ECO-FRIENDLY BEHAVIOUR STUDY: FACTORS AFFECTING REUSABLE SHOPPING BAG PURCHASES AMONG MALAYSIAN GEN Z

BY

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ABSTRACT

In recent years, the widespread use of plastic bags has become a detrimental effect to our mother earth, particularly due to its non-biodegradable nature, which lead to pollution in both terrestrial and marine ecosystems. The existence of RSBs serves as a more sustainable alternative to people, as it was designed for repeated use and often made from durable materials. In Malaysia, Generation Z, which constitutes the largest population group, is increasingly aware of environmental issues and more likely to prioritize the well-being of the planet over individual convenience. This generation is becoming a driving force behind the shift towards more sustainable consumption practices. Hence, this study has investigated the PI of RSBs among Generation Z in Malaysia.

Stimulus-Response (SR) model and attached 5 key variables will be the backbone of our study to examine the purchase intention of reusable shopping bags which encompass, green awareness (GA), green attitude (GATT), green responsibility (GR), green knowledge (GK) and green trust (GT). By sending out the questionnaire, data of 384 Malaysian Generation Z respondents was gathered. The collected data had deployed into SPSS to check the relationship between these variables. The findings indicate that 3 out of 5 hypotheses have a significant relationship which influence the PI of RSBs. The remain hypotheses do not have positive relationship with the PI of RSBs.

This research can provide valuable insights for both researchers and practitioners, helping them better understand on factors that influence Malaysian Generation Z and enabling them to take appropriate actions to increase the intention to purchase RSBs.

Keywords: *Sustainability, Stimulus-Response, Reusable Shopping Bags, Purchase Intention, Gen Z*

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LIST OF ABBREVIATIONS

DV	Dependent Variable
GA	Gren Awareness
GATT	Green Attitude
GK	Green Knowledge
GR	Green Responsibility
GT	Green Trust
PI	Purchase Intention
IVs	Independent Variables
RSBs	Reusable Shopping Bags
SOR	Stimulus-Organism-Response
SR	Stimulus-Response
TPB	Theory of Planned Behaviour

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CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This research aims to identify the factors that influence the customer PI of RSBs among Gen Z in Malaysia. This chapter will begin with 1.1 Research Background followed by 1.2 Research Problems, 1.3 Research Questions, 1.4 Research Objectives, 1.5 Research Significance and 1.6 Conclusion.

1.1 Research Background

Plastic pollution is one of the most significant environmental problems of this modern era (Ali et al., 2021). People depend on plastic bags due to its numerous benefits (Wang & Li, 2021), but the extensive use of plastic bags has resulted in plastic waste, which adversely affects the environment, economy, society, and danger to human and animal health. Every year, people produce about 400 million tonnes of plastic waste (Ali et al., 2021), with single-use plastic bags being the main culprit, as they account for 40% of this total (Niyitanga et al., 2021). Plastic bags have a degradation period of up to 100 years (Li et al., 2022), while their average usage duration is just only 12 minutes (Wang and Li, 2021).

From production to disposal, plastic bags cause harmful effects throughout their entire lifecycle (The World Counts, 2020, as cited in Wang & Li, 2021; Ali et al., 2021). During the raw materials extraction process to produce plastic bags, toxic chemicals are discharged into the fluid, land, and atmosphere, depleting the ozone layer and exacerbating the greenhouse effect (Royer et al., 2018; Teuten et al., 2009, as cited in Mentis et al., 2022). Furthermore, approximately 96% of plastic bags wind up in landfills or incineration, it will be hindering the breakdown of biodegradable materials which resulting in lower agricultural yields and soil fertility

as well as produce hazardous substances such as furans, dioxins, methane that contribute to global warming (Li et al., 2022).

In the worst scenario, the plastic ends up in the ocean where the amount of plastic in the world's oceans may surpass the weight of fish by the year 2050 (Zoellner, 2020). The organic splendour of landscapes has been harmed by uncontrolled trash from plastic bags leading to millions of seabirds, sea turtles, and other aquatic animals perish throughout the year from smothering after erroneously ingesting plastic bags as food (Barnes et al., 2009, as cited in Wang & Li, 2021). In the long run, it will lead to the toxic chemicals of plastic bags bioaccumulating up the food chain and threatening human's health. Besides, it also pollutes groundwater resources when plastics toxins seep into drinking water resources, making global drinking resources in a danger situation (Ahsan et al., 2020).

Since single-use plastic bags seriously damage our ecosystem, more nations are beginning to focus on these problems. Global legislation began to take effect in the 1990s as people become more aware of the harm that plastic bags cause. Since 2010, the number of anti-plastic bag laws (such as levies and bans) has tripled due to their rapid spread and many nations have implemented safety measures to reduce the usage of plastic bags (Behuria, 2021). This is to align with the Sustainable Development Goals (SDG) where nations plan to strive for resilient and sustainable green growth which appealed by United Nations (Halkos & Gkampoura, 2021). Certain nations implemented complete prohibits on the usage of plastic bags as a precaution, whereas other nations instead imposed various levies and charges on the use of plastic bags (Senturk & Dumludag, 2021). Behuria (2021) stated that including Malaysia, 36 of the 51 nations have banned plastic bags in the Global South.

The first state in Malaysia to implement the plan to cut back on plastic bags in all hypermarkets and supermarkets was Penang in 2009 (Teoh, 2021). As a result, customers were forced to bring or purchase RSBs when shopping or else they had to pay RM 0.20 for each plastic bag used at checkout counters. This policy has been

implemented by other states by the following year. RSBs are a type of eco-friendly bags that can be used repeatedly and can be disposed of with little or no negative environmental impact (Ashwini & Aithal, 2023). Making the transition to RSBs is one of the sustainable consumption strategies that promote sustainable development. Sustainable consumption is a comprehensive strategy that encourages a change in consumption habits while enhancing the quality of life to diminish the detrimental impacts of human consumption to the environment (Ekasari et al., 2021). Several varieties of RSBs have been developed, such as canvas, nylon, bamboo, jute, and cotton (Ashwini & Aithal, 2023). The qualities of these shopping bags differ in terms of cost, strength, longevity, and environmental effect (Mukucha et al., 2023).

Therefore, the market for RSBs is expanding significantly in reaction to these environmental issues and the push from several parties to forego using plastic bags. Numerous industries are now producing RSBs and supplied to retailers and wholesalers (Geetha, 2022). According to Cognitive Market Research (2024), the RSBs market exhibited a USD 10,681.2 millions of market value in 2024, with Southeast Asia is projected to have a compound annual growth rate (CACR) of 6%, reaching USD 169.51 million by 2024. As the market research showed that there is the opportunity and demand for RSBs in the future, hence, investigating the PI of RSBs is vital.

Moreover, research shows that many consumers prioritize saving money over protecting the environment when it comes to purchasing the RSBs. This is claimed because when the plastic bags were provided for free, people with low environmental awareness tended to use more than necessary and exhibited greater price sensitivity compared to individuals with higher environmental awareness. For instance, these individuals were more likely to purchase RSBs when they recognize that it will help them save more money in the long run, compared to paying RM0.20 for plastic bags each time they make purchases (Kaplan et al. 2018, as cited in Senturk & Dumludag, 2021). This pattern is reflected in Southern Australia, where plastic bag bans saw the percentage of people bringing their own bags rise from 60% to 95% (Sharp et al., 2010, as cited in Senturk & Dumludag, 2021). Additionally,

Mugobo & Ntuli (2022) found that financial incentives are a key driver for consumers to switch to RSBs, highlighting that cost-saving, rather than environmental protection, is often the primary motivation behind their usage.

In this research, we will be focusing on Generation Z because according to Dragolea et al. (2023), the people who made up Gen Z knew how important it was to take care of the environment, and they are the group most eager to participate in environmental protection initiatives. Hence, this study closes the knowledge gap by investigating the factors that motivate or dissuade Gen Z from purchasing the RSBs.

1.2 Research Problems

According to WWF-Malaysia (2022), Malaysia generates an enormous amount of plastic waste, exceeding 1 million tonnes, this quantity is equivalent to the weight of about 10,000 blue whales. Unpleasantly, Klang River was recognized as one of the world's top plastics contributors to the oceans in 2021. It ranked alongside India's Uthas river and the Philippines' Tullahan river, tying for the second biggest riverine emitter of plastic waste (The Star, 2023). Alarmingly, when contrasting with Thailand (15.52kg), Vietnam (12.93kg), Indonesia (12.5kg), Philippines (12.4kg), Malaysia is on the top place in terms of plastic waste consumption of 16.78kg per person annually (WWF-Malaysia, 2020). Thus, investigating the PI toward sustainable alternatives, such as RSBs are essential to address the root of growing plastic bags waste in Malaysia.

Customer's decision-making process about purchases begins with the desire to purchase (Hutter et al., 2013, as cited in Prasad et al., 2019). According to Montano and Kasprzyk (2015), PI are significant since they are the primary indicator of actual behaviour (as cited in Peña-García et al., 2020). Consistent with that, PI is frequently used to forecast consumer behaviour and is regarded as the best indicator of consumer behaviour in many contexts. For instance, research shows that the annual sales of RSBs increased from 1 million in 2018 to 2 million in 2019 in other nation. However, considering the country's population of over 55 million, these

sales figures remain relatively low (Muposhi & Shamhuyenhanzva, 2021). This indicates that a significant portion of the population has yet to embrace these eco-friendly alternatives, highlighting the need for further efforts to encourage widespread adoption. Thus, it would be necessary to carry out a conceptual study to identify the primary factors influencing the PI of RSBs.

Gen Z refers to the people born between 1997 and 2012 (Ho et al., 2022). With 32% of the world's population, it is the biggest generational group (New York Post, 2020; Djafarova & Foots, 2022) and is anticipated to have a major influence on global consumer sales; for this reason, investigation into this potentially influential generation group is crucial (Djafarova & Bowes, 2021). Gen Z is eager to preserve our mother earth for everyone (Meet et al., 2024) and they are the generation that are facing the potential for enormous ecological consequences, therefore, it is imperative that they engage in order to guarantee the sustainability and prosperity for their future generation (Rosidah, 2024; Saut & Saing, 2021). However, despite Gen Z being more concerned about the environment, but this generation does not always exhibit pro-environmental behaviours compared to older generations (Lavelle-Hill et al., 2020). According to Anggraeny (2023), it discovered that many Gen Z individuals find it challenging to fully abandon plastic bags and acknowledge that consistently using RSBs can be difficult.

In order to understand the behavior of customers in Gen Z, there is a need to explore the GA of consumers because the use of plastic bags in retail establishments is still common due to either a lack of awareness or a failure on the part of the authorities to spread the word about the need to avoid plastic (New Straits Time, 2023). Importantly, the concern for environmental issues among consumers is a global issue that will constantly alter their way of life to become more ecologically conscious (Cheng et al., 2023). Md Sapry et al. (2022) mentioned the government of Malaysia has initiated a campaign called 'No Plastic Bag Day' aimed at reducing the utilisation of bags made of plastic. The aim of this initiative is to inform customers about how plastic bags affect the ecosystem. However, the successful outcome of the campaign is called into question because the Malaysian Plastic

Manufacturers Association (MPMA) showed that the population of Malaysian consumed 9 billion plastic bags per year (Bedi, 2023) while a single Malaysian will use up to 300 pieces of plastic bags annually (Nurqalby, 2023), claimed that the GA of consumers is still not generating the favourable outcomes.

Not only GA is an important factor influencing the PI of RSBs, but also the GATT. Research by Wang et al. (2021) have shown that around 50% to 60% of consumers are concerned about the environment, however, their positive attitudes do not translate into a greater intention to purchase green products. This discrepancy shows that their GATT may not directly influence their buying behavior towards more sustainable options. For instance, when informed that plastic bags are unavailable, many consumers tend to leave the shop directly, as they see plastic bags as a necessity (New Straits Time, 2023). Additionally, rather than bringing or purchasing RSBs, consumers are often willing to pay the RM 0.20 for a plastic bag to the retailers, stated by Nurqalby (2023). In a worst scenario, in 2020, the Selangor government collected RM6.6 million from charging RM 0.20 per plastic bag. This amount rose significantly to RM8.5 million in 2021 (Free Malaysia Today, 2022). This increase highlights a growing negative impact of the penalty, as the higher revenue suggests an increased use of plastic bags despite the charge. Besides, Hashim et al. (2023) also revealed that after a decade implementing this penalty in other regions, only 52.3% decrease in plastic bags usage while the rest 47.7% opted to pay the imposed fee to use plastic bags. Therefore, these evidence shows that consumers do not have GATT, underscoring the need to examine these problems in this research.

Apart from this, GR is essential because it ensures that a person's green understanding is translated into consistent and actionable behaviors that drive environmental benefits (Antaria & Pangaribuanb, 2021). Using RSBs is not just a decision; it's a responsibility to contribute to a healthier future (Bkbags, 2024). However, observational research conducted at a supermarket revealed that there are no shifts in the amount of consumers carrying their own RSBs to the store or having the intention to purchase RSBs in the store after the ban of plastic bags (Lavelle-

Hill et al., 2020). This finding indicates that many people are not fully embracing their GR, which emphasises the need for further study into these issues.

Likewise, GK also impacts the views and intentions of individuals by providing information on potential remedies and enforcement plans, along with the detrimental effects of environmental issues (Saari et al., 2021). Understanding the truth about plastics is essential. Individuals need to be mindful of how much plastic waste there is in the world, and how it affects ecosystems, the natural world, and the well-being of humans (Sparkman, 2024). Still, according to Kovacs and Keresztes (2022), it reveals that 58% of consumers are averse to pay for a higher price for environmentally friendly goods. This reluctance often stems from a lack of detailed GK; many consumers do not fully grasp the severe impact of plastic waste or the long-term benefits of choosing sustainable options where consumers may perceive the premium cost as unjustified or unnecessary. These data thus demonstrate that consumers do not have a GK, which emphasises the necessity of looking into these issues in this research.

Lastly, GT is also a problem that discourages the intention to purchase RSBs. Consumers expressed doubt that they don't trust the ban to stop plastic bags will help the environment; instead, it has made them more expensive and profitable for informal markets (Mansour & Mouro, 2024). Research shows that despite some countries' efforts to ban plastic bags, they are still being produced and sold illegally at higher prices, turning them into a lucrative black-market commodity. As a result, many consumers may become skeptical of environmental initiatives to reduce plastic bags, undermining confidence in sustainability efforts and complicating the shift toward eco-friendly behaviors. Besides, many consumers remain skeptical about the effectiveness of reducing plastic bag usage in genuinely benefiting the environment. This skepticism often stems from a lack of trust in whether the reduction of plastic bags alone will have a significant impact on environmental improvement. For example, according to Denmark’s Ministry of Environment and Food, in comparison to plastic bags made of inexpensive polyethylene, the

production of RSBs requires using more other resources during the extraction process (Chang, 2020).

1.3 Research Question

i. How are the green awareness, green attitude, and green responsibility related to purchase intention of reusable shopping bags among Gen Z in Malaysia?
ii. How are the green knowledge and green trust related to purchase intention of reusable shopping bags among Gen Z in Malaysia?

1.4 Research Objective

Generally, this project proposes to examine the factors that influence the purchase intention of reusable shopping bags among Gen Z in Malaysia, specifically;

i. To examine the effects created by green awareness, green attitude, and green responsibility on the purchase intention of reusable shopping bags among Gen Z in Malaysia.
ii. To examine the effects created by green knowledge and green trust on the purchase intention of reusable shopping bags among Gen Z in Malaysia.

1.5 Research Significance

1.5.1 To Practitioners

An action plan called “Malaysia Roadmap towards zero-single-use plastic” was introduced in 2018 to eradicating single-use plastic by 2030 (Bedi, 2023). Followingly, the Minister of Natural Resources and Environmental

Sustainability (NRES), Nik Nazmi Nik Ahmad announced that plastic bag usage in retails and roadside hawkers would be prohibited by 2025 (San, 2023). According to The Straits Time (2023), this roadmap just provides policy guidance for a unified and collaborative approach among various stakeholders, including state governments, it falls short of outlining a uniform and cohesive methodology to address the issue comprehensively. Indeed, the government just create a roadmap focusing on how to tackle the single use plastic issue only but did not implement policy regarding RSBs.

Besides, starting from 1980s, the Ministry of Education (MoE) Malaysia has incorporated environmental education into the national education curriculum. However, it is often taught as a component of science, geography, moral education and life skills rather than a stand-alone topic (Kamaruddin et al., 2019). The focus often shifts towards specific aspects of knowledge, such as the scientific or moral dimensions, while overlooking the holistic understanding of sustainability. Meaning to say, MoE struggles to effectively conveying or enhancing the primary to tertiary students' sustainable knowledge and understanding regarding RSBs.

In addition, the government of Malaysia, NGOs and private sectors had trying to improve the green awareness of the consumers in these recent years via conducting various environmental protection campaign which including, tree-planting campaign (The Star, 2021), recycle campaign (The Star, 2021), green products campaign (Malay Mail, 2024), and many more. A campaign namely “No Plastic Bag Campaign” is carried out continuously by charging RM 0.20 for every plastic bag by the government (The Straits Times, 2023). Sadly, the effectiveness of this campaign is quite worrying as many shoppers refuse to charge the penalty on the plastic bags as they see this to retain their customers (Ignatius, 2023). Even though these stakeholders had done quite a lot of promotional campaign, but none of one is solely focus on RSBs.

Also, according to The Star (2023), Standard and Industrial Research Institute of Malaysia (SIRIM), which is a government organization dedicated to the development of quality assurance and standardization for Malaysia's product, have launched Sirim Ecolabel on green products. Besides, Malaysian Green Technology and Climate Change Corporation (MGTC) also launched an official green recognition, called MyHIJAU mark. These initiatives aim improve the public welfare by ensuring the products in the market are not misleading to consumers or greenwashed. However, these Sirim Ecolabel and MyHIJAU Mark has certified over 15,000 products, such as food packaging products, lifestyle products, office equipment, furniture, lighting products, but RSBs are not being certified yet. Hence, it does not help consumer building green trust on RSBs.

In contrast to other studies, this research specifies the items of the variables more clearly. For instance, if GK is a significance variable, the MoE need to work harder in improving syllabus and synopsis of the education system from primary to tertiary education. Moving on, if the GA is a significant variable in our study, all the stakeholders need to carry out more focus campaign to evoke the awareness of consumers by encouraging them to purchase RSBs instead of plastic bags. Besides, we will advise government to increase RSBs trustworthiness by officially recognise them in different tactics, if GT is a significant variable in our research.

Overall, this research aims to provision policymakers with beneficial insights into know how the eco-friendly stimulus dimensions will impact Gen Z's PI on RSBs. This study also provides vital clue that assist public and private stakeholders to develop and put strategies into action that might raise Malaysian Gen Z' intention to purchase RSBs.

1.5.2 To Academics

As single-use plastic bags are a major contributor to pollution and environmental degradation, studying the consumption and impact of RSBs provides valuable insights into how small behavioural changes can result in large declines in plastic waste. Consequently, studies examining the sustainability of RSBs have been growing over time. In sustainability studies, the Theory of Planned Behavior (TPB) has been extensively used in the past to aid researchers in establishing their conceptual framework when analysing consumers' PI of RSBs, but limited studies are using SR theory in sustainability studies. As a result, the research model used in this study closes the gap in the literature.

There are many past studies examining the SR model, mostly in online shopping festival studies. In general, no studies have used the SR model to examine the 5 variables under research in this study together GK, GA, GATT, GT, and GR. Hence, it will close another gap in the literature.

The creator of SR advocates researchers to improve the SR model to find a comprehensive solution to the issues raised in the study. GK and GT are additional variables that are related to the problem that needs to be solved in this project. For this reason, we have further modified our framework to include both these two variables. Furthermore, no published research on Google Scholar has tested GK and GT together using the SR model in a single empirical study, which sets the current research model apart from others.

1.6 Conclusion

This chapter outlines the overall structure and purpose of our study. The background, issue, problems, goals, questions, and significance of the chapter set up the setting for the subsequent chapter.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

The Stimulus-Response (SR) model and related literature will be reviewed in this chapter. The proposed framework and hypothesis are also posited to identify the factors that influence the PI of RSBs among Gen Z in Malaysia. This chapter will enclose our literature review including 2.1 Underlying Theories, 2.2 Review of Variables 2.3 Hypothesis Development, 2.4 Current Research Model and 2.5 Conclusion.

2.1 Underlying Theories

Pavlov (1927) introduced a classical theory of strictly Stimulus-Response (S-R) approach by predicting the response (R) based on a given stimulus (S) and it was a simple input and output concept. This S-R approach is prominent in investigating behaviorism; however, it has a defect in it fails to account for logical consciousness when explaining behaviour (Cao & Liu, 2023). Afterwards, Woodworth (1929) found the existence of a term called “organism” (O) as a medium to comprehend the complexity of a human behaviour and proposed stimulus-organism-response model (S-O-R) (Refer to Figure 2.1). This SOR model, further elaborated by Mehrabian and Russell (1974), explains that the factors or driving force has a significant influence on individuals' internal states or mindset and their subsequent behaviors (Alanadoly and Salem, 2022, as cited in Shamim et al., 2024). This model assists in revealing the reasons behind a person's actions in a certain circumstance in numerous marketing context research (Zhu et al., 2019). According to this theory, there are three steps involved in the consumer decision making process. Firstly, the stimulus (S) is a thing that will trigger or motivate customers, followed by organism (O) serves as an intermediary black box or an emotional reaction of an individual

and response (R) represent a behavioural outcome of an individual (Jeong et al., 2022).

Significantly, the SOR model stands out from other theories and models due to its effectiveness in examining the relationship between environmental or green stimuli and consumer behaviour (Chen & Zhang, 2023). Scholars have widely applied SOR into the sustainability and eco-friendly contexts, including sustainable tourism industry (Mohammad et al., 2024), sustainable organic food industry (Kaur et al., 2022), sustainable packaging industry (Lee et al., 2023) and many more. Besides that, green products research also incorporated with SOR model such as electrical cars (Rahahleh et al., 2020), green apparel (Rūtelionė & Bhutto, 2024) and eco-friendly stationery (Ling et al., 2024) and so on.

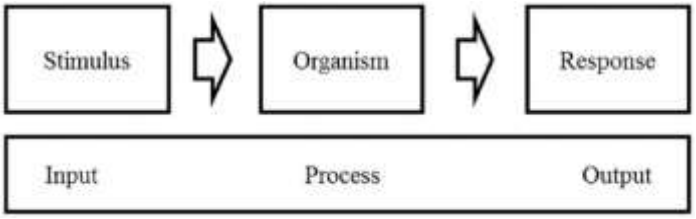


Figure 2.1 Conceptual Framework of SOR Model

Adapted from Woodworth, R. S. (1929). *Psychology* (Rev. ed.). Holt.

On the other side, some researchers claimed that SOR is more suited for cognitive psychology rather than behaviorism which is also known as consumer behaviour (Digranes, 2023; Hochreiter et al., 2023). Including or excluding the organism makes the difference between making a thought-out, a calculated decision and reacting automatically (like a reflex). Consequently, some researchers opt to apply the SR model in various contexts, such as game design (Digranes, 2023), online social media (Shao et al., 2021), public mobile library (Liu et al., 2023) and etc. These researchers tend to apply SR model rather than SOR model due to some psychology researchers argue that for an organism to be validated, it must be

observable and recordable. Sadly, the sensations, perceptions, thoughts, beliefs and feelings of a human mental process can only be observed based on their behaviour or actions (Henriques & Michalski, 2019). Consequently, organisms remain challenging to study directly, as it is not always observable and often occurs unconsciously. The organism is not only influenced by stimuli but also actively shapes its own behavior. The two are connected in a reciprocal relationship rather than a simple cause-and-effect or a single way dynamic (Baedke et al., 2021). It would be complicated if adopted in research because it requires accounting for both the influence of stimuli and the organism's internal processes. Moreover, identifying a transitional stage of organism would need specialised technology that is difficult to get in order to precisely scan the brain and brainwaves of the neural processes. Hence, in this research, we will delete the organism (O) in our model, focused on the direct relationship between stimuli and responses, where the response is observed and measured without the need to infer unobservable internal states. Stimulus (S) under investigation include Green Awareness (GA), Green Attitude (GATT), Green Responsibility (GR), Green Knowledge (GK) and Green Trust (GT); whilst behavioural responses (R) is Purchase Intention (PI).

2.1.1 Stimulus-Response (SR) Studies

Although SR has been widely applied to other research principles, its application to measuring the context of sustainability studies is still limited. As shown in Table 2.1, most of the previous study research has used the SR theory to measure online shopping festival studies (Mahmuddin, et al., 2022; Chen, C., & Li, X., 2020; Dewi, D. G., & Sharif, O. O., 2022). The variables that they are studying in the studies using SR theory are perceived temptation of price promotion, perceived fun promotional activities, and perceived contagiousness of mass participation (Mahmuddin, et al., 2022; Chen, C., & Li, X., 2020; Dewi, D. G., & Sharif, O. O., 2022). Generally, no prior research has tested the current research variables with the SR model.

Table 2.1. Studies that Employed the SR Theory

Source	Tested Variables	Dependent Variables
Dewi, D. G., & Sharif, O. O. (2022)	1. Perceived Temptation of Price Promotion 2. Perceived Fun of Promotion Activities 3. Perceived Categories Richness of Promotion 4. Perceived Contagiousness of Mass Participation	Participation Intention
Mahmuddin, et al. (2022)	1. Perceived Temptation of Price Promotion 2. Perceived Fun Promotional Activities 3. Perceived Broad Range of Promotion Categories 4. Perceived Influence of Mass Participation	Participation Intention
Chen, C., & Li, X. (2020)	1. Perceived Economic Temptation 2. Perceived Festival Entertaining 3. Perceived Mass Participation 4. Confucian Values	Purchase Intention

2.1.2 Theory of Planned Behavior (TPB) Studies

As shown in Table 2.2, many of the studies from previous literature employed TPB which is commonly used in sustainability contexts to understand and predict individuals' intentions and behaviors such as attitudes, subjective norms, and perceived behavioral control. Many of these studies used GA, followed by GATT, GK, GR and GT. We based our study on Duong et al. (2021) as the guide to conduct this study which examined the impact of personal norms on consumer intentions to make green purchases, and we incorporated the similar variables into our study using SR. Specifically, we adopted environmental concerns, attitudes toward green products, and perceived environmental responsibility, renaming them as "GA", "GATT", and "GR" for our research. We renamed the terms in our study to better match our research context. Also, renaming the terms helps

to obtain clearer insights into the factors influencing the PI because the original terms are too general to understand how the target audience are linked with the PI of RSBs.

However, this study focuses on personal behavioral factors of consumers rather than external social influences. As a result, this indicated that we have excluded the subjective norms component, which traditionally measures the perceived pressure from society to participate in or refrain from participating in a particular behavior. Given this exclusion, our study no longer aligns with the traditional TPB model. To better fit our research objectives, we have adopted the SR theory, which is more appropriate for exploring how external stimuli influence individual behaviors directly, without considering the mediating role of social norms.

Table 2.2. Studies that Used the TPB in Sustainability Contexts

Source	Tested Variables					Other Independent Variables	Dependent Variable
	GK	GA	GATT	GR	GT		
Duong et al. (2021)		✓	✓	✓		1. Subjective Norms 2. Perceived Behavioural Control	Green Purchase Intention
Varah et al. (2020)		✓	✓			1. Subjective Norms 2. Perceived Behavioural Control 3. Willingness to Pay Premium	Behavioral Intention
Tama et al. (2021)	✓	✓				1. Subjective Norms 2. Perceived Behavioural Control 3. Perceived Threat of Conventional Farming	Behavioral Intention

Ogiem wonyi (2022)		✓			✓	1. Green Behavioural Control 2. Green Product Value 3. Green Price Sensitivity	Green Behavior

2.1.3 Green Knowledge (GK) and Green Trust (GT) Studies

GK refers to the capacity to comprehend problems pertaining to human intake acts and practices that can positively or negatively affect the environment. It has the potential to influence the views of customers of environmentally friendly goods positively (Hamzah & Tanwir, 2021). According to earlier research, one of the foremost significant factors influencing a person's decision to buy a green product is their level of GK (Zhuang et al., 2021; Rausch & Kopplin, 2021; Moslehpour et al., 2022). Next, GT is defined as confidence in a product's eco-friendly features, which can enhance both willingness to purchase and brand loyalty (Sharma, 2021). Studies have also highlighted that GT is another crucial factor affecting someone's selection to purchase green products (Tarabieh, 2021; Guerreiro & Pacheco, 2021; Wasaya et al., 2021).

Many researchers have used the notion of GK and GT as variables in their studies of consumer purchasing behavior after it was initially introduced. Even so, most studies did not examine GK and GT with the SR theory. According to Tan et al. (2022), the study shows that the researchers use the Theory of Green Purchasing Behavior (TGPB) to examine the relationship between GK and PI. Moreover, one of the past studies utilizes the combination of the Theory of Planned Behavior (TPB) and the Theory of Consumption Value (TCV) to investigate the impact of GK on the PI of tourists' regarding green products in Europe (Nekmahmud et al., 2022).

Similarly, one of the studies applies the TCV to examine the impact of GT on customers' green PI (Amin & Tarun, 2020). Furthermore, based on Zhuang et al. (2021), the study displays the application of consumer behavior theory, combined with the expansion of the TPB model and Antecedents, Belief, Consequences (ABC) theory to examine the relationship between GT and green PI. Therefore, both GK and GT are integrated into the current research study model, which is tested using the SR model.

2.2 Review of Variables

2.2.1 Dependent Variable (DV)

2.2.1.1 Purchase Intention (PI)

PI refers to the customer's inclination, interest, and likelihood to buy the products, which will affect the customers' real purchasing decisions (Amin & Tarun, 2020). Besides that, PI involves careful planning before a decision is made (Chauhan et al., 2021) For instance, customers will consider factors such as time, place, and payment method when deciding what to buy. They will compare these factors with the available options and make their decision based on what seems the best to them (Tsai et al., 2020). Moreover, there are several factors, including the perception of the company and satisfaction with previous purchases are recognized as the key determinants of consumers' intention to make future purchases (Kirmani & Khan, 2018, as cited in Sharma, 2021). Thus, in our context, PI serves as the DV that examines Gen Z's motivation to purchase RSBs.

2.2.2 Independent Variables (IVs)

2.2.2.1 Green Awareness (GA)

The term "GA" refers to consumer concern and behavior regarding environmentally friendly products (Suki et al., 2016, as cited in Alamsyah et al. 2021) and several research works have demonstrated the importance of environmental awareness in encouraging people to consume more sustainably (Wang, 2013; Liu et al., 2017; Eze, 2020, as cited in Shen & Wang, 2022). Effective labeling, packaging, and advertising can increase the visibility of green products and help consumers recognize and understand what they are. Consumers who are environmentally conscious and use green products often believe these products have a positive environmental impact. Customers will be able to achieve their own ecological impact targets if they are aware of how green products work. Thus, it implies that consumer decision-making can be influenced by awareness of green products, which may contribute to fostering a more optimistic view of the market (Ansu-Mensah, 2021). In our study, we will specifically examine how Gen Z's concern of the environmental issues influences their intention to purchase RSBs.

2.2.2.2 Green Attitude (GATT)

According to Fishbein and Ajzen (1975), attitude is the summary evaluation of a person towards something, either positively or negatively, like or dislike as well as favourable or unfavourable or even neutral of certain behaviour (Laheri et al., 2024 & Jena, 2020). Based on this concept, Eagly and Chaiken (1993) proposed that the way people evaluate a psychological item based on their behaviour is measured by their attitude (X. Li et al., 2023). Attitude also serves as a fundamental aspect of the human psyche that manifests a reaction to interactions with the surroundings and the body itself, reflecting one's values, predispositions, and mindset. It also refers to an individual's propensity or inclination to respond in a particular way towards a specific item, activity, person, or occasion (Banaji & Heiphetz, 2010, as cited in Abun et al., 2021). In the context of GATT, it relates to a person's judgement and affection towards environmental preservation and the reduction of

environmental degradation (Amoako et al., 2020; F. Ahmad et al., 2021). Studies indicated that GATT is a vital variable predictor of PI in sustainable industries (Aseri & Ansari, 2023). In layman terms, in the research of Aseri & Ansari (2023), attitude served as a variable in investigating the purchase behaviour of green footwear. In short, this study will focus on the favorable or unfavorable inclination of Gen Z towards purchasing RSBs.

2.2.2.3 Green Responsibility (GR)

Responsibility stems from freedom of action in a given situation, which means that a person who can choose between different options can be said to be responsible for his actions (Verma et al., 2019). Responsibilities arise from performing the primary functions of a role, which naturally include both legal and moral obligations (Tamvada, 2020). GR refers to a person's obligation to enhance environmental well-being (Van Hoang & Tung, 2024). This involves a person ensuring the commitment in purchasing, using, and disposing of products has minimal negative impacts on both people and the environment (Borah et al., 2024). Choosing eco-friendly products, cutting back unsustainable consumption, and actively engaging with environmental protection issues are all part of self-imposed activity (Hamzah & Tanwir, 2021). It reflects a self-regulated behavior that emphasizes environmental responsibility and emotional involvement in addressing ecological concerns (Duong et al., 2022). GR has a momentous role in predicting the PI in an environmentally friendly industry. For example, Akdoğan et al. (2023) adopted GR in their study with the intention to purchase green products. Thus, GR in this research refers to Gen Z's obligation to engage in environmentally friendly practices, especially purchasing RSBs.

2.2.2.4 Green Knowledge (GK)

The concept of GK describes a person's understanding of the environment and current environmental issues. GK encompasses all that consumers may be mindful of regarding the environment, including the main players and their effects, the qualities of environmental systems, and the shared responsibility required for sustainable development (Hamzah & Tanwir 2020). Moreover, knowledge refers to the ability to solve practical situations, such as the ability to learn continuously and improvise (Dabezies & Taks, 2021) When consumers lack knowledge and are misinformed of environmentally friendly options, it may find it challenging for them to take pro-environmental actions (Gifford and Nilsson, 2014, as cited in Hamzah and Tanwir, 2020). For instance, people who lack knowledge may psychologically inhibit the acceptance of electrified vehicles (Wang et al. 2018, as cited in Hamzah and Tanwir, 2020). Therefore, in our context, GK refers to Gen Z's perspective on how they perceive the natural world and their intention to purchase RSBs.

2.2.2.5 Green Trust (GT)

Mayer et al. (1995) defined trust as "the readiness of one party will act in the best interest of another party." Integrity, benevolence and ability are the roots of forming trust. The notion of trust is dynamic and subject to shift depending on the actions of the trusted party (Glikson & Woolley, 2020). Trust is also a relational trait that can be developed through interactions, growing as promises are fulfilled, and reflecting a partner's reliability and integrity (Kim & Kim, 2021). The phrase "GT" builds on this foundation, refers to the individual's willingness to build upon a product or a service which has the capacity to meet environmental performance standards based on the belief for its ability, effectiveness, benevolence and credibility (Ahmad et al., 2021; Zhuang et al., 2021). Besides, it is also referred to a psychological state where individual belief in the specific product can be

relied on to meet expectations for environmental qualities (Mawardi et al., 2024). GT also means customer confidence in a product whereby the performance is considered as environmentally superior (Guerreiro & Pacheco, 2021). Previous research has claimed that GT is a primary indicator in the behavioral intention of green products (Sultan et al., 2020). In our study, GT is a well-suited variable for exploring how Gen Z's PI is influenced by the effectiveness, benevolence and credibility of RSBs.

2.3 Hypothesis Development

2.3.1 Green Awareness and Purchase Intention

The concern of consumers towards the environment will affect the choice to purchase eco-friendly products. People who are concerned about the environment are willing to alter their behaviors to protect it. Kumar et al. (2021) stated that most US consumers consider environmental issues when making product purchases. The leading businesses are also expanding their product lines and utilizing a variety of eco-friendly techniques to sway customers' decisions regarding eco-friendly apparel. According to Lestari et al. (2021), it stated that awareness of environmental issues and intentions to make green purchases are positively correlated. Customers believe that they need to comprehend the benefits of eco-friendly products to the environment and to buy them because doing so is seen as crucial for protecting the environment, their families, and society. Additionally, Ansu-Mensah (2021) claimed that the awareness about environmentally friendly products has shaped the individual's purchasing decision. This is because when consumers are aware of how well-performing green products work, it will assist them accomplish their own targets regarding their personal environmental impact and influence their purchasing decisions, both of which can contribute to improving the market's overall view.

In contrast, Wang et al. (2022) found that the GA is not significantly affecting the PI. In some cases, even if consumers are aware of environmental issues, they may not fully understand the specific effectiveness of the green products towards the environment. This lack of detailed information could decrease the impact on their decision to buy environmentally friendly goods.

Nevertheless, this study implies that GA and PI are positively related. If consumers know that the damage caused by plastic bag pollution, they will have the alert to do something to protect the natural world and leads heightened recognition of the importance of eco-friendly products such as purchasing RSBs. Therefore, when a consumer has a higher awareness of the environment, they will intend to buy RSBs. Thus, we hypothesized that:

H1: Green Awareness and Purchase Intention are positively related.

2.3.2 Green Attitude and Purchase Intention

Classic consumer behaviour theory states that a person's attitude has an essential effect on their behaviour intention (Fishbein & Ajzen, 1975). According to Al-Swidi & Saleh (2021), attitude is a series of thoughts about something or an action that may develop into an intention. This relationship is stronger when attitude is measured as a specific environmental attitude rather than just a general environmental attitude. The degree to which a person has the positive or negative intention to purchase is reflected by their attitude towards it. A greater attitude in the outcome of an action will be more likely to increase the possibility of the action to be taken, otherwise it will negatively affect the action to be taken (Wang et al., 2023). Besides, customers that have a positive attitude, particularly inward environmental attitudes on the environment will frequently choose sustainable products (Kamalanon et al., 2022). Waris and Hameed (2020) demonstrated that

consumers' attitudes on sustainable home appliances will influence their intention to make a purchase.

However, in Mazhar et al.'s (2022) study conducted in Pakistan, GATT and PI were not positively associated. Plausibly, this may be due to green products generally not being feasible at economical prices and consumers have the mindset that green items are lower quality than conventional products. As Pakistan is a developing country, people are more price conscious and less likely to pay higher prices for green items, reflecting a negative attitude will influence the PI.

Nevertheless, this study predicts that GATT and PI are positively related. Although the price of RSBs is slightly higher than plastic bags, it remains relatively affordable when compared to other eco-friendly products, as the unit price of RSBs is relatively low and the price range between RSBs and plastic bags is not huge. In the case of our study, if Gen Z in Malaysia have a positive GATT, he or she will have the intention to purchase reusable products. Hence, we hypothesized that:

H2: Green Attitude and Purchase Intention are positively related.

2.3.3 Green Responsibility and Purchase Intention

Patiño-Toro et al. (2024) suggest that GR is a powerful indicator of PI in a sustainable context, as it significantly influences a person's choice to purchase ecologically friendly goods. Previous research had also claimed that environmental behaviour and GR are positively correlated (Barbaritano & Savelli, 2021). A consumer with a higher sense of responsibility will monitor their consumption habits and purchasing decisions, acting responsibly to minimize the negative impact on people and society (Ahmad & Zhang, 2020). Besides, consumers who have a heightened responsibility

will have a higher inclination and are more likely to purchase green items (Nguyen et al., 2022). This also suggests that individuals with a stronger sense of responsibility will tend to keep away from those products which have negative environmental impacts, as a consumer behavioural intention can be predicted based on their sense of responsibility (Nazish et al., 2024). Subsequently, a study by Xu et al. (2019) showed that those who have sense of environmental responsibility are more inclined to purchase environmentally friendly automobiles rather than normal automobiles. Similarly, in the case of RSBs, if a consumer has the moral obligation to preserve the environment, he or she will opt to purchase RSBs. Thus, we proposed the following hypotheses:

H3: Green Responsibility and Purchase Intention are positively related.

2.3.4 Green Knowledge and Purchase Intention

Knowledge can serve as a vital precursor to developing favorable pro-environmental actions such as PI. Besides, both subjective (self-perceived) and objective (factual educational understanding) environmental knowledge can influence pro-environmental PI (Wang et al., 2020). Consumers with greater GK are more likely to recognize their responsibility towards the environment and the need for sustainable development. Consequently, their GK motivates them to exhibit higher PI for sustainable products, as they are able to differentiate the environmental attributes and impacts of such products compared to conventional ones (Rausch & Kopplin, 2021). According to Putri and Hayu (2024), GK has a positive influence on individuals' intention to make green purchases because consumers with this knowledge will be more aware of the potential dangers and negative consequences of not making environmentally friendly purchases. Generally, customers will be more careful while choosing certain items and they

respond according to their learned knowledge (Hossain et al., 2022). In the research of Hossain et al. (2022), they claimed that knowledgeable consumers will have higher PI in eco-conscious clothing rather than the conventional ones to fullfill their environmental responsibilities.

Nonetheless, Tavitiyaman et al. (2024) mentioned that GK does not significantly affect PI. This suggests that even consumers equip with GK, it does not necessarily lead to PI, as other immediate will dominate their spending intentions on green products. Customers may choose to allocate their funds to alternative products instead.

This study projects that GK and PI of RSBs are positively related because there are limited substitutes options when consumers stand in front of the checkout counter, having to choose between RSBs or plastic bags due to the lack of alternatives. Hence, the level of a consumer's GK is a key factor in purchasing RSBs among Gen Z in Malaysia. Based on this, we proposed that:

H4: Green Knowledge and Purchase Intention are positively related.

2.3.5 Green Trust and Purchase Intention

Based on Amin and Tarun (2020), GT, which reflects individuals' willingness to purchase and rely on environmentally friendly products, plays a significant role in the customer decision-making process. Particularly in the age of environmental and socially conscious buying, the level of GT can greatly influence consumer choices. According to Wasaya et al. (2021), in the realm of sustainability, GT is a strong indicator of PI. The paradigm that supports trust is based on the three most significant events: validity, altruism, and dependability. When customers perceive these elements in a company's practices, it fosters a trust-based emotional response towards the company, thereby enhancing their intention to make a purchase (Wasaya et al., 2021). Subsequently, according to Guerreiro and Pacheco (2021), GT positively

influences individuals' intention to purchase green products. Consumers are more likely to buy from companies they trust and view as ethically reliable, while avoiding those with questionable ethical practices. Even if a product is of low quality, if it is associated with moral messages, buyers will use these ethical considerations to shape their perception of the product, often leading to increased trust and a stronger inclination to make the purchase. Hence, when a consumer has a higher level of GT on the goods and companies, they will be more intended to purchase RSBs. Thus, we hypothesize that:

H5: Green Trust and Purchase Intention are positively related.

2.4 Current Research Model

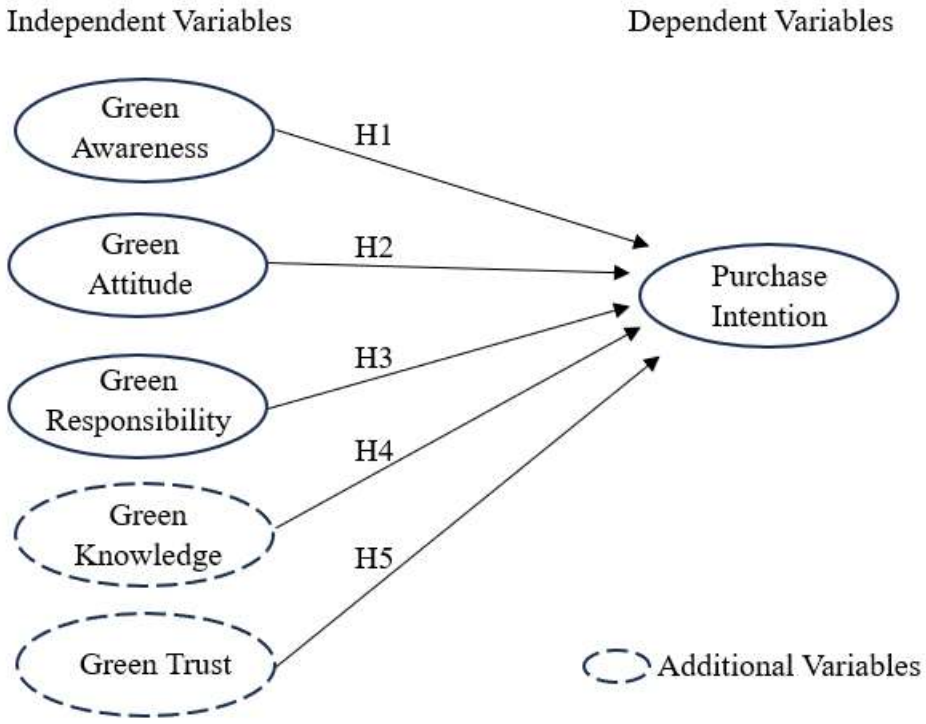


Figure 2.2 The Proposed Conceptual Framework

According to Figure 2.2, the independent variables (IVs) are Green Awareness (GA), green attitude (GATT), green responsibility (GR), green knowledge (GK) and green

trust (GT). The dependent variable (DV) is the purchase intention (PI) of reusable shopping bags (RSBs). This framework indicates that the IVs affect the DV.

2.5 Conclusion

This chapter developed a new framework and provided a comprehensive explanation of the underlying theories. By analyzing relevant literature, we have examined the various variables influencing the PI of RSBs and explored how these variables are interconnected.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

Research methodology will be covered in this chapter, containing 3.1 research design and 3.2 sampling design, 3.3 data collection method, 3.4 data analysis tools, 3.5 conclusion.

3.1 Research Design

An approach that studies can adopt to address the topic that has been proposed is considered as research design (Marcyzk, 2010). In our study, we used a quantitative research approach, which relies on numerical data from surveys to measure and define the phenomena observed (Taherdoost, 2022). According to Jamieson et al. (2023), quantitative research approach can provide crucial opportunities to enhance the level of comprehension in data analysis. It helps to examine human behavior by breaking down the social environment into measurable variables, such as frequency ranges or rates (Rashid & Sipahi, 2021) and uses statistical techniques to comprehend the relationship between an IV and a DV (Mehrad, 2019).

Moving on, we apply descriptive research design in our study. It is a tool that assists researchers to discover greater insight into a particular population (Siedlecki, 2020). Furthermore, it helps in providing a methodical and accurate description of the facts and features of a particular population, including preferences, traits, similarities, and differences (Dulock, 1993). Therefore, this method can help to analyze the information gathered from respondents to clarify the variables and hypotheses in our research.

3.2 Sampling Design

3.2.1 Target Population

The target population is the conceptually limited subset of potential participants that most closely resembles the characteristics of the population of interest and to which researchers may have access to it (Bridier, 2021). In this study, the target population will be Malaysian Gen Z, specifically individuals aged 18 to 27 years old. This age range is chosen because consumers above 18 years old are expected to have a more developed understanding of green products and are likely to provide more reliable and trustworthy information (Sulistyawati et al., 2021). Gen Z, born between 1997 and 2012, fits within this age range, allowing for a focus on those who are both familiar with and have opinions on sustainable consumer practices (Ho et al., 2022). This population is the largest in Malaysia, who accounts for 26% of the country's population (Ismail et al., 2020) and is expected to significantly impact numerous groups (Lev, 2021). Furthermore, organizations that prioritise sustainability will have a greater affinity with Gen Z, as they are highly concerned about it (Sakdiyakorn et al., 2021). Moreover, research indicates that Gen Z tends to purchase sustainable brands than older generations and has slightly higher expectations of organizations that have the implementation of the SDG (Yamane & Kaneko, 2021). Thus, our target population will be Gen Z.

3.2.2 Sample Size

The number of respondents who take part in our study to represent a population is called the sample size. According to Worldometers (n.d.), the population of Malaysia reached 34,595,716 on 16th April 2024. Ismail et al. (2020) reported that 26% of the Malaysia population are Gen Z. Krejcie & Morgan (1970) has determined the sample size for research activities to

make research easier to select the precise sample size to avoid invalid results. Nevertheless, the table does not include exact population figures for the 8.99 million people, with a maximum of 100,000 population cap.

Gen Z Population= Malaysia Population * 26%= 8,994,886

Therefore, 384 samples would need to be selected for our study.

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

Figure 3.1 Sample Size Table

Adapted from Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30(3), 607610.

3.2.3 Sampling Method

3.2.3.1 Sampling Frame

Sampling frame is an exhaustive list of sample units drawn from a population. Sampling frame is different from population as it is more specific compared to population which is general (Rahman et al., 2022). Given that of the broad focus of our study, which is Malaysian Gen Z, finding a sample frame would not be applicable due to the large number of respondents which makes it impossible to collect all the information in detail.

3.2.3.2 Sampling Location

The sampling location then focuses on Gen Z consumers in Malaysia. According to Chen et al. (2021), it mentioned that Malaysia has had among the highest global growth rates of plastic waste, and it became a significant concern in Malaysia. Malaysia generates the second-highest proportion of plastic waste generated in Asia. Consequently, these problems have led to a stronger focus on Malaysia in this research. The questionnaires for the study will be provided in a Google form that will be shared on social media with links and shared in person with QR codes.

3.2.3.3 Sampling Technique

In our study, the sampling frame is available but not accessible due to limited access. Hence, non-probability sampling is chosen for our research as it involves the deliberate choice of individual respondents with a particular viewpoint based on accessibility and researcher's judgement. Specifically, we have chosen judgmental sampling, also known as purposive or selective sampling (Dixit et al., 2021), where participants are selected based on the predefined criteria that align with the needs of our study (Amin & Tarun, 2022). According to Ndubisi et al. (2020), judgmental sampling is also typically utilized when a narrow number of entities have characteristics

of investigator interest. Judgmental sampling helps us to filter out the appropriate respondents who meet our research criteria. As RSBs are common in the market, many consumers are likely to have purchased them before. As a result, it is crucial for us to identify a more niche targeted group of individuals who have not yet purchased RSBs yet but are aware of RSBs, this further justifies the use of judgmental sampling. We will implement two filter questions; the first question will be asked before dispatching the questionnaire and the second question will be asked within the questionnaire itself.

3.3 Data Collection Method

3.3.1 Questionnaire Design

3.3.1.1 Pre-Testing

The purpose of pre-testing in conducting research is to ensure data quality, detect issues and reduce errors. It involves testing the survey items to be distributed to members of the target population to assess the validity and reliability before the questionnaires are distributed (Colbert et al., 2019). We have engaged three academic experts from the Department of Marketing in UTAR to review the draft questionnaire. They claimed our questionnaire is sufficient to achieve the research objective and provided recommendations for improving it. We have adapted their opinions and made amendments to our questionnaire; the pre-test result is shown in Appendix 3.1.

3.3.1.2 Pilot Study

A pilot study is a small-scale preparatory study carried out to confirm the viability or intensify the research design which is done before full-scale research. It also tests the feasibility of the research and evaluates the suitability of researchers' intended techniques and protocols (Lowe, 2019).

Pilot studies often involve small sample sizes, typically spanning from fifteen to thirty participants as this helps to ensure the sample mean roughly resembles the target population's population mean (Yadewani & Duraipandi, 2024). In our study, we would like to collect thirty samples to test the direct relationship between each variable by using Statistical Package for the Social Sciences (SPSS). The questionnaire was sent out to the chosen pilot research participants, but no feedback was received for improvement, therefore no changes were made, and we had finalised our questionnaire as shown in Table 3.1.

Table 3.1 The Finalized Questionnaire Item Statements

Code	Item statement	Source
Green Awareness (IV1)		
GA1	I recently learned about reusable shopping bags.	(Ansu-Mensah, 2021)
GA2	I possess comprehensive knowledge and understanding regarding reusable shopping bags.	
GA3	Reusable shopping bags are not like traditional plastic bags.	
GA4	I am aware that using reusable shopping bags helps the environment.	
Green Attitude (IV2)		
GATT1	Environmental protection is important to me.	(Vu et al., 2021)
GATT2	Using reusable shopping bags can be a great way to reduce pollution, including water and air pollution.	
GATT3	Using reusable shopping bags can help to preserve the environment and conserve its resources.	
GATT4	Promoting a green living environment is important to me.	(Leong et al., 2024)
GATT5	I am willing to make a positive contribution to society, both in the present and for the future.	
Green Responsibility (IV3)		
GR1	My actions have an impact on the health of the environment.	(Barbaritano & Savelli, 2021)
GR2	I possess the ability to safeguard the environment.	
GR3	I want to learn how to contribute towards improving the environment.	
GR4	I will work to make my surrounding environment better.	
Green Knowledge (IV4)		

GK1	Using reusable shopping bags is an environmentally friendly option that helps reduce the amount of plastic waste in our environment.	(Moslehpour et al., 2022)
GK2	I possess more knowledge about reusable shopping bags than an average person.	
GK3	Investing in reusable shopping bags could prove to be beneficial in the long run.	(Siyal et al., 2021)
GK4	Using reusable shopping bags is a sustainable and eco-friendly alternative to single-use plastic bags.	
GK5	Using reusable shopping bags has a greater positive impact on the environment compared to using plastic bags.	
Green Trust (IV5)		
GT1	I believe that reusable shopping bags are committed to protecting the environment.	(Guerreiro & Pacheco, 2021)
GT2	I believe that using reusable shopping bags is a dependable way to improve the environment.	
GT3	Generally, the environmental argument about the purchase of reusable shopping bag is trustworthy.	
GT4	I trust that reusable shopping bags will fulfil their commitments to environmental protection.	
Purchase Intention (DV)		
PI1	I would like to buy some reusable shopping bags.	(Moslehpour et al., 2022)
PI2	I am willing to pay a higher price for reuse.	
PI3	I prefer reusable shopping bag over plastic bag.	
PI4	I think it is a good idea to buy reusable shopping bags.	(Hein, 2022)

Meanwhile, the Cronbach's alpha, which measure the reliability of our pilot study has been carried out. Since the sample size is relatively small, the threshold value of the Cronbach's alpha score is 0.6 (Aktürk et al., 2020). The value of the Cronbach's alpha range between 0.778 to 0.897, as shown in Table 3.2. The result reflects that all the variables are reliable.

Table 3.2 Reliability Analysis for Pilot Test

Variables	Cronbach's alpha score	No. of items	Reliability level
Green Awareness (GA)	0.778	4	Good
Green Attitude (GATT)	0.897	5	Very Good
Green Responsibility (GR)	0.876	4	Very Good
Green Knowledge (GK)	0.884	5	Very Good
Green Trust (GT)	0.824	4	Very Good
Purchase Intention (PI)	0.892	4	Very Good

3.3.1.3 Questionnaire Design for Main Study

Google Forms in English will be used to distribute the questionnaire on social media as the instrument for the data collection procedure. To meet the ultimate objectives, the respondents are required to answer the questionnaire based on their understanding of GA, GATT, GR, GK, GT and PI towards RSBs. There are two sections, Section A consists of demographic and filtering questions, and Section B assesses the factors influencing the PI of RSBs in the survey. Each respondent was given a seven-point Likert scale spanning from 1= Strongly Disagree to 7= Strongly Agree in Section B to evaluate Gen Z intention to purchase RSBs based on our research IVs and DV. The reason for using the seven-point Likert scale is because the increasing number of points brings the scale closer to a universal standard, improving both reliability and accuracy of the research (Tanujaya et al., 2022).

3.3.2 The Field Work of Main Survey

Following the questionnaire's completion, the main research was conducted with a target of 384 responses to the surveys. The primary outcome was utilized to validate the research's hypothesis.

The main fieldwork for the survey was conducted through an online questionnaire distributed using Google Forms, with the questionnaire being published on 11 June 2024. To reach the goal of collecting 384 responses, the survey link was widely disseminated via social media platforms including Facebook, WhatsApp, and Instagram. Before disseminating the questionnaires, researchers will first ask participants if they have previously purchased RSBs before. If the answer is no, they will be eligible to access the survey. Subsequently, the second judgmental question will be in the questionnaire enquiring whether they are aware of the RSBs; if the response is yes, they will be directed to complete the remainder of the questionnaire.

Moreover, researchers visited convenience stores and supermarkets, including Lotus, Aeon, 7-Eleven, and 99 Speedmart, encouraging shoppers to participate and to collect responses. These locations were chosen instead of hawker stalls because they are subject to government bans on single-use plastic bags, which do not apply to the hawker stalls (Kaur, 2019). Additionally, these locations can attract a diverse group of shoppers who are potential users of RSBs. By surveying individuals in these locations, researchers can directly reach those who are likely to be relevant to the study, particularly those making decisions about purchasing RSBs. To facilitate easy completion, hard copies of a QR code linking to the Google Form were printed and displayed face-to-face. This data collection ended on 3 July 2024, resulting in 498 responses.

3.4 Data Analysis Tool

3.4.1 Descriptive Analysis

Descriptive analysis is employed to examine the data by elucidating the descriptive evaluation of the respondent as an investigative variable (Al-Azzam & Al-Mizeed, 2021). It helps the collection of data to be presented in a variety of ways, such as tables, graphs, and other graphic displays so it

can be concise, and it can be summarized with one or two details that best represent the entire body of data (Salvatore, 2021). To facilitate easy comprehension and understanding, the percentage analysis will be used to interpret the demographic data of the respondents, which was collected from the survey questionnaire.

3.4.2 Inferential Analysis

3.4.2.1 Reliability Test

Research internal consistency or reliability is being measured by Cronbach Alpha. As shown in Figure 3.2, its value needs to be higher than 0.6. If the value is less than 0.6, it is considered not consistent; if the value is more than 0.9, it is considered excellent but also a signal of multicollinearity overlapping (Nawi et al., 2020).

Figure 3.2. Rule of Thumb on Cronbach's Alpha

Alpha Coefficient Range	Strength of Association
< 0.6	Poor
0.6 to < 0.7	Moderate
0.7 to < 0.8	Good
0.8 to < 0.9	Very Good
0.9 >	Excellent

Adapted from Nawi, F. a. M., ATambi, N. a. M., Samat, N. M. F., & Mustapha, N. W. M. W. (2020). A review on the internal consistency of a scale: The empirical example of the influence of human capital investment on Malcom Baldridge Quality Principles in tvet institutions. *Asian People Journal (APJ)*, *3*(1), 19–29. https://doi.org/10.37231/apj.2020.3.1.121

Likewise, Quantile-Quantile (Q-Q) plot will be conducted to ensure each variable's data is normally distributed. Strictly to say, there should be no significant distance between the observed and expected values for the variables.

3.4.2.2 Pearson's Correlation Coefficient

Pearson's correlation coefficient generally accesses the strength of linear relationship (Tripathi et al., 2024) which refers to the associations between two variables, if the value spans closer to +1 or -1, it will be considered as strong correlation (Gupta et al., 2022). According to Figure 3.3, the thresholds value of 0.4 has been selected, which means that data over this level will be considered (Schober et al., 2021).

Figure 3.3 Rule of Thumb on Pearson's Correlation Coefficients

Adapted from Schober, P., Mascha, E. J., & Vetter, T. R. (2021). Statistics From A (Agreement) to Z (z Score): A Guide to Interpreting Common Measures of Association, Agreement, Diagnostic Accuracy, Effect Size, Heterogeneity, and Reliability in Medical Research. *Anesthesia & Analgesia*, *133*(6), 1633–1641. https://doi.org/10.1213/ane.0000000000005773

3.4.2.3 Multiple Linear Regression Analysis

Multiple linear regression is referring to a modelling technique that investigates the association between two variables when controlling or removing the effect of other variables simultaneously (James et al., 2023). A stepwise approach will be adopted, where the analysis will be conducted in multiple rounds. The process will begin by selecting the most significant variable in the first round. Subsequent rounds will follow, with each round

excluding the next significant variable, continuing until no further significant variables are identified (Chan et al., 2022).

R-squared shows the magnitude of total variation in the DV that has been accounted for by the IVs in the model, reflecting the intimacy of data fit the regression model (Ozili, 2023). Generally, an R-squared value above 0.75 demonstrates a strong model, a value above 0.50 indicates a moderate model, and a value below 0.25 suggests the model is weak (Wardani & Hasibuan, 2024).

The F-test indicated in the ANOVA usually tests the difference between the means of multiple groups by comparing the variability within groups and between groups (Kumar, 2024). Multicollinearity issues occur when the F-value is high, or the P-value is less than 0.05 as a significant IVs shall not be highly correlated. The multicollinearity connection among the IVs may be verified by calculating the Variable Inflation Factor (VIF) value. If the value exceeds 10, multicollinearity issue is likely present, indicating IVs in the model are highly correlated (Osemeke et al., 2024).

Multiple linear regression is used to blend up the IVs and DVs to construct the best equation for this study. The multiple linear regression equation of this study is as below:

$$Y = a + bX_1 + cX_2 + dX_3 + eX_4 + fX_5$$

Where,

Y : Purchase intention of reusable shopping bags;

X_1 : IV1 - Green Awareness;

X_2 : IV2 - Green Attitude;

X_3 : IV3 – Green Responsibility;

X_4 : IV4 – Green Knowledge;

X5 : IV4 – Green Trust;

a: The intercept point of the regression line or constant; and b, c, d, e &f: The coefficient of regression for X_1, X_2, X_3, X_4, X_5

3.5 Conclusion

In summary, this chapter offers a thorough explanation of the research tool used in this study.

CHAPTER 4: RESULT AND DISCUSSION

4.0 Introduction

We will be analyzing and interpreting the gathered data by using SPSS. In chapter will be covering 4.1 descriptive result of respondent demographic profile, 4.2 inferential result, 4.3 current developed research model and 4.4 conclusion of the statistical result.

4.1 Descriptive Result of Respondent Demographic Profile

Out of the 498 questionnaires that were distributed, 114 sets of them were deemed invalid because of the filtering question. (make it smooth) This research is only focused on Generation Z between 18 years old and 27 years old from 13 states in Malaysia. As a result, 384 sets of responses are qualified for statistical analysis.

According to Table 4.1, there are 52.1% of respondents who are female (N = 184), and the remaining respondents (N = 200) are male 47.9%. Furthermore, 56.8% of the respondents (N=218) are aged between 18-22 while 43.2% (N=166) are aged between 23-27. Our study shows a slight predominance of females over males by only 4.2% and the aged group of 18-22 are slightly more than 23-27 by 13.6%, indicating a fairly balanced distribution between genders and ages. Females has higher number attributed that they are more concern and having the interest to approach relevant information about environmentally friendly products than males (Wang et al., 2019).

Of the 384 valid respondents, 32.3% (N=124) were from Perak; the next highest percentage came from 12.8% (N=49) from Selangor; 12.2% from Penang (N=47); 11.7% from Johor (N=45); 5.7% from Kedah (N=22); 4.9% from Sabah (N=19);

4.4% from Pahang (N=17); 3.6% from Sarawak (N=14); 3.1% from Malacca (N=12); 2.6% of Negeri Sembilan respondents (N=10), 2.3% from Kelantan and Perlis respondents (N=9), and 1.8% from Terengganu respondents (N=7). The first and second high response rates from Perak and Selangor can be clarified by the significant population density of these states (Satista, 2024). Besides, Penang's respondents are relatively high, primarily due to it was the first ever state to ban plastic bags on every Monday since 2009 (The Star, 2023). These three states were also the early adopters of the no-plastic-bag policy before it was enforced nationwide (Ahmad et al., 2023). Thus, the respondents of these three states are likely to have more intention in purchasing RSBs.

Moreover, regarding education, 79.2% of respondents (N = 304) have a degree, 9.4% of respondents (N=36) have completed upper secondary school, and the remaining respondents (N=34) have a diploma, (N=9) have a master, and (N=1) has a doctoral. Furthermore, the majority of 84.6% of respondents (N=325) are students, 13% of respondents (N=50) are employees, and 2.3% of respondents (N=9) are employers. Most of our respondents hold a degree because of the age distribution as the majority of them are still serving a role as a student at university pursuing their education.

Next, most of the respondents, 87% of them (N=334) have an income level below RM3000, an income level between RM3000 – RM5000 of 9.4% of respondents (N=36), and 3.6% of respondents (N=14) have an income level above RM5000. This is because most of our respondents are full-time students, and haven't been involved in the workforce yet, the majority's income level is below RM3,000. Lastly, a filtered question of "Are you aware of reusable shopping bags?" was collected. It demonstrates that every respondent (N=384) is aware of the use of reusable shopping bags.

Table 4.1. Demographic Summary Table

	Frequency	Percent (%)	Cumulative Percent (%)
Gender			
• Male	184	47.9	47.9
• Female	200	52.1	100.0
Age			
• 18-22	218	56.8	56.8
• 23-27	166	43.2	100.0
State			
• Johor	45	11.7	11.7
• Kedah	22	5.7	17.4
• Kelantan	9	2.3	19.8
• Malacca	12	3.1	22.9
• Negeri Sembilan	10	2.6	25.5
• Pahang	17	4.4	29.9
• Penang	47	12.2	42.2
• Perak	124	32.3	74.5
• Perlis	9	2.3	76.8
• Sabah	19	4.9	81.8
• Sarawak	14	3.6	85.4
• Selangor	49	12.8	98.2
• Terengganu	7	1.8	100.0
Educational Level			
• Upper Secondary	36	9.4	9.4
• Diploma	34	8.9	18.3
• Degree	304	79.2	97.5
• Master	9	2.3	99.8
• Doctoral	1	0.2	100.0
Employment Status			
• Employee	50	13.0	13.0
• Employer	9	2.3	15.4
• Student	325	84.6	100.0
Income Level			
• Below RM3,000	334	87.0	97.0
• RM3,000-RM5,000	36	9.4	96.4
• Above RM5,000	14	3.6	100.0
Aware of Reusable Shopping Bags			
• Yes	384	100.0	100.0

4.2 Inferential Result

4.2.1 Reliability Result

The reliability coefficient scores were calculated to assess the collected data's dependability. Based on Table 4.2, it demonstrates that the data for GATT, GR, GK, GT, and PI are reliable due to the Cronbach's alpha scores range from 0.714 to 0.817, which is higher than the threshold of 0.6 (Ursachi et al., 2015; Nawi et al., 2020) However, there is a variable, GA, which falls below the threshold with a score of 0.559, indicating that this variable is not reliable. To address this, we have removed one item from GA: "*I recently learned about reusable shopping bags.*" This statement was deemed too vague, as it does not specify whether the respondent's learning pertains to environmental benefits, usage, or availability of RSBs.

Table 4.2. First Reliability Test Result

Variables	Cronbach's alpha score	No. of items
Green Awareness (GA)	0.559	4
Green Attitude (GATT)	0.817	5
Green Responsibility (GR)	0.780	4
Green Knowledge (GK)	0.733	5
Green Trust (GT)	0.801	4
Purchase Intention (PI)	0.714	4

As shown in Table 4.2.1, after removing the item from the GA variable, all variables now demonstrate reliable data, with Cronbach's alpha scores exceeding 0.6 (Ursachi et al., 2015; Nawi et al., 2020).

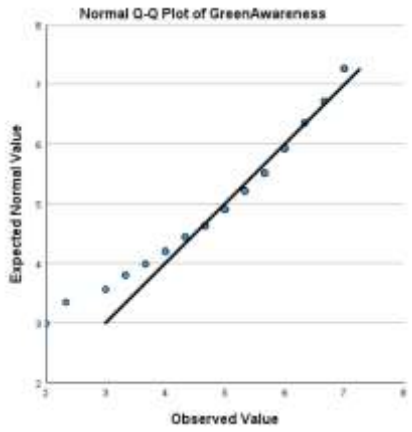
Table 4.2.1 Final Reliability Test Result

Variables	Cronbach's alpha score	No. of items
Green Awareness (GA)	0.624	3
Green Attitude (GATT)	0.817	5
Green Responsibility (GR)	0.780	4
Green Knowledge (GK)	0.733	5
Green Trust (GT)	0.801	4
Purchase Intention (PI)	0.714	4

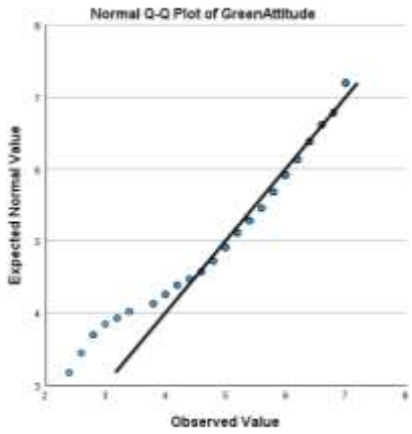
4.2.2 Normality of Data Distribution

The variable data are tested to see if they are normally distributed after the reliability standards are fulfilled. The Q-Q plot method was used, which reveals that if the data do not align with a positive-sloped 45-degree line, it suggests a deviation from normal distribution; the more the data deviate from this line, the stronger the evidence is that the series is not normally distributed (Khatun, 2021). Hence, the figure below illustrates that all the variables are normally distributed because there is minimal variation between the observed and expected data values.

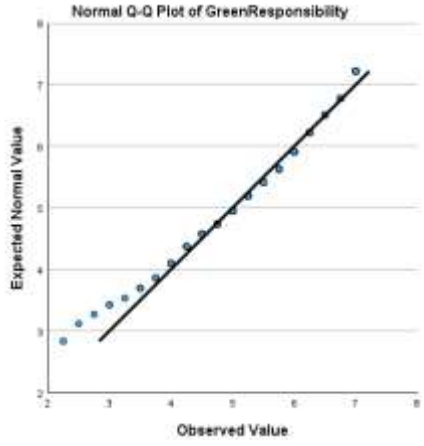
GA



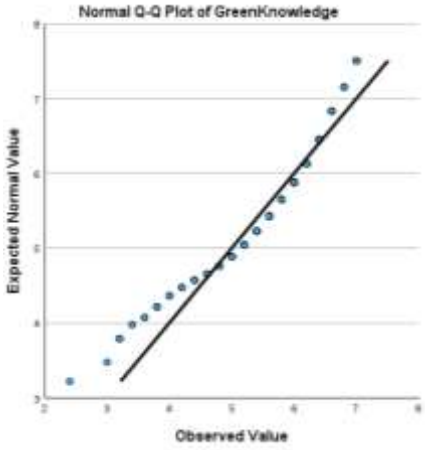
GATT



GR



GK



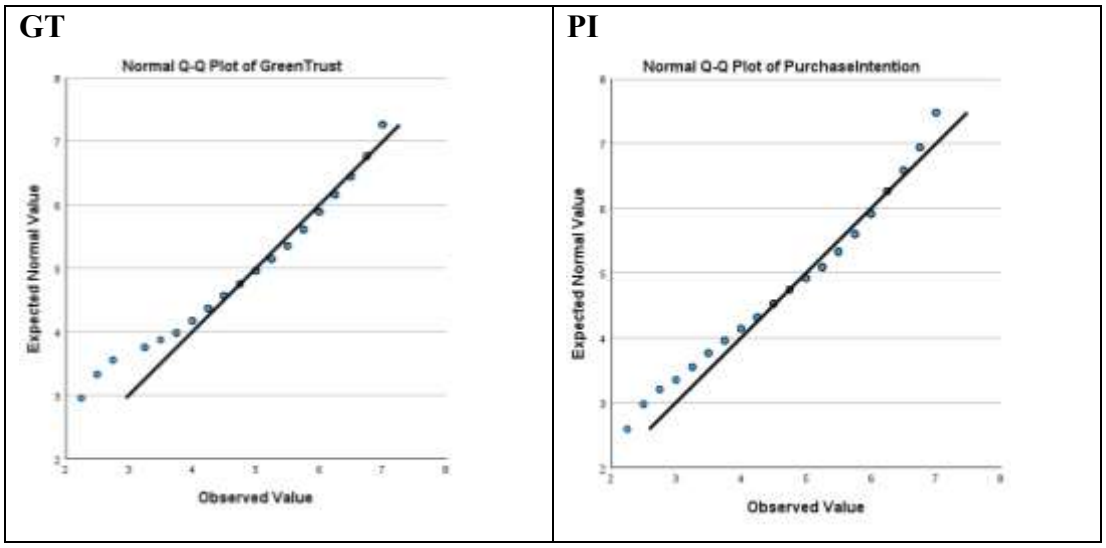


Figure 4.1. The Normality of Data Distribution for Each Studied Variable

4.2.3 Correlation Result

To determine how strongly, moderately, or weakly each IV and the DV are associated, the Pearson correlation coefficient is calculated. According to Schober et al. (2021), correlation coefficients are interpreted as follows: values below 0.10 indicate a negligible correlation, 0.10 to 0.39 denote a weak correlation, 0.40 to 0.69 represent a moderate correlation, 0.70 to 0.89 signify a strong correlation, and values above 0.90 indicate a very strong correlation. Based on Table 4.3, the Pearson correlation coefficients for all IVs and the DV range from 0.472 to 0.620, indicating a moderate correlation. Specifically, the coefficients are GK (0.472), GA (0.505), GATT (0.537), GR (0.620), and GT (0.610).

Table 4.3. Pearson Correlation Coefficient Result

Table 4.3 The Correlations Results

		GreenKnowledge	GreenAwareness	GreenAttitude	GreenResponsibility	GreenTrust	PurchaseIntention
GreenKnowledge	Pearson Correlation	1	.663**	.720**	.559**	.672**	.472**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001
	N	384	384	384	384	384	384
GreenAwareness	Pearson Correlation	.663**	1	.627**	.580**	.662**	.505**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001
	N	384	384	384	384	384	384
GreenAttitude	Pearson Correlation	.720**	.627**	1	.700**	.732**	.537**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001
	N	384	384	384	384	384	384
GreenResponsibility	Pearson Correlation	.559**	.580**	.700**	1	.698**	.620**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001
	N	384	384	384	384	384	384
GreenTrust	Pearson Correlation	.672**	.662**	.732**	.698**	1	.610**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001
	N	384	384	384	384	384	384
PurchaseIntention	Pearson Correlation	.472**	.505**	.537**	.620**	.610**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	
	N	384	384	384	384	384	384

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

4.2.4 Multicollinearity and Multiple Linear Regression Result

A stepwise approach is utilized in conducting the multiple linear regression. The first round's outcome is displayed in Model 1, where the most important variable—GR—is kept for further analysis while the other IVs are eliminated. GT was identified by the process as another significant IV in the second round, as depicted in Model 2. GK and GA are still excluded in the final round, as demonstrated by Model 3, suggesting that they are not significant and should be eliminated from the ensuing regression analysis.

Table 4.4. Non-significant Variables that are Excluded from the Regression Analysis

Table 4.4 Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	GreenKnowledge	.183[b]	3.842	<.001	.193	.687	1.455	.687
	GreenAwareness	.219[b]	4.561	<.001	.228	.664	1.506	.664
	GreenAttitude	.202[b]	3.646	<.001	.184	.511	1.959	.511
	GreenTrust	.346[b]	6.486	<.001	.315	.513	1.950	.513
2	GreenKnowledge	.053[c]	1.020	.309	.052	.533	1.877	.397
	GreenAwareness	.106[c]	2.040	.042	.104	.535	1.869	.413
	GreenAttitude	.048[c]	.783	.434	.040	.395	2.533	.395
3	GreenKnowledge	.016[d]	.289	.773	.015	.460	2.175	.369
	GreenAttitude	.022[d]	.353	.724	.018	.376	2.657	.356

a. Dependent Variable: PurchaseIntention

b. Predictors in the Model: (Constant), GreenResponsibility

c. Predictors in the Model: (Constant), GreenResponsibility, GreenTrust

d. Predictors in the Model: (Constant), GreenResponsibility, GreenTrust, GreenAwareness

The R-Squared value of 0.452 in Table 4.5 indicates that the three remaining variables—GR, GT, and GA—account for 45.2% of the outcome, which is the intention to purchase RSBs among Gen Z in Malaysia. This means that the remaining 54.8% of the variance in purchase intention that due to other factors are not explored in this study.

Table 4.5. Multiple Linear Regression Model Summary Result

Table 4.5 Regression's Model Summary Results[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.620[a]	.384	.383	.75027
2	.668[b]	.446	.443	.71292
3	.672[c]	.452	.447	.70998

a. Predictors: (Constant), GreenResponsibility

b. Predictors: (Constant), GreenResponsibility, GreenTrust

c. Predictors: (Constant), GreenResponsibility, GreenTrust, GreenAwareness

d. Dependent Variable: PurchaseIntention

Table 4.6 shows that the F value of 104.294 and a p-value of less than 0.05, confirming that the results are statistically significant at the 95% confidence level. All three of the significant IVs—GR, GT, and GA—shown by the F-test in Table 4.6 are independent, indicating that multicollinearity is not

considered problematic in this study. This also implies that at least one of these significant variables is meaningfully related to the PI of RSBs at the 0.05 significance level.

Table 4.6. ANOVA Test Result

Table 4.6 ANOVA of the Regression Model[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	134.235	1	134.235	238.467	<.001[b]
	Residual	215.030	382	.563		
	Total	349.265	383			
2	Regression	155.619	2	77.809	153.091	<.001[c]
	Residual	193.646	381	.508		
	Total	349.265	383			
3	Regression	157.716	3	52.572	104.294	<.001[d]
	Residual	191.549	380	.504		
	Total	349.265	383			

a. Dependent Variable: PurchaseIntention

b. Predictors: (Constant), GreenResponsibility

c. Predictors: (Constant), GreenResponsibility, GreenTrust

d. Predictors: (Constant), GreenResponsibility, GreenTrust, GreenAwareness

VIF occurs when certain IVs in several settings have a strong correlation with another one. A VIF value of 1 indicates no multicollinearity. Values between 1 and 5 suggest partial multicollinearity, while a VIF greater than 5 indicates substantial multicollinearity. If the VIF exceeds 10, it signifies a high level of multicollinearity, suggesting that multicollinearity is a serious issue in the model (Osemeke et al., 2024). According to Table 4.7, the VIF scores for the significant IVs—GR (2.049), GT (2.419), and GA (1.869)—fall between 1 and 5, indicating only partial multicollinearity. This finding supports a second time of verification of each significant IV's independence.

Table 4.7. Regression Coefficients for Significant Variables

Table 4.7 Regression Coefficients for the Significant Variables[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.829	.234		7.805	<.001		
	GreenResponsibility	.646	.042	.620	15.442	<.001	1.000	1.000
2	(Constant)	1.204	.243		4.964	<.001		
	GreenResponsibility	.394	.055	.379	7.109	<.001	.513	1.950
	GreenTrust	.353	.054	.346	6.486	<.001	.513	1.950
3	(Constant)	1.019	.258		3.949	<.001		
	GreenResponsibility	.369	.057	.354	6.516	<.001	.488	2.049
	GreenTrust	.299	.060	.292	4.950	<.001	.413	2.419
	GreenAwareness	.113	.055	.106	2.040	.042	.535	1.869

a. Dependent Variable: PurchaseIntention

As shown in table 4.7, it indicates that GR is the most significant independent variable, with an unstandardized coefficient of 0.369, explaining the outcome, PI of RSBs. It is followed by GT, with a coefficient of 0.299, and GA, with a coefficient of 0.113. Hence, the following represents the study's regression equation:

$$Y = 1.019 + 0.369\ X_3 + 0.299\ X_5 + 0.113\ X_1$$

Where;

Y: Purchase intention of reusable shopping bags;

X_3: Green responsibility;

X_5: Green trust;

X_1: Green awareness

A normal P-P plot is developed to guarantee a linear relationship between the cumulative effect of the significant IVs and the DV. According to Figure 4.2, it is evident that the standardised residuals exhibit scattering along the normal distribution line, indicating a normally distributed set of data for all significant predictor variables.

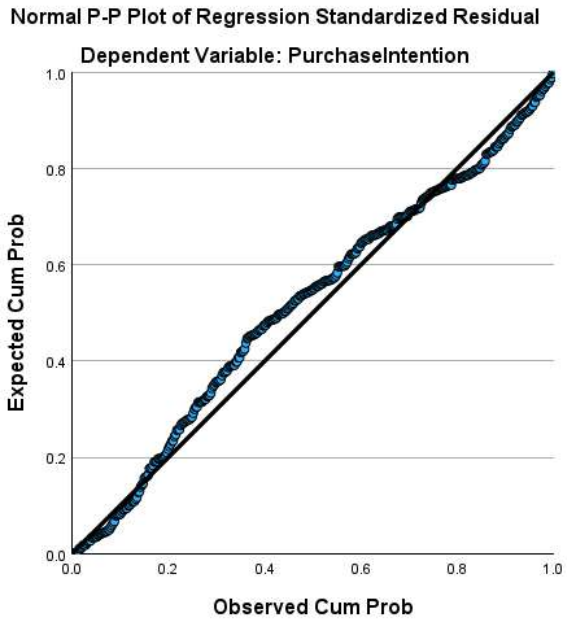


Figure 4.2. The Normal P-P Plot of Regression Standardized Residual for PI to RSBs Among Generation Z in Malaysia

4.3 Current Developed Research Model

Based on the results, the final research model of this project is shown in Figure 4.3. GK and GA have been eliminated from the finalised research model because they have no discernible impact on the PI.

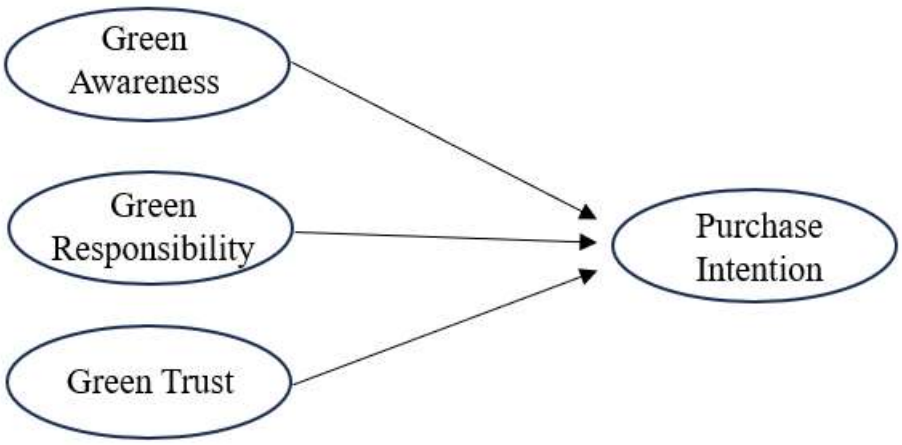


Figure 4.3 Current Developed Research Model

4.4 Conclusion of the Statistical Result

The hypothesis is tested using regression analysis, and Table 4.8 displays the results of that analysis. The next topic contents discussing the major finding and appropriate implications to policymakers and academia are covered.

Table 4.8. Confirmation of Hypothesis Testing Result

	Details of Hypothesis	Remarks
H1	Green awareness and purchase intention are positively related.	Supported
H2	Green attitude and purchase intention are positively related.	Not supported
H3	Green responsibility and purchase intention are positively related.	Supported
H4	Green knowledge and purchase intention are positively related.	Not supported
H5	Green trust and purchase intention are positively related.	Supported

CHAPTER 5: CONCLUSION, IMPLICATION, AND RECOMMENDATION

5.0 Introduction

The main study findings have been compiled and discussed in this chapter. The theoretical and practical implications, along with the research's limitations and recommendations for improvement in further study have been covered in this chapter. This chapter consists of 5.1 accomplishment of research bjective and discussion, 5.2 implication for policymakers and academias, 5.3 limitation for study, 5.4 recommendations for future research and 5.5 conclusion.

5.1 Accomplishment of Research Objective and Discussion

This research aims to investigate how eco-friendly behavioral factors influence Malaysian consumers' PI, guided by two specific objectives and corresponding with two research questions. The validation of the hypotheses related to these objectives is crucial for achieving the research goals. According to the findings, out of five hypotheses, two of the hypotheses are unsupported and three are supported. Selected respondents were interviewed as follow-up research interviews, which allowed the author to discuss the reasons behind the support or not supported of the particular hypotheses.

Three hypotheses (H1, H2 & H3) are developed to accomplish the first objective, in examining how GA, GATT and GR are related to the PI of RSBs. H1 is accepted, this means that GA positively influences the PI of RSBs. The support of H1 shows that the respondents PI is driven by the GA and comprehensive understanding of RSBs which lead them to be more likely to recognize the environmental benefits of

it. This also implies that Gen Z consumers are aware of the differences between RSBs and traditional plastic bags. Besides, they are aware that RSBs are not just an alternative to plastic bags, but it is a crucial step toward reducing plastic waste and minimizing their ecological footprint. The result is aligned with the studies which were conducted by Okada et al. (2019); Maziriri et al. (2023); Guiao and Lacap (2022); Alhamad et al. (2023) and many more.

However, this study does not prove that GATT and PI of RSBs are related, which posits that H2 are not supported. The non-support of H2 is attributed to respondents not consistently showing a positive GATT toward RSBs. Although they think that RSBs can reduce pollution, but it does not entirely effective in addressing broader environmental issues and it might even contribute to other forms of pollution. Besides, respondents tend to have a negative attitude towards promoting a green living environment and contributing to the present and future of society, as they see this as not their priority. This is due to our respondent's income level not being considered high, as most of our respondents' income level is below RM3,000. Previous research by Zeynalova and Namazova (2022) suggests that higher income levels are identical with a greater commitment to a green living environment. The non-significant result created by GATT on PI is consistent with the research by Rausch and Kopplin (2021) and Vu et al. (2021).

Besides, this study also identified that GR would influence PI of RSBs whereby H3 is supported. The support of H3 is closely linked to the heightened sense of responsibility of the respondents. This sense of responsibility drives respondents to choose reusable options more frequently, as they recognize that these choices contribute to a larger environmental goal over individual preferences. Their community-oriented mindset further motivates them to take actions that benefit not only themselves but also the benefits of people all walk of life since we are share a single mother earth. Using RSBs will decrease the destruction of the planet and view this as a shared responsibility for protecting our planet. This finding had supported by the studies by Yue et al. (2020).

This research develops two hypotheses (H4&H5) to discover how GK and GT are related to the PI of RSBs to achieve the second research objective. The rejection of H4 had shown that GK is not positively related to PI of RSBs. It also reflects that respondents are viewing their GK of RSBs and the environment inconsistently. This behavior can be explained by respondents who do not possess sufficient knowledge about RSBs than the average person. Measuring one's own knowledge is challenging, as the definition of what constitutes sufficient knowledge is unclear and varies from person to person. In layman term's, an individuals may believe that he or she is having the knowledge, but when it come to the reality, their knowledge on RSBs might be incomplete. Furthermore, consumers may struggle to see the tangible benefits of RSBs, especially when the immediate cost appears higher than that of disposable plastic bags. They might question whether the environmental benefits and potential cost savings over time are worth the initial investment, leading to uncertainty and hesitation to invest in the RSBs. The result is parallel with the studies which were done before by Indriani et al. (2019); Nazish et al. (2024) and Zahan et al. (2020).

Lastly, H5 is supported, which shows that GT and PI of RSBs are related. This has reflected those respondents are having GT on RSBs. Such behavioral response indicated that they believe that RSBs as a trustworthy means of protecting the environment. They trust that using these bags is a dependable way to contribute to environmental improvement and view the overall environmental argument in favor of purchasing RSBs as credible and reliable. The result is congruent with studies carried out by Wasaya et al. (2021); Amallia et al. (2021); Asif et al. (2022).

5.2 Implication

5.2.1 Implication for Policymakers

When referring to the multiple regression statistical result, GR is the most significant variable that affects the PI of RSBs. Therefore, to encourage the PI of RSBs, the government, especially the Ministry of Education (MoE)

need to educate primary, secondary and tertiary students on how the RSBs will make the surrounding environment better and improve the human well-being as well. The syllabus should go beyond simple environmental knowledge as it should enhance critical thinking, help in problem solving and facilitate wise decision making. For instance, rather than incorporating sustainability topics into existing courses, universities might open new elective courses, letting students equip themselves with sustainability knowledge. Students must complete sustainability projects and tests to raise their sense of responsibility and ensure they can safeguard the environment. For the primary and secondary level of education, hand-on activities should be attached in the syllabus. For instance, combining RSBs in different games and activities to demonstrate how using RSBs will have impact on the health of environment will let student to learn how to contribute to improve the environment.

GT, being the second most significant variable on the PI of RSBs, the government should implement tactics to let consumers trust that RSBs are committed to protect and served as a dependable way to improve the environment. The government needs to certify the RSBs in the market with SIRIM Eco Label and MyHIJAU as a way to offer credible information to consumers. Besides, the government is encouraged to collaborate with certain private industry experts and NGOs to validate the impact of RSBs are committing to protect the environment. After the validating process, public reporting should be revealed in a transparent way to justify the arguments of RSBs. To let consumers trust that RSBs will fulfill their commitment to environmental protection, a virtual interactive platform should be launched. This platform will integrate all RSBs in the market, letting consumers know about the fundamentals of the RSBs, which includes the sustainability standards meets, the manufacturer and its environmental impacts.

GA is the third most significant variable that motivates the PI of RSBs. Environmental protection campaigns aimed at promoting GA of RSBs should be strategically designed by government, NGOs and private sectors. During the promotional campaign, the government and NGOs need to develop educational materials that clearly explain the environmental benefits of using RSBs compared to traditional plastic bags. This can include infographics, brochures, and videos that highlight how RSBs reduce waste, conserve resources, and minimize pollution can let target respondents learn more about RSBs. Besides conducting an offline campaign; an online campaign should be conducted simultaneously. Utilizing social media platforms to reach a wider audience with engaging content such as challenges, contests, and quizzes focused on the benefits of RSBs will arouse the awareness of consumers.

As the hypothetical relationship of the GK and GA are not supported, it is inappropriate for the researcher to suggest any policies or strategies which relate to the PI of RSBs.

5.2.2 Theoretical Implications

The present study has made a theoretical contribution by employing the SR model to examine the intention of Malaysian Gen Z to buy RSBs. The SR model helps to examine how external stimuli trigger specific behavioral responses from individuals. The original variables of the SR model are GA, GATT, and GR which serve as key factors driving the intention to purchase RSBs. However, to provide a more comprehensive perspective, current research introduces GK and GT as additional variables that people might not consider but that can help predict the marketing environment far better. Furthermore, our study introduces these two additional variables into the context of RSBs using the SR model, an area previously unexplored by other studies.

The non-significant impact that GK and GA have on the intention to purchase RSBs does not imply that the SR framework is not a suitable model to use when discussing RSBs. The non-support of GA (H2) implies the possibility that awareness does not always lead to action in driving PI. This result shows that in measuring the relationship between GA and PI, future researchers should consider exploring this variable and whether there are specific types or levels of awareness that might have a more direct impact on PI. Moreover, the non-support of GK (H4) shows that respondents who have different environmental understanding may view the value of GK differently. This finding suggests that to get sample elements that behave more consistently with the GK influence, future researchers should think about articulating the target respondents more precisely.

The present research model offers a comprehensive analysis of Malaysian Gen Z's intention to buy RSBs, and the study's findings will be beneficial to researchers looking into related topics. In addition, this research can shed light on the applicability of the SR theory to Malaysian Gen Z's PI of RSBs as well as the significance of each IV in predicting the PI. When it comes to the intention to buy RSBs, researchers can explain why some IVs have a significant impact while others have no significant impact—though they may have a significant consequence in different study contexts.

5.3 Limitations of Study

The location limitation is one of the study's drawbacks. Many respondents are from Perak, focusing only on particular Malaysian states. Since every region has its own unique culture, values, and beliefs, the results will be more accurate in representing Malaysia if there are more diverse responses from people in various locations. The study may face challenges due to its uneven illustration, which could potentially affect the reliability of the data.

Furthermore, we limited our analysis to Gen Z respondents, those between the ages of 18 and 27. This will restrict the capacity to comprehend different age groups which results in a lack of viewpoints from different age groups. This could result in a narrower understanding of the overall market and may overlook important generational differences that could influence the PI of RSBs.

In addition, this study focuses on SR theory, with only lightly examines of how stimulus as external factors directly influence the responses which is the consumer's PI of purchasing the RSBs. However, the SR model oversimplifies the process by not accounting for the internal factors that mediate this relationship.

5.4 Recommendations for Future Research

To overcome the first limitation, future researchers should make sure that every state in Malaysia is adequately represented in the sample. To reach the target respondents and maintain control over the subgroups since they offer more comprehensive coverage of the population, future researchers can use stratified sampling method. Stratified sampling method is the most desirable substitute for probability sampling techniques as it can ensure that the number of respondents from each state in Malaysia is distributed equally.

Moreover, future researchers should consider including individuals from other age groups, such as Gen X and Gen Y, as their target respondents. By expanding the study to include a wider range of age groups, researchers can obtain a more thorough grasp of how various generations view and react to environmental issues, such as the purchase of RSBs. Including these diverse perspectives would allow for a more holistic analysis, revealing potential differences or similarities in green PI across generations.

To overcome the third limitation, future researchers may consider incorporating the "Organism" (O) component into the theory, transforming it into the Stimulus-Organism-Response (SOR) model. The "Organism" component represents the

internal processes that occur within the individual between the stimulus and the response. By adding the "Organism," researchers can better explore the internal cognitive, such as perceptions, motivations, and emotions that mediate the relationship between external stimuli and consumer responses.

5.5 Conclusion

In a nutshell, the validity of every hypothesis is being investigated. Also, this chapter highlighted the study's shortcomings and offered some suggestions for further research.

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Appendices

Appendix 3.1: Pre-Testing Result

Variables	Code	Original Items	Adapted Items	Source
Green Awareness (IV1)	GA1	I have heard about green products.	I ~~have heard~~ recently learned about reusable shopping bags.	(Ansu-Mensah, 2021)
	GA2	I have detailed knowledge and understanding about green products.	I ~~have detailed~~ possess comprehensive knowledge and understanding ~~about of~~ regarding reusable shopping bags.	
	GA3	I buy green products instead of common/conventional products.	~~I buy reusable shopping bags instead of plastic bags.~~ Reusable shopping bags are not like traditional plastic bags.	
	GA4	I am aware that buying green products contributes to sustainable future.	I am aware that using reusable shopping bags ~~contributes to a sustainable future~~ helps the environment.	
Green Attitude (IV2)	GATT1	Environmental protection is important to me when making product purchases	Environmental protection is important to me ~~when making product purchases.~~	(Vu et al., 2021)
	GATT2	I believe that green products help to reduce pollution (water, air, etc.)	~~I believe that~~ Using reusable shopping bags ~~help to~~ can be a great way to reduce pollution, including water and air pollution.	
	GATT3	I believe that green products help to save nature and its resources	~~I believe that~~ Using reusable shopping bags can help to ~~save~~ preserve the environment and conserve its resources.	

	GAT T4	It is essential to promote green living in Malaysia	~~I believe that it is essential to promote reusable shopping bag in Malaysia.~~ Promoting a green living environment is important to me.	(Leong et al., 2024)
	GAT T5	By buying green packaged products, I am contributing to society for the present and future.	~~I am contributing to society for~~ I am willing to make a positive contribution to society, both in the present and for the future ~~by purchasing reusable shopping bags.~~	
Green Responsibility (IV3)	GR1	My actions impact the health of the environment.	My actions have an impact on the health of the environment.	(Barbaritano & Savelli, 2021)
	GR2	I have the power to protect the environment.	I ~~have the power to protect~~ possess the ability to safeguard the environment.	
	GR3	I can learn how to improve the environment.	I ~~can~~ want to learn how to ~~improve the~~ contribute towards improving the environment.	
	GR4	I will work to make my surrounding environment a better place.	I will work to make my surrounding environment ~~a~~ better ~~place~~.	
Green Knowledge (IV4)	GK1	I know that I buy products and packages that are environmentally safe.	~~I know that I buy bags that are environmentally safe.~~ Using reusable shopping bags is an environmentally friendly option that helps reduce the amount of plastic waste in our environment.	Moslehpour et al., 2022
	GK2	I know more about recycling than the average person.	~~I know more~~ I possess more knowledge about reusable shopping bags than an average person.	
	GK3	Going green products could be a	~~I believe that reusable shopping bags could be a~~	Siyal et al., 2021

		beneficial investment in long-term.	Investing in reusable shopping bags could prove to be beneficial in the long ~~term~~ run.	
	GK4	I purchase green products because they are environmentally friendly	~~I purchase reusable shopping bags because they are environmentally friendly.~~ Using reusable shopping bags is a sustainable and eco-friendly alternative to single-use plastic bags.	
	GK5	I purchase green products because they have more environmental benefit than other products.	~~I purchase reusable shopping bags because they have more environmental benefits than plastic bags.~~ Using reusable shopping bags has a greater positive impact on the environment compared to using plastic bags.	
Green Trust (IV5)	GT1	You feel that this brand's environmental commitments are generally reliable.	I believe that reusable shopping bags are ~~generally reliable to~~ committed to protecting the environment.	(Guerreiro & Pacheco, 2021)
	GT2	You feel that this brand's environmental performance is generally dependable.	I believe that using reusable shopping bags is ~~generally~~ a dependable way to improve the ~~to~~ environment.	
	GT3	You feel that this brand environmental argument is generally trustworthy.	~~I feel that~~ Generally, the environmental argument about the purchase of reusable shopping bag is trustworthy.	
	GT4	This brand keeps promises and commitments for environmental protection.	I ~~believe purchasing~~ trust that reusable shopping bags ~~keeps promises and~~ will fulfil their commitments to environmental protection.	

Purchase Intention (DV)	PI1	I want to purchase green cosmetics products.	I ~~want to purchase~~ would like to buy some reusable shopping bags.	Moslehpour et al., 2022
	PI2	I am willing to pay a higher price for green cosmetics products than for conventional cosmetics products.	I am willing to pay a higher price for ~~reusable shopping bags than plastic bags~~ reuse.	
	PI3	I intend to buy green products because of my environmental concern.	I prefer reusable shopping bag over plastic bag.	
	PI4	I think it is a good idea to buy recycled product.	I think it is a good idea to buy reusable shopping bags.	(Hein, 2022)

Appendix 3.2: Master Copy of the Questionnaire

Eco-Friendly Behaviour Study: Factors Affecting Reusable Shopping Bag Purchases Among Malaysian Gen Z

Survey Questionnaire

Greeting to all,

We are final year undergraduate students of Bachelor of Marketing (Hons), from Faculty of Business and Finance in University Tunku Abdul Rahman (UTAR) Kampar campus. As part of our research, we are conducting a research project on **"Eco-Friendly Behaviour Study: Factors Affecting Reusable Shopping Bag Purchases Among Malaysian Gen Z."** This research aims to **examine the factors influencing the purchase intention of reusable shopping bags among Generation Z in Malaysia**.

This survey will only take you approximately **5 minutes**, and all participation towards this survey are voluntary. Rest assured that all the responses collected will be used solely for academic purposes and will be kept private and confidential. Thank you in advance for your time and cooperation in answering our questionnaire. Your participation is highly appreciated.

For further inquiries, please contact us at **minghui2109@1utar.my** or **kellykan18@1utar.my.**

Yours sincerely,

Hiew Ming Hui 22ABB03100

Kelly Kan Sin Kit 21ABB03189

Section A: Demographic Questions

This section serves to collect essential background information from survey participants, which is vital for data analysis purposes.

1. What is your gender?
   - ☐ Male
   - ☐ Female
2. What is your age?
   - ☐ 18 below
   - ☐ 18-22
   - ☐ 23-27
   - ☐ 28-32
   - ☐ 33-37
   - ☐ 38-42
   - ☐ 43-47
   - ☐ 47 above
3. Where are you from (state)?
   - ☐ Perlis
   - ☐ Kedah
   - ☐ Penang
   - ☐ Perak
   - ☐ Selangor
   - ