters that includes recycling, conservation, waste management, environmental protection, regulatory compliance, pollution control and a variety of other related issues, designing and delivering products that minimize negative effects on the environment through their production use and disposal (Rehman & Shrivastava, 2013). Green treatment and resource recovery in today's context is very important issue for governments and industries worldwide. Thus, much research is needed to understand the determinants that can influence the green purchase behavior of consumers (Sharma et al., 2013). Nepal a developing country has a lack of good infrastructure as well as manufacturing companies and is dependent upon import of many goods and growth of manufacturing companies as well as adaptation of green practices by these companies would surely have a good impact upon the society, environment as well GDP too. However, only the adoption of green practices by manufacturers is also not enough proper communication about its importance should be conveyed to the residents which will change their perception towards green purchase in a positive way.

6. Limitation and Implication

The study has used self-reported behavior for measuring consumer's green purchase behavior instead of the actual behavior so future researcher may consider actual behavior for study. Further, the present study was carried out focused only on educated consumers who were from urban area so, generalization of the study might be difficult. Use of judgmental sampling might limit the representativeness of the sample further increase in sample size would have been better. Further, the study used self-reported behavior instead of actual behavior of the consumers which may change with time. The present research has measured the sustainable practices adopted by the manufacturing companies and its impact on purchase decision without being specific on particular industry that may limit generalizations of our findings. With it, as the attitude towards the green buying and actual buying has reported to be not similar as reported by many other researchers conducting interviews to obtain the reasons for the respondents green buying behavior would clarify the findings even more. Moreover, the study has focused only on limited number of variables increasing the number of variables as attitude, promotion, loyalty, lifestyle, confusion etc would be better.

The present study extends the literatures available on sustainable practices adopted by manufacturers and its impact on purchase decision and with the understanding of relationship between the variables it is known that when consumers are faced with a choice they won't just buy products that has adopted sustainable practices. This will help the marketers to develop strategies accordingly, and also help the managers to understand that only following sustainable practices won't make customers to purchase their product communicating about need to be green, effective promotion and others should be done effectively. As stated by Chen (2010) cited as in Y. Chen (2016) companies if would like to develop long term strategies to carry out their green marketing the main challenge is to learn how to incorporate set environmental goals into their business strategies. Further, understating from point view of consumers allows firms to make specific marketing strategies that has been based on consumer beliefs and values related to sustainability so more marketing campaigns that promotes green products can ne effectively enhanced. For manufacturers, finding imply that consumers prefer a green product with favorable functional attributes so the producer or the marketer should also focus on functional attributed and not only on green characteristics. To add companies should not only introduce products with eco-labels but also make an effort to develop trust in eco-label.

References

[1] Ab Hamid, M. R., Sami, W., & Mohmad Sidek, M. H. (2017). Discriminant Validity Assessment: Use of Fornell & Larcker criterion versus HTMT Criterion. *Journal of Physics: Conference Series*, *890*(1). https://doi.org/10.1088/1742-6596/890/1/012163

[2] Alayón, C. L., Säfsten, K., & Johansson, G. (2022). Barriers and Enablers for the Adoption of Sustainable

Research Article

Manufacturing by Manufacturing SMEs. *Sustainability (Switzerland)*, *14*(4), 1–34. https://doi.org/10.3390/su14042364

[3] Ali, H., Chen, T., & Hao, Y. (2021). Sustainable manufacturing practices, competitive capabilities, and sustainable performance: moderating role of environmental regulations. *Sustainability (Switzerland)*, *13*(18). https://doi.org/10.3390/su131810051

[4] Ali, S. S., Kaur, R., Persis, D. J., Saha, R., Pattusamy, M., & Sreedharan, V. R. (2023). Developing a hybrid evaluation approach for the low carbon performance on sustainable manufacturing environment. *Annals of Operations Research*, *324*(1–2), 249–281. https://doi.org/10.1007/s10479-020-03877-1

[5] Awan, F. H., Dunnan, L., Jamil, K., Mustafa, S., Atif, M., Gul, R. F., & Guangyu, Q. (2022). Mediating Role of Green Supply Chain Management Between Lean Manufacturing Practices and Sustainable Performance. *Frontiers in Psychology*, *12*(January), 1–11. https://doi.org/10.3389/fpsyg.2021.810504

[6] Becker, M., Wiegand, N., & Reinartz, W. J. (2019). Does It Pay to Be Real? Understanding Authenticity in TV Advertising. *Journal of Marketing*, *83*(1), 24–50. https://doi.org/10.1177/0022242918815880

[7] Bentler, P. M., & Hu, L. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, *3*(4), 424–453.

