

# The Relationship between Green Packaging Awareness, Initiatives, and Behaviour

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## Abstract

*Growing environmental concerns have spurred increased interest in sustainable business practices. Green packaging, a vital component of this movement, aims to minimise environmental impact through eco-friendly materials and production processes. This study investigates the relationship between green packaging awareness and consumer behaviour, a segment often underrepresented in sustainability research. Drawing on the Theory of Reasoned Action (TRA), explore how environmental consciousness, emotional responses, and social values influence purchasing decisions related to eco-friendly packaging. The TRA posits that attitudes towards a behaviour, influenced by beliefs about its consequences and subjective norms (perceived social pressure), predict behavioural intentions, which in turn, predict actual behaviour. Examining these factors in the context of green packaging aims to develop a comprehensive framework for understanding consumer decision-making. A robust measurement model is designed to capture the key constructs of the TRA framework. This model is then validated through a survey administered to a diverse sample of consumers. The analysis was focused on assessing the internal consistency of the measurement scales and testing the hypothesised relationships between environmental consciousness, emotions, social values, attitudes towards green packaging, subjective norms, and purchase intentions. This research addresses a critical gap in the previous literature by focusing on the unique context of rural areas. Understanding consumer behaviour in this segment is crucial for businesses seeking to expand their sustainability efforts while catering to a growing and environmentally conscious market. The findings of this study provided valuable insights into how companies can leverage green packaging initiatives to influence purchasing decisions and promote ecologically responsible behaviour. Fur-*

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*thermore, the research contributes to the broader body of knowledge on sustainable consumption by demonstrating the applicability of the TRA framework in a non-Western context.*

**Keywords:** *Green packaging, Awareness, Anitiatives, and Behaviour*

**JEL Classification:** *Q56, M31, D91, Q51, D12*

## **INTRODUCTION**

### ***Background of Study***

The study aims to explore consumer behaviour regarding adopting green packaging products, investigating the various factors shaping attitudes and intentions towards eco-friendly packaging solutions. While research on this topic has been conducted globally, there remains a gap in awareness and implementation, particularly in developing countries like Pakistan. As customers become more environmentally conscious, there has been a huge increase in awareness of green packaging. Concerns about the sustainability of the environment and the effects of conventional packaging on trash and pollution drive this awareness. Eco-friendly packaging lessens environmental damage and encourages sustainable practices, so consumers are selecting items that use it more and more. To meet market expectations, businesses are influenced by this shift in consumer behaviour to use greener packaging options (Ali & Ali, 2020).

A significant trend in environmental sustainability is the change to green packaging, which reflects a more significant movement in consumer and corporate attitudes towards ecological responsibility. Consumer awareness of the environmental impact of packaging materials has increased significantly as concerns about plastic pollution and resource depletion gain urgency (Trajkovska Petkoska et al., 2021). Businesses have launched several green packaging initiatives in response to this growing awareness, such as using recycled content, biodegradable materials, and minimalist packaging designs. These programs seek to decrease carbon footprint and waste, in line with consumer values and legal obligations (Majeed et al., 2022).

Despite these endeavours, research is still being done to determine how they affect customer behaviour. Measuring the performance of these initiatives and how they affect customer behaviour, measuring the application of green packaging methods, and examining their impact on purchase decision (Majeed et al., 2022) This study aims to investigate these factors in great depth to shed light on how environmental sustainability is impacted by green packaging and to guide industry practices going forward.

### ***Research Gaps***

One significant gap identified after reviewing various research studies and survey responses is the lack of awareness and implementation of eco-friendly packaging solutions in developing countries like Pakistan. Despite extensive research globally and numerous proposed solutions, there remains a disparity in awareness and adoption, particularly in regions where environmental consciousness may be lacking. This gap underscores the need for further

research to understand the specific barriers to eco-friendly packaging adoption in developing countries and to develop targeted strategies to promote awareness and implementation.

### **Problem Statement**

Despite extensive research on green packaging behaviour globally, there remains a significant gap in awareness and implementation of eco-friendly packaging solutions, indicating a persistent weakness in translating consumer attitudes into tangible actions.

### **Research Objectives**

- 1 To analyse green packaging behaviour holistically, examining the various dimensions of consumer attitudes, environmental awareness, and the impact of packaging initiatives on sustainable consumption practices.
- 2 To investigate consumers' attitudes and behaviours towards eco-friendly packaging, examining the role of environmental concern, consciousness, and other variables in driving green packaging behaviour.

### **Research Questions**

- 1 Does environmental benefit have a relationship with behaviour intention?
- 2 Does value for money have a relationship with behaviour intention?
- 3 Does consciousness personality trait moderate between environmental benefit and behaviour intention moderator?
- 4 Does consciousness personality trait moderate between emotional value and behaviour intention moderator?
- 5 Does consciousness personality trait moderate between social value and behaviour intention moderator?
- 6 Does consciousness personality trait moderate between value for money and behaviour intention moderator?
- 7 Does environmental concern moderate the relation between environmental benefit and behaviour intention moderator?
- 8 Does environmental concern moderate the relationship between emotional value and behaviour intention moderator?
- 9 Does environmental concern moderate the relationship between social value and behaviour intention moderator?
- 10 Does environmental concern moderate the relationship between value for money and behaviour intention moderator?
- 11 Does attitudes mediator affect the relationship between environmental benefit and behaviour intention?
- 12 Does attitudes mediator affect the relationship between emotional value and behaviour intention?
- 13 Does attitudes mediator affect the relationship between and social value behaviour intention?
- 14 Does attitudes mediator affect the relationship between and value for money behaviour intention?

## **LITERATURE REVIEW**

A study titled “The Relationship between Green Packaging Awareness, initiatives, and Behaviour: An Exploratory Study on India's Rural Population” is a seminal work in this field. This study investigates the antecedents and consequences of green packaging behaviour (GPB). It developed a conceptual model wherein green packaging awareness (GPA) and green packaging initiatives (GPI) are precursors of GPB, and environmental concern and availability of various green packaging alternatives are Moderators (George et al., 2023).

### ***Seminal Study***

The seminal study on green packaging behaviour focuses on understanding individuals' attitudes and behaviours towards environmentally friendly packaging. It lays the foundation for exploring factors such as environmental concerns, personal benefits, and green packaging initiatives that influence green packaging behaviour.

### ***Evolution***

Green marketing has existed since the inaugural Earth Day in 1970. However, it wasn't until the 1980s that the concept received acceptance, as growing environmental consciousness among consumers created a need for eco-friendly goods and services. Over the years, the focus has shifted from just marketing to a more holistic approach that includes consumer behaviour, recycling behaviour, and retailers' strategies (George et al., 2023).

The topic of green packaging behaviour has evolved from initial studies that primarily focused on environmental benefits to a more comprehensive understanding that includes personal benefits, social values, and value for money. Early research highlighted the ecological advantages of green packaging, while recent studies have delved into the emotional and social values associated with it.

### ***Current State***

The current literature on green packaging is extensive and diverse. A systematic review of the literature found four main research themes: consumer attitudes and behaviours towards eco-friendly packaging, studies that investigate green packaging using a holistic approach, studies that use an analytical approach to identify relevant package cues, and consumer knowledge and understanding of sustainable packaging. (Sastre et al., 2022).

The current state of the literature on green packaging behaviour is extensive and diverse. It encompasses studies from various countries and contexts, exploring consumer attitudes, environmental awareness, packaging initiatives, and their impact on sustainable consumption practices. Recent research has also focused on the role of ecological concern and consciousness in driving green packaging behaviour (Branca et al., 2024).

### ***Existing Gaps***

Despite the extensive research, there are still gaps in the literature. Consumer behaviour about green package products, consumer recycling behaviour, consumer purchasing behaviour, or retailer tactics of sustainable initiatives encouraging green consumption were the

main subjects of the majority of studies on sustainable packaging (Wijekoon & Sabri, 2021). Furthermore, some specific issues are as follows:

Most research uses customer intent as the dependent variable rather than the actual purchase, which is a chronic flaw in the literature. One notable gap is the limited focus on the behaviour of individuals, both as consumers and practitioners of green packaging.

More studies are needed to highlight the interplay between environmental concerns, packaging initiatives, and actual behaviour intention in adopting green packaging practices. Additionally, further research could explore the effectiveness of different strategies, such as awareness campaigns, incentives, and policy interventions, in promoting pro-environmental behaviour related to green packaging.

### ***Variables***

Eight variables are used in this research: environmental benefit, environmental concern, social value, emotional value, value for money, attitude towards green packaging, consciousness (personality trait), and behaviour intention.

### ***Environmental Concern***

This means they worry about protecting our environment, using resources wisely, and ensuring enough for future generations. Environmental concern is how much people know about environmental problems and how willing they are to help fix them. Studies (George et al., 2023) have shown that people who are very concerned about the environment tend to like products with eco-friendly packaging. They're also more likely to buy things that are good for the environment and choose packaging that doesn't harm it. Being environmentally conscious isn't just about buying green. It is also about sharing tips on protecting the environment and encouraging others to be eco-friendly.

### ***Environmental benefits***

One of the outcome variables is the environmental advantages of GPB compliance and proper waste disposal (Mahmoud et al., 2022). The benefits include a lower carbon footprint, increased soil fertility, and less toxicity in waste material.

### ***Social Value***

According to (Wahab et al., 2021), improving one's self-image through social value can influence customer behaviour towards environmentally friendly packaging. Social values in green packaging include personal comfort, moral norms, self-image, and social pressures. Consumers who feel responsible, socially conscious, and motivated to support the environment are more likely to purchase green packaging. Individual lifestyles and influences from family, friends, society, and government can affect eco-friendly packaging decisions and promote sustainable environmental practices. Found that ecological awareness and understanding of green environments significantly impact eco-friendly behaviour.

### ***Emotional Value***

The emotional value influencing consumers' intention to make green purchases is based

on their experiences and feelings. Positive, negative, or neutral emotions directly correlate with consumers' intentions to purchase environmentally friendly packaging. For example, consumers who feel good about themselves will be more likely to embrace green packaging items because they believe they must preserve the environment. On the other hand, negative emotion suggests feelings of shame, disgust, rage, and contempt, which are inappropriate and immoral feelings that influence a person's decision to buy. Consumers like products with cohesive production, composition, and packaging. Therefore, some non-biodegradable products will make environmentally conscious consumers feel bad, resulting in higher prices. (Wahab et al., 2021)

### ***Value for Money***

According to early studies, consumers' willingness to pay (WTP) is the foundation of marketing strategy and the primary factor influencing key marketing decisions. "The maximum price a buyer expects to pay for a given number of goods or services" is another definition of willingness to pay (Mahmoud et al., 2022). Price response strategies, which dictate price and promotion decisions, are centred on consumers' willingness to pay. Furthermore, as poor pricing might imperil the growth of investments, new investments and new products that are to be introduced to the market must have their prices carefully considered. When projecting demand for a product, managers must know the highest price buyers are willing to pay.

### ***Attitude***

Previous research indicates that products with environmentally friendly packaging are worth more. However, a few different types of packaged eco-friendly goods are available, and not much research has been done on how customers feel about them. Consequently, it's essential to focus more on consumers' preference for environmentally friendly packaged goods. Furthermore, earlier researchers have not explored whether eco-friendly packaged goods have a comparative advantage over products made with eco-friendly ingredients. Moreover, research has not been done to determine whether consumers' perceptions of eco-friendly items vary depending on the amount of packing (excessive vs. suitable). This study examined the efficacy of requiring eco-friendly packaging when products' eco-friendliness and other features were compared with consumers' purchase intentions. (Seo et al., 2016)

### ***Consciousness***

Being conscientious is a global trend, a problem that is now hot, and a developing field of study. It can also take many forms, including environmental concerns, ethics, sustainability, responsibility, and transparency. However, generally speaking, conscientiousness is an ethical issue that consumers are becoming more conscious of. It was shown that contemporary consumers demand discounts from businesses that create unethically and have a favourable view toward ethically-made things. Conscientiousness is a megatrend that affects not only consumer behaviour but also business behaviour. Companies can use this trend to their advantage by arguing that brands that exhibit conscientiousness are those whose "ethical concerns and values are embedded in the company's entire business strategy, in its value and supply chain, as well as in its vision and culture over time." (Kauppinen-Räsänen et al., 2014)

## ***Behaviour Intention***

A variety of factors influence behavioural intentions (Jayasinghe, 2022) People are likely to adjust their behaviours in response to learning about environmental issues. Additionally, it is discovered that consumers' attitudes affect their purchasing decisions. Green marketing strategies can raise young millennials' awareness of the social pressure to embrace environmentally responsible purchase habits. Green behaviour intentions are a broad category of consumer actions. Green packaging and advertising educate consumers about green purchasing practices, encourage the purchase of eco-friendly goods and cultivate a devoted consumer base.

## ***Underpinning Theory***

The theory of reasoned action (TRA) theory was used as the theoretical framework for this analysis. The basic premise of TRA is that a person's behaviour is not entirely determined by thoughts and abstract patterns The desire to model behaviour is based on research on the consequences of that behaviour. If the outcome is positive, the person will perform the behaviour, but if the outcome is negative, the person will not. TRA understands many aspects of how people behave through brain research. Learning styles indicate how a person should think about others as the basis for their behaviour. People will engage in a behaviour as long as others support that behaviour. Scholars have previously used TRA to understand green advertising and behaviour.(George et al., 2023)

## ***Justification***

In this review, Green Package Behaviour (GPB) is considered human behaviour, and it consists of Green Package Awareness (GPA) and Green Package Driving (GPI). This review examines the different components of TRA that contribute to understanding the goals of human needs for ecological safety and ethical standards. In this way, TRA can be expected to influence individual GPA's perception of GPB (George et al., 2023)

## ***The Study of Variables Concerning Theory***

Attitude The character's personality and emotions are still up in the air. Susceptibility to behaviour depends on the exploration of the consequences of behaviour. If the outcome is good, the person will perform the behaviour, but if the outcome is negative, the person will not perform the behaviour (George et al., 2023)

## ***Consciousness***

Earth-conscious people should purchase ecological products and join the green package to protect the climate. Ecologically conscious consumers are always impressed by green packaging and purchase green products. Behavioural Goals: TRA helps understand the individual's expectations for safe behaviour and the resulting behavioural patterns (George et al., 2023)

## ***Environmental Concern***

Asking others to protect the climate and encouraging them to engage in green behaviour may increase environmental concerns (George et al., 2023)

## **Social Value**

From a psychological perspective, TRA understands many aspects of human behaviour. Attitudes reflect opinions about others that are important to how a person behaves. People will exhibit this behaviour if others support this behaviour. (George et al., 2023)

## **Environmental Benefit**

One of the results is the positive impact of compliance with the GPB and proper waste disposal. Advantages include reducing the carbon footprint, increasing the abundance of pollutants, and reducing waste toxicity. (George et al., 2023)

## **Hypothesis Development**

### **Relationship among the variables in the proposed model**

**Environmental Benefit (H1):** –It refers to individuals' awareness, attitudes, and feelings regarding ecological issues and their willingness to take action to mitigate environmental impacts. Environmental concern is a driving force behind the adoption of green packaging products and the broader shift toward sustainable consumption patterns. By understanding and addressing consumers' environmental concerns, businesses can effectively promote and market green packaging solutions to meet the growing demand for eco-friendly alternatives.

**Emotional Value (H2):** Emotional value in the context of green packaging refers to the emotional experiences, associations, and connections that individuals form with environmentally friendly packaging options. While the primary focus of green packaging is often on its environmental benefits, such as reducing waste and minimising ecological impact, emotional value complements these functional aspects by tapping into consumers' feelings, attitudes, and motivations. It is the case that consumers favour items with emotional claims about the environment over those with neutral (control) claims. The studies also show that distraction, information processing skills, and environmental commitment of the participants all attenuate this effect. (Aagerup et al., 2019)

**Social Value (H3):** The social value variable refers to the social benefits and impacts associated with adopting and using eco-friendly packaging solutions. Social value encompasses the positive effects of green packaging on communities, societies, and interpersonal relationships. Since the proposed study focuses on people's pro-environmental behaviour. Its findings are beneficial to society. This study emphasises the importance of purchasing products with environmentally friendly packaging and recycling or reusing them to save the environment. Businesses, policymakers, and consumers can collectively contribute to building more sustainable and resilient communities while addressing pressing environmental challenges by considering the social value variable in green packaging initiatives. (George et al., 2023)

**Value For Money (H4) :** The value for money of green packaging products depends on a balance between their price, performance, environmental benefits, and the perception of the brand's commitment to sustainability. A study claims that the current generation,

which the epidemic and numerous financial crises have impacted, places a higher importance on money. In this regard, signalling theory, a social cognitive theory, is used to assess the willingness of the current generation to pay extra for environmentally friendly products. The consumption of green products by the current generation can be determined by factors such as environmental worries, green future estimation, and green perceived quality. These factors can also have a beneficial impact on the willingness to pay a premium for green products. (Gomes et al., 2023)

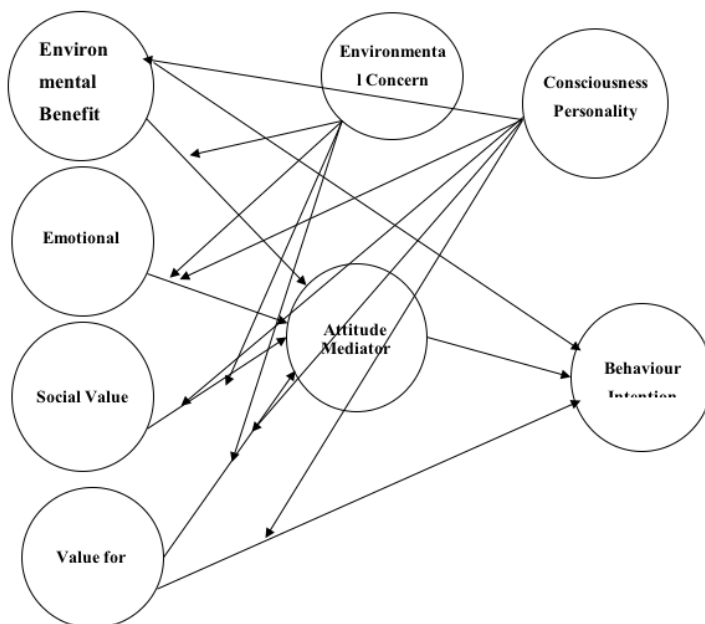
**Attitude (H5):** Businesses and policymakers can develop strategies to promote positive attitudes toward green packaging and encourage its adoption among consumers. Effective communication, product design, pricing strategies, and environmental initiatives can all contribute to shaping attitudes and driving consumer preferences toward sustainable packaging options. How someone feels about the behaviour relies on how they perceive its results. If the behaviour has favourable results, they will engage in it; if the results have bad results, they will not. (George et al., 2023) Today, consumers are increasingly informed about their environmental obligations and are more inclined to opt for eco-friendly products over conventional ones. Marketers have recognised the pivotal role. (Zakersalehi & Zakersalehi, 2012)

**Environmental Concern (H6):** Environmental concern is a pivotal variable in adopting and accepting green packaging solutions. It encapsulates individuals' awareness, attitudes, and responsibility towards environmental issues. Environmental concern manifests in several key ways within the context of green packaging, like Awareness of Environmental Impact, Support for Eco-Friendly Initiatives, Willingness to Pay Premiums, etc. Additionally, results from the suggested model indicate that the availability of green packaging, environmental concern, and GPI interact to influence GBP and that environmental concern moderates the relationship between GPI and GPB. Additionally, GPB's results regarding environmental and individual advantages are established. (George et al., 2023)

**Consciousness Personality Trait (H7):** The consciousness variable in the context of green packaging refers to individuals' level of awareness, mindfulness, and consideration of environmental issues and sustainability factors when making decisions related to packaging choices. This variable encompasses several dimensions, such as Environmental Awareness and health and Safety Awareness. (ECEVİT, 2023)

**Behaviour Intention (H8):** The behaviour intention variable in the context of green packaging refers to individuals' readiness and willingness to adopt, purchase, and use environmentally friendly packaging options. It reflects the subjective probability or inclination that individuals will perform specific behaviours associated with green packaging. Several factors that influence behaviour intention in this context are Attitudes toward Green Packaging, Environmental Concerns and Values, Perceived Norms and Social Influence. According to a study, Malaysian consumers' intention to buy green packaging products is directly correlated with their attitudes toward green packaging, perceived behavioural control, environmental concern, and environmental awareness. Furthermore, this study shows that intention and behaviour are significantly and directly correlated when it comes to the purchase of green packaging products. (Moorthy et al., 2021).

## CONCEPTUAL FRAMEWORK



## METHODOLOGY

The purpose of this portion of the report is to provide information regarding the means that will be adopted to perform analysis, the means adopted for data collection, the population proposed to benefit from the outcome, and the sample drawing method and its number.

### ***Sample & Sampling Design***

It is about how much data is needed to make an informed choice about research. Based on their behaviour, millions of customers buy green-packaged products. Fifty respondents were chosen using a purposive sampling technique. Of the total respondents, 38 decided to conduct an information investigation. The survey contains six inquiries regarding demographics and eight concerning customers' attitudes towards green bundling. A self-controlled questionnaire was emailed and sent through actual circulation.

### ***Data Collection Tools***

In this exploration, an organised survey is utilised to get information and accumulate data regarding customers' behaviour towards green packaging. The review questionnaire was taken from past comparative examinations, and that was to ensure that the study was intelligible, predictable, clear, and achievable for respondents to reply to. An online survey questionnaire was used to gather the information from the participants. The questionnaire was designed as a demographic area in the first part and items of constructs in the other second part, in which the sequence of measuring is Strongly Disagree, Disagree, Neutral, Agree, Strongly Disagree, and it measures the intensity and insight of the subjective constructs, hence widely used in the field of management science. It is used for measuring and is an updated and reliable five-item version of an earlier scale (Keller, 2003).

## Data Analysis Method

This research aims to investigate the consumer attitude towards green packaging. This study is applied to provide a solution to the current problem. This is an exploratory type of research; data is gathered through the distribution of structured questionnaires via social media and emails. The questionnaire was adopted from previous research, various tests were conducted, and data was analysed through the PLS-SEM.

## RESULTS & DISCUSSION

### Data Screening

After conducting an initial check for univariate outliers, it was determined that none were present in the dataset. Given the absence of outliers and the data's apparent accuracy and unbiased nature, all 37 responses from the survey form were retained without any removal. This decision was made to maintain the integrity of the dataset and ensure that all available information was considered in the analysis.

### Demographic Profile of Respondents

**Table 1: Demographics**

Demographics	Groups	Frequency	Frequency Percentage
<b>Gender</b>	Female	18	47.4%
	Male	20	52.6%
<b>Age</b>	18-29	25	69.4%
	30-39	10	27.8%
	40-50	1	2.8%
	51-60	0	0%
<b>Employment</b>	Employed	28	77.8%
	Unemployed	6	16.7%
	Self employed	2	5.6%
	Retired	0	0
<b>Education</b>	No schooling completed	0	0
	Nursery school to 8th grade	0	0
	Some high school, no diploma	0	0
	High school graduate, diploma or others	1	2.6%
	Trade/technical/vocational training/Associate Degree	1	2.6%
	Under Graduate degree	5	13.2%
	Graduate degree	13	24.2%
	Post Graduate	19	49.9%
	Doctorates Degree	2	5.3%

The data depicts a diverse sample, with a slightly higher representation of males (52.6%) than females (47.4%). Most respondents fall within the 18-29 age bracket (69.4%), with a significant minority in the 30-39 range (27.8%). Employment-wise, most respondents are

employed (77.8%), with smaller proportions being unemployed (16.7%) or self-employed (5.6%). Educationally, the sample varies, with a majority having completed post-graduate studies (49.9%), followed by graduate degrees (24.2%) and undergraduate degrees (13.2%). A smaller portion have high school diplomas (2.6%) or trade/technical/vocational training (2.6%), while a few hold doctorate degrees (5.3%).

## **Descriptive Analysis**

**Table 2. Skewness & Excess Kurtosis**

<b>Constructs</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>	<b>St. Deviation</b>	<b>Kurtosis</b>	<b>Skewness</b>
A	3.64	4	1	5	1.164	0.977	-1.337
BI	3.47	3.735	1	5.079	1.061	0.861	-1.254
CON	3.359	3.63	1	5	1.008	0.968	-1.181
EV	3.458	3.66	1	5	1.053	1.145	-1.241
EB	3.663	4	1	5	1.072	1.504	-1.427
EC	3.594	3.893	1	5	1.012	2.077	-1.533
SV	3.407	3.625	1	4.77	0.933	2.327	-1.678
VFM	4.648	4.823	3.12	5.462	0.664	0.794	-1.27

The data represents responses to attitudes, intentions, and values associated with a particular subject. Overall, respondents showed moderately positive attitudes, intentions, and perceptions. They generally perceive emotional, environmental, and social values positively, with a moderate concern for the environment. Notably, respondents highly value the monetary aspects associated with the subject. However, there's variability in the level of concern for the environment, with some respondents showing more extreme scores. The distributions of these variables are generally negatively skewed, indicating more low scores than high scores, except for social value, which shows positive skewness, suggesting more high scores than low scores.

**Table 3. Constructs, Items, Outer Loadings, Composite Reliability (CR), and Average Variance Extracted (AVE)**

<b>Construct</b>	<b>ITEMS</b>	<b>OUTER LOADING</b>	<b>CR</b>	<b>AVE</b>
Attitude (A)	A1	1.03	0.978	0.882
	A2	0.932		
	A3	1.04		
	A4	0.994		
	A5	1.049		
	A6	0.948		
Behaviour Intention (BI)	BI1	0.922	0.848	0.611
	BI2	1.075		
	BI3	1.013		
	BI4	0.642		
Consciousness (CON)	CON1	0.945	0.948	0.86
	CON2	1.071		
	CON3	1.001		
Environmental Benefit	EB1	1.013	0.966	0.743
	EB2	1.023		

	EB3	1.079		
	EB4	0.608		
	EB5	1.015		
	EB6	0.956		
	EB7	1.097		
	EB8	1.086		
	EB9	0.978		
	EB10	0.918		
Social Value (SV)	SV1	0.933	0.937	0.625
	SV2	0.623		
	SV3	1.05		
	SV4	0.874		
	SV5	1.168		
	SV6	1.023		
	SV7	0.681		
	SV8	0.869		
	SV9	1.113		
	SV10	1.04		
Value for Money(VFM)	VFM1	1.605	0.826	0.547
	VFM2	1.331		
	VFM3	1.052		
	VFM4	0.574		

### **Measurement Model Assessment**

The data presents result from a measurement instrument involving six constructs: "Attitude (A)", "Behaviour Intention (BI)", "Consciousness (CON)", "Environmental Benefit (EB)", "Social Value (SV)", and "Value for Money (VFM)". Each construct is assessed through multiple items. Items with high outer loadings (close to or greater than 1) are considered strong indicators of their respective constructs. The Composite Reliability (CR) values for all constructs are high, indicating strong internal consistency reliability, implying that the items within each construct reliably measure the underlying construct. Most constructs exhibit high Average Variance Extracted (AVE) values, reflecting good convergent validity. However, "Social Value (SV)" and "Value for Money (VFM)" have comparatively lower AVE values, suggesting potential issues with convergent validity for these constructs.

### **Reliability and Construct Validity**

The table provides metrics for the reliability and construct validity of various constructs in the model, including Attitude (A), Behavioural Intention (BI), Consciousness (CON), Environmental Benefits (EB), Social Value (SV), and Value for Money (VFM). Each construct is assessed through its items and their outer loadings, with Composite Reliability (CR) and Average Variance Extracted (AVE) values. The CR values, ranging from 0.826 to 0.978, all exceed the acceptable threshold of 0.7, indicating high internal consistency and reliability. Similarly, the AVE values, ranging from 0.547 to 0.882, are above the threshold of 0.5, confirming good convergent validity for each construct.

In particular, the Attitude construct shows excellent reliability and validity with a CR of 0.978 and an AVE of 0.882. Behavioural Intention, Consciousness, Environmental Benefits, Social Value, and Value for Money also exhibit adequate to high reliability and convergent validity, as evidenced by their respective CR and AVE values. This suggests that the items used in the model are consistent and effectively capture the variance of their underlying constructs, ensuring the robustness and reliability of the measurement model.

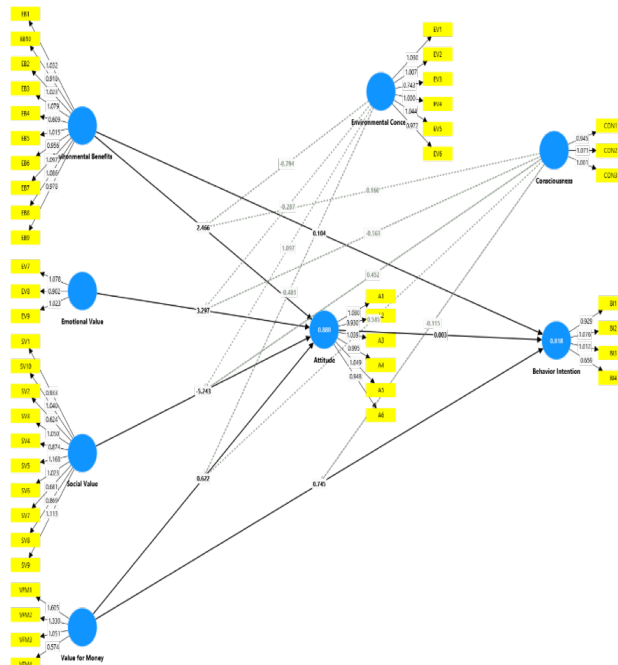
### Structural Model Assessment

The structural model created by Smart PLS indicates that Attitude (ATT) towards a certain behaviour is significantly influenced by several factors. Value for Money (0.452) is the strongest predictor, followed by Emotional Value (0.273), Social Value (0.244), and Environmental Benefits (0.185). These predictors collectively explain 53% of the variance in Attitude ( $R^2 = 0.530$ ). Minimal direct effects of environmental concern (0.015) and consciousness (-0.031) on attitude are observed.

Attitude is a crucial mediator that strongly influences Behavioural Intention (BI) with a path coefficient of 0.636. Additionally, Consciousness has a minor positive effect on Behavioural Intention (0.081), while Environmental Concern has a small negative effect (-0.111). The model explains 41.9% of the variance in Behavioural Intention ( $R^2 = 0.419$ ). Overall, improving perceptions of value and benefits can significantly enhance Attitudes, which in turn drive Behavioural Intentions, with Environmental Concern and Consciousness playing more minor roles in this process.

**Figure 1. SEM Modelling Analysis**

### DISCUSSION



Upon conducting an initial examination of the dataset, no univariate outliers were detected,

leading to the retention of all 37 survey responses to uphold the integrity and completeness of the data set, which is essential for the robustness of our analysis. The demographic composition of our sample reveals a slight male predominance (52.6%) over females (47.4%), with a significant proportion falling within the 18-29 age bracket (69.4%). The majority of respondents are employed (77.8%), with smaller cohorts identifying as unemployed (16.7%) or self-employed (5.6%). Educational attainment varies, with a notable percentage holding post-graduate degrees (49.9%), followed by graduate degrees (24.2%) and undergraduate degrees (13.2%).

In contrast, a study focusing on rural populations and their eco-friendly practices for sustainable development involved a larger sample size of 395 respondents from 47 coastal villages. This sample was obtained through quota sampling to ensure representation from each village, achieving data saturation over a three-month period. The gender distribution in this study (52.4% males, 47.6% females) mirrors the gender balance observed in our study, indicating consistency in gender representation across both research endeavours. (Mahmoud et al., 2022)

The analysis of respondents' attitudes, intentions, and perceptions towards sustainable practices generally revealed positive inclinations, particularly towards emotional, environmental, and social values, with a notable emphasis on monetary aspects. However, there was variability in environmental concern among respondents, with some displaying extreme scores. The data distribution exhibited predominantly negative skewness, except for social value, which demonstrated positive skewness.

Similarly, the rural study reported positive attitudes towards green packaging and sustainable behaviours. Utilising a Likert scale to measure constructs revealed no multicollinearity issues, affirming the data's validity. This consistency in findings across different samples and contexts enhances the generalizability of the results.

Our study's evaluation of the measurement model indicated strong internal consistency with high outer loadings and satisfactory composite reliability (CR) values. While most constructs demonstrated good convergent validity, social value and value for money exhibited slightly lower average variance extracted (AVE) values, suggesting areas for potential refinement.

The rural study also demonstrated robust measurement properties with high factor loadings, reliability coefficients, and AVE values. Confirmatory factor analysis (CFA) supported the seven-factor model, confirming the constructs' convergent and discriminant validity. The absence of common method variance (CMV) further bolstered the reliability of the study's outcomes.

Our structural model posited relationships between environmental benefit, concern, social value, emotional value, and value for money on behavioural intention through attitudes towards green packaging, moderated by consciousness. The measurement model supported these relationships, with high CR and AVE values indicating reliable constructs.

In the rural study, the structural model tested hypotheses concerning green packaging attitudes (GPA) and behaviour (GPB), revealing significant positive associations. Mediation analysis confirmed that green packaging intention (GPI) mediated the link between GPA and

GPB. Furthermore, environmental concern moderated the relationship between GPI and GPB, with the availability of green packaging reinforcing this connection. These results align with our theoretical framework, emphasising the role of attitudes and external factors in shaping sustainable behaviours.

Both studies underscore the importance of attitudes towards green practices and the influence of various values (emotional, social, and economic) on behavioural intentions. The consistent gender representation and positive perceptions across diverse demographics highlight the widespread acceptance of sustainable initiatives. The larger sample size and geographical diversity in the rural study further validate these findings, suggesting broad acceptance of sustainable practices across various populations.

## **RESULT**

In order to preserve the dataset integrity, the data screening verified that there were no univariate outliers and kept all 37 survey replies. The sample's demographic composition was 47.4% female and 52.6% male, with 69.4% of participants between 18 and 29. 49.9% of respondents had postgraduate degrees, while 77.8% of respondents were employed, 16.7% were unemployed, and 5.6% were self-employed.

A descriptive study revealed somewhat favourable attitudes, intents, and consciousness, with a strong focus on financial considerations and varying degrees of environmental concern. The majority of the constructs in the measurement model achieved good convergent validity, and it demonstrated strong internal consistency and reliability. Value for money was the strongest predictor of behavioural intention in the structural model, where attitude had a considerable impact. With a path coefficient of 0.636, attitude moderated behavioural intention, with only negligible impacts from consciousness and environmental concern.

Overall, the study shows that consumers have positive sentiments about environmentally friendly packaging and offers opportunities for manufacturers and merchants to implement sustainable practices. This aligns with the theory of reasoned action, which emphasises how social influences and attitudes shape action.

## **CONCLUSION**

This study investigated the impact of factors like environmental benefit, environmental concern, social value, emotional value, value for money, attitude towards green packaging, consciousness (personality trait), and behaviour intention on green packaging. The responses to the survey were positive regarding green packaging products.

The dataset of 37 responses showed no univariate outliers, ensuring data integrity. The demographic profile revealed a slightly higher representation of males (52.6%) compared to females (47.4%), with the majority in the 18-29 age bracket (69.4%). Employment status showed most respondents were employed (77.8%), with smaller groups being unemployed (16.7%) or self-employed (5.6%). Educational attainment varied, with a majority having completed post-graduate studies (49.9%), followed by graduate degrees (24.2%) and undergraduate degrees (13.2%).

Descriptive analysis revealed moderately positive attitudes (Mean = 3.64), intentions (Mean = 3.47), and consciousness (Mean = 3.36), with emotional (Mean = 3.46) and environmental benefits (Mean = 3.66), social value (Mean = 3.4 and value for money (Mean = 4.64) being positively perceived. Overall, descriptive analysis showed respondents had moderately positive attitudes and intentions, with a high value placed on monetary aspects and some variability in environmental concern.

The measurement model confirmed high internal consistency with strong Composite Reliability (CR) values across constructs such as Attitude (CR = 0.978), behavioural intention (BI) (CR = 0.848), Consciousness (CR = 0.948), environmental benefit (EB) (CR = 0.96), and social value (CR = 0.937). However, constructs like Social Value (AVE = 0.625) suggest potential reliability with convergent validity.

The Theory of Reasoned Action (TRA) provided in the literature review offers a framework for understanding human behaviour, emphasising the role of attitudes, intentions, and social influences. In this context, the study's variables are aligned with TRA's concepts, reflecting how individual perceptions and social factors influence behaviour related to green packaging. The hypothesis development section further links these variables to specific outcomes and relationships within the proposed conceptual framework, giving the importance of environmental concern, emotional value, social value, and attitudes in driving green packaging adoption. Overall, the results indicate robust data with positive consumer attitudes, robust findings, positive consumer attitudes, and reliable measurement constructs. Finally, the results show that people in Pakistan are willing and ready to pay more for green packaging, which is an addition to the existing studies conducted in India. Furthermore, the results and discussion section validate these hypotheses. It explores the descriptive analysis of responses, measurement model reliability, and construct validity, providing empirical support for the theoretical alignment and conceptual framework outlined.

The study suggests opportunities for local retailers to adopt eco-friendly bags and for manufacturers, especially cosmetics, to introduce recyclable packaging. Government incentives like tax benefits can further promote the transition to sustainable packaging practices, contributing to environmental conservation efforts nationwide. Furthermore, local food delivery companies could switch to biodegradable containers made from sustainable materials. This aligns with consumers' positive environmental values, reducing plastic waste and promoting eco-conscious practices.

### ***Theoretical Implications***

The study provides empirical support for the Theory of Reasoned Action (TRA) by demonstrating how individual attitudes, intentions, and social influences affect behaviour related to green packaging. The positive correlation between environmental concern, emotional value, social value, and attitudes towards green packaging underscores the theoretical framework's relevance. This alignment confirms that TRA can effectively explain adopting eco-friendly practices, emphasising the importance of personal and social factors in driving sustainable behaviour.

### ***Practical Implications***

The findings suggest several opportunities for practical application:

- Local Retailers: Retailers in Pakistan can adopt eco-friendly bags, leveraging consumer willingness to pay more for sustainable options.
- Manufacturers: There is a potential to introduce recyclable packaging, particularly in the cosmetics industry, appealing to environmentally conscious consumers.
- Government Incentives: Policies such as tax benefits can promote the transition to sustainable packaging practices, supporting environmental conservation efforts.
- Food Delivery Companies: Transitioning to biodegradable containers made from sustainable materials can align with consumers' positive environmental values, reducing plastic waste and promoting eco-conscious practices.

### **Limitations and Future Research Directions**

Limitations include its focus being on conceptual work, not the practical. Secondly, the sample size and geographic scope were narrow. Furthermore, six variables were related to green packaging and discussed; the study did not thoroughly explore specific limitations within each variable, suggesting a need for more targeted research with broader representation and in-depth analysis of critical factors so the future direction could involve engaging companies in green initiatives, conducting awareness campaigns for consumers and businesses, advocating for sustainable packaging policies, educating consumers about eco-friendly choices, fostering partnerships for collective action, promoting innovation in green packaging, and monitoring the impact of these efforts for continuous improvement.

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## **APPENDIX**

### **1 Attitude**

- I have a positive attitude towards green packaging products
- I prefer using green packaging products more than conventional products, although they are expensive
- I prefer buying eco-friendly green packaging products because they are more favourable.
- I think that purchasing eco-friendly green packaging products is a positive behaviour
- I think that purchasing eco-friendly green packaging products is a good idea
- Participating in purchasing green packaging products can improve the quality of goods.

### **2. Emotional Value**

- Using green packaging instead of traditional packaging would make you feel like a better person.
- Using green packaging instead of traditional packaging would feel like preserving the planet
- Using green packaging instead of traditional packaging would feel positive.
- Using green packaging instead of traditional packaging would feel energetic
- Using green packaging instead of traditional packaging would change how people judge.
- I actively think about the positive impact of green packaging on the environment.
- To reduce negative feelings, I try to change my perspective on the situation involving green products.
- When environmental concerns arise, I try to maintain a calm and rational mindset about green packaging products.

### **3. Value for Money**

- I frequently consider the value for money when purchasing green products
- Do you think that green packaging products are value to money?
- If the features of green packaging increase the product's price, will you still be able to pay more?
- Is paying more for products in green packaging and environmentally friendly ways acceptable?
- You feel proud to have environmentally friendly packaged (green packaging) products in your house, though they are more costly than conventionally packaged products
- Are you willing to support local initiatives to support green packaging

### **4. Consciousness**

- I am very conscious of the green packaging products impact on my lifestyle choices.
- I am very reactive when it comes to changes in packaging from "traditional (example plastic bag) to green environmentally friendly packaging (example paper bag)".

- It is important for me to maintain a green appearance, for example, by reducing waste.

#### **5. Behavior Intention**

- If I feel emotionally connected to green packaging containing products, I would like to share pictures of them on my social media platforms.
- Considering the environmental benefits, I probably switch to using green packaging products in future.
- I plan to purchase green packaging products because of their positive environmental contribution.
- Do you think there is enough information about "green" features when you buy the product?

#### **6. Environmental concern**

- I have enough environmental awareness and knowledge about green packaging products
- Do you make additional efforts to purchase plastic and paper products made in green packaging?
- Will you shift to other products with green packaging due to environmental concerns?
- When you need to choose between two equal products, do you buy the one in green packaging, which is less harmful to the environment?
- I use green packaging products because I strive to contribute to a healthy environment
- I pursue natural ingredients when purchasing green packaging products

#### **7. Social Value**

- Using green packaging will help me to feel acceptable
- Using green packaging would give its owner social approval
- Using green packaging would make a good impression on me
- Advice from family and friends are crucial to use green packaging.
- People's surroundings can motivate individuals to use green packaging.
- Trustable news from social media will motivate me to use green packaging
- The current trend of society will influence me to use green packaging
- Do you think that you get enough information from your surroundings about green features when you are buying the green packaging products?
- Social media can influence my decision to buy green packaging products
- I prefer purchasing green packaging products when my family members or friends recommend them

#### **8. Environmental Benefit**

- In your opinion, decreased pollution or reduced plastic waste is the most significant environmental benefit of green packaging products.
- How important do you think it is for the companies to prioritize the use of green packaging products for environmental benefits?

- Have you noticed any personal or societal benefits resulting from the increased use of green packaging products?
- Do you think that green packaging helps in wastage reduction?
- Do you think that green packaging reduces the toxicity of the waste material
- Green products do not adversely affect the health of community
- Green packaging products would not pollute the environment