[8] Bray, J., Johns, N., & Kilburn, D. (2011). An Exploratory Study into the Factors Impeding Ethical Consumption. *Journal of Business Ethics*, *98*(4), 597–608. https://doi.org/10.1007/s10551-010-0640-9

[9] Budi, Y., & Silintowe, R. (2023). *THE INHIBITING FACTORS OF GREEN PRODUCT PURCHASING BEHAVIOR : GREEN KNOWLEDGE AS A MODERATING EFFECT*. *24*(2), 392–404.

[10] Carroll, G. R. (2000). *6 Carroll _ Swaminathan - why the microbrewery movement*. *106*(3).

[11] Cerjak, M., Mesić, Ž., Kopić, M., Kovačić, D., & Markovina, J. (2010). What motivates consumers to buy organic food: Comparison of Croatia, Bosnia Herzegovina, and Slovenia. *Journal of Food Products Marketing*, *16*(3), 278–292. https://doi.org/10.1080/10454446.2010.484745

[12] Chambers, N., & Fncci, I. (2012). *Green Jobs Practices in Nepalese Enterprises Submitted by : August*.

[13] Chan, T. yan, & Wong, C. W. Y. (2012). The consumption side of sustainable fashion supply chain: Understanding fashion consumer eco-fashion consumption decision. *Journal of Fashion Marketing and Management*, *16*(2), 193–215. https://doi.org/10.1108/13612021211222824

[14] Chen, C. C., Sujanto, R. Y., Tseng, M. L., Fujii, M., & Lim, M. K. (2021). Sustainable consumption transition model: Social concerns and waste minimization under willingness-to-pay in Indonesian food industry. *Resources, Conservation and Recycling*, *170*. https://doi.org/10.1016/j.resconrec.2021.105590

[15] Chen, J., & Lobo, A. (2012). Organic food products in China: determinants of consumers' purchase intentions. *International Review of Retail, Distribution and Consumer Research*, *22*(3), 293–314. https://doi.org/10.1080/09593969.2012.682596

[16] Chen, Y. (2016). Linked references are available on JSTOR for this article : The Drivers of Green Brand Equity : Green Brand Image , Green Satisfaction , and Green Trust. *Journal of Business Ethics*, *93*(2), 307–319. https://doi.org/10.1007/sl0551-009-0223-9

[17] Chen, Y. S. (2013). Towards green loyalty: Driving from green perceived value, green satisfaction, and green trust. *Sustainable Development*, *21*(5), 294–308. https://doi.org/10.1002/sd.500

[18] Cinelli, M. D., & LeBoeuf, R. A. (2020). Keeping It Real: How Perceived Brand Authenticity Affects Product Perceptions. *Journal of Consumer Psychology*, *30*(1), 40–59. https://doi.org/10.1002/jcpy.1123

[19] Connell, K. Y. H. (2010). Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies*, *34*(3), 279–286. https://doi.org/10.1111/j.1470-6431.2010.00865.x

[20] Eggers, F., O'Dwyer, M., Kraus, S., Vallaster, C., & Güldenberg, S. (2013). The impact of brand authenticity on brand trust and SME growth: A CEO perspective. *Journal of World Business*, *48*(3), 340–348. https://doi.org/10.1016/j.jwb.2012.07.018

[21] Esmaeilpour, M., & Bahmiary, E. (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 and Marketing*, *12*(2), 297–315. https://doi.org/10.1515/mmcks-2017-0018

[22] Eze, U. C., & Ndubisi, N. O. (2013). Green Buyer Behavior: Evidence from Asia Consumers. *Journal of Asian and African Studies*, *48*(4), 413–426. https://doi.org/10.1177/0021909613493602

[23] Firdaus, F. (2023). Green Product Purchase Decision: the Role of Environmental Consciousness and

Willingness To Pay. *Jurnal Aplikasi Manajemen*, *21*(4), 1045–1060. https://doi.org/10.21776/ub.jam.2023.021.04.14

[24] Gaur, J., Amini, M., Banerjee, P., & Gupta, R. (2015). Drivers of consumer purchase intentions for remanufactured products a study of Indian consumers relocated to the USA. *Qualitative Market Research*, *18*(1), 30–47. https://doi.org/10.1108/QMR-01-2014-0001

[25] Glegg, A. (2005). Right-minded teachers: The influence of the socio-political context on the preparation of teachers in British Columbia, 1872–2002. *Journal of Educational Administration and History*, *37*(1), 19–37. https://doi.org/10.1080/0022062042000336055

[26] Gleim, M. R., Smith, J. S., Andrews, D., & Cronin, J. J. (2013). Against the Green: A Multi-method Examination of the Barriers to Green Consumption. *Journal of Retailing*, *89*(1), 44–61. https://doi.org/10.1016/j.jretai.2012.10.001

[27] Gupta, S., & Ogden, D. T. (2009). To buy or not to buy? A social dilemma perspective on green buying. *Journal of Consumer Marketing*, *26*(6), 378–393. https://doi.org/10.1108/07363760910988201

[28] Hair Jr., J. F., Gabriel, M. L. D. da S., & Patel, V. K. (2014). Modelagem de Equações Estruturais Baseada em Covariância (CB-SEM) com o AMOS: Orientações sobre a sua aplicação como uma Ferramenta de Pesquisa de Marketing. *Revista Brasileira de Marketing*, *13*(2), 44–55. https://doi.org/10.5585/remark.v13i2.2718

[29] Handriana, T. (2016). Mapping of Green Buying Perception in Developing Country. *Mediterranean Journal of Social Sciences*, *7*(3), 19–30. https://doi.org/10.5901/mjss.2016.v7n3p19

[30] Ijomah, W. L., McMahon, C. A., Hammond, G. P., & Newman, S. T. (2007). Development of design for remanufacturing guidelines to support sustainable manufacturing. *Robotics and Computer-Integrated Manufacturing*, *23*(6), 712–719. https://doi.org/10.1016/j.rcim.2007.02.017

[31] Jayaraman, V., Singh, R., & Anandnarayan, A. (2012). Impact of sustainable manufacturing practices on consumer perception and revenue growth: An emerging economy perspective. *International Journal of Production Research*, *50*(5), 1395–1410. https://doi.org/10.1080/00207543.2011.571939

[32] Jermsittiparsert, K., Siam, M. R. A., Issa, M. R., Ahmed, U., & Pahi, M. H. (2019). Do consumers expect companies to be socially responsible? The impact of corporate social responsibility on buying behavior. *Uncertain Supply Chain Management*, *7*(4), 741–752. https://doi.org/10.5267/j.uscm.2019.1.005

[33] Joshi, Y., & Rahman, Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions. In *International Strategic Management Review* (Vol. 3, Issues 1–2). Holy Spirit University of Kaslik. https://doi.org/10.1016/j.ism.2015.04.001

[34] Kang, S., & Hur, W. M. (2012). Investigating the Antecedents of Green Brand Equity: A Sustainable Development Perspective. *Corporate Social Responsibility and Environmental Management*, *19*(5), 306–316. https://doi.org/10.1002/csr.281

[35] Lee, J. S., Hsu, L. T., Han, H., & Kim, Y. (2010). Understanding how consumers view green hotels: How a hotel's green image can influence behavioural intentions. *Journal of Sustainable Tourism*, *18*(7), 901–914. https://doi.org/10.1080/09669581003777747

[36] Lopes, J. M. M., Gomes, S., & Trancoso, T. (2024). Navigating the green maze: insights for businesses on consumer decision-making and the mediating role of their environmental concerns. *Sustainability Accounting, Management and Policy Journal*. https://doi.org/10.1108/SAMPJ-07-2023-0492

[37] Mainieri, T., Barnett, E. G., Valdero, T. R., Unipan, J. B., & Oskamp, S. (1997). Green buying: The influence of environmental concern on consumer behavior [Compra ecológica: la influencia de la preocupación por el medio ambiente en el comportamiento del consumidor]. *Journal of Social Psychology*, *137*(2), 189–204.

[38] Mishal, A., Dubey, R., Gupta, O. K., & Luo, Z. (2017). Dynamics of environmental consciousness and green purchase behaviour: an empirical study. *International Journal of Climate Change Strategies and Management*, *9*(5), 682–706. https://doi.org/10.1108/IJCCSM-11-2016-0168

[39] Mohd Isa, S., & Xin Yao, P. (2013). Investigating the preference for green packaging in consumer product choices: A choice-based conjoint approach. *Business Management Dynamics*, *3*(2), 84–96. www.bmdynamics.com

[40] Mohd Suki, N. (2016). Green product purchase intention: impact of green brands, attitude, and knowledge. *British Food Journal*, *118*(12), 2893–2910. https://doi.org/10.1108/BFJ-06-2016-0295

[41] Napoli, J., Dickinson, S. J., Beverland, M. B., & Farrelly, F. (2014). Measuring consumer-based brand

authenticity. *Journal of Business Research*, *67*(6), 1090–1098. https://doi.org/10.1016/j.jbusres.2013.06.001

[42] Nekmahmud, M., & Fekete-Farkas, M. (2020). Why not green marketing? Determinates of consumers' intention to green purchase decision in a new developing nation. *Sustainability (Switzerland)*, *12*(19), 1–31. https://doi.org/10.3390/su12197880

[43] Ng, P. F., Butt, M. M., Khong, K. W., & Ong, F. S. (2014). Antecedents of Green Brand Equity: An Integrated Approach. *Journal of Business Ethics*, *121*(2), 203–215. https://doi.org/10.1007/s10551-013-1689-z

[44] Nordin, N., Ashari, H., & Hassan, M. G. (2014). Drivers and barriers in sustainable manufacturing implementation in Malaysian manufacturing firms. *IEEE International Conference on Industrial Engineering and Engineering Management*, *2015-Janua*(January 2016), 687–691. https://doi.org/10.1109/IEEM.2014.7058726

[45] Omair, A. (2015). Selecting the appropriate study design for your research: Descriptive study designs. *Journal of Health Specialties*, *3*(3), 153. https://doi.org/10.4103/1658-600x.159892

[46] Rehman, M. A. A., & Shrivastava, R. L. (2013). Green manufacturing (GM): Past, present and future(a state of art review). *World Review of Science, Technology and Sustainable Development*, *10*(1–3), 17–55. https://doi.org/10.1504/WRSTSD.2013.050784

[47] Rosen, M. A., & Kishawy, H. A. (2012). Sustainable manufacturing and design: Concepts, practices and needs. *Sustainability*, *4*(2), 154–174. https://doi.org/10.3390/su4020154

[48] Sallam, M. A. (2014). The Effects of Brand Image and Brand Identification on Brand Love and Purchase Decision Making: The Role of WOM. *International Business Research*, *7*(10), 187–193. https://doi.org/10.5539/ibr.v7n10p187

[49] Sarkis, J. (2001). Manufacturing's role in corporate environmental sustainability Concerns for the new millennium. *International Journal of Operations and Production Management*, *21*(5–6), 666–686. https://doi.org/10.1108/01443570110390390

[50] Saufi, N. A. A., Daud, S., & Hassan, H. (2016). Green Growth and Corporate Sustainability Performance. *Procedia Economics and Finance*, *35*(October 2015), 374–378. https://doi.org/10.1016/s2212-5671(16)00046-0

[51] Sekaran, U. (2006). *Metodologi Penelitian untuk Bisnis*. *5*, 147–158.

[52] Şentürk, C., & Zeybek, G. (2019). Teaching-Learning Conceptions and Pedagogical Competence Perceptions of Teachers: a Correlational Research. *Research in Pedagogy*, *9*(1), 65–80. https://doi.org/10.17810/2015.92

[53] Shi, D., Lee, T., & Maydeu-Olivares, A. (2019). Understanding the Model Size Effect on SEM Fit Indices. *Educational and Psychological Measurement*, *79*(2), 310–334. https://doi.org/10.1177/0013164418783530

[54] Shrestha, S. (2018). Analysis of Green Marketing Tools towards Consumer Purchase Intention in Kathmandu. *Journal of Business and Social Sciences Research*, *1*(1), 37. https://doi.org/10.3126/jbssr.v1i1.20948

[55] Sideridis, G., Saddaawi, A., & Al-Harbi, K. (2018). Internal Consistency Reliability in Measurement: Aggregate and Multilevel Approaches. *Journal of Modern Applied Statistical Methods*, *17*(1), 1–30. https://doi.org/10.22237/jmasm/1530027194

[56] Smith, S., & Paladino, A. (2010). Eating clean and green? Investigating consumer motivations towards the purchase of organic food. *Australasian Marketing Journal*, *18*(2), 93–104. https://doi.org/10.1016/j.ausmj.2010.01.001

[57] Starr, R. (2011). *The certification of authenticity: effects on product perception*. *1994*, 341. https://researchspace.auckland.ac.nz/handle/2292/8885

[58] Suki, N. M. (2013). Green awareness effects on consumers' purchasing decision: Some insights from Malaysia. *International Journal of Asia-Pacific Studies*, *9*(2), 49–63.

[59] Sutherland, J. W., Richter, J. S., Hutchins, M. J., Dornfeld, D., Dzombak, R., Mangold, J., Robinson, S., Hauschild, M. Z., Bonou, A., Schönsleben, P., & Friemann, F. (2016). The role of manufacturing in affecting the social dimension of sustainability. *CIRP Annals - Manufacturing Technology*, *65*(2), 689–712. https://doi.org/10.1016/j.cirp.2016.05.003

[60] Tandon, A., Jabeen, F., Talwar, S., Sakashita, M., & Dhir, A. (2021). Facilitators and inhibitors of organic

Research Article

food buying behavior. *Food Quality and Preference*, *88*, 104077. https://doi.org/10.1016/j.foodqual.2020.104077

[61] Tanner, C., & Kast, S. W. (2003). Promoting Sustainable Consumption: Determinants of Green Purchases by Swiss Consumers. *Psychology and Marketing*, *20*(10), 883–902. https://doi.org/10.1002/mar.10101

[62] Ukenna, S., Nkamnebe, A., & Idoko, E. (2019). Inhibitors of sustainable consumption: Insights from university academic staff in southern Nigeria. *Sustainable Development*, *27*(1), 96–108. https://doi.org/10.1002/sd.1865

[63] Ülkü, M. A., & Hsuan, J. (2017). Towards sustainable consumption and production: Competitive pricing of modular products for green consumers. *Journal of Cleaner Production*, *142*, 4230–4242. https://doi.org/10.1016/j.jclepro.2016.11.050

[64] Usp, N., & Winter, S. E. M. (2012). *Some Clarifications and Recommendations on Fit Indices Tanaka (1993), Maruyama (1998), and others distinguish between several types of fit indices: 2*, 1–4.

[65] William, Y., Kumju, H., Seonaidh, M., & Caroline, J. O. (2009). Sustainable consumption: green consumer behaviour when purchasing products. *Sustainable Development*, *18*(March 2009), 20–31. http://dx.doi.org/10.1002/sd.394

[66] Wu, J., Zhao, Y., Qi, H., Zhao, X., Yang, T., Du, Y., Zhang, H., & Wei, Z. (2017). Identifying the key factors that affect the formation of humic substance during different materials composting. *Bioresource Technology*, *244*(August), 1193–1196. https://doi.org/10.1016/j.biortech.2017.08.100

[67] Yadav, R., & Pathak, G. S. (2017). Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior. *Ecological Economics*, *134*, 114–122. https://doi.org/10.1016/j.ecolecon.2016.12.019

[68] Zeithaml, A. V. (1988). Persepsi Konsumen Nilai Sarana-Akhir : Kualitas , Sintesis Model dan Bukti. *Jurnal Asosiasi Pemasaran Amerika*, *52*(3), 2–22.

[69] Zhu, Q., Sarkis, J., & Lai, K. H. (2012). Examining the effects of green supply chain management practices and their mediations on performance improvements. In *International Journal of Production Research* (Vol. 50, Issue 5). https://doi.org/10.1080/00207543.2011.571937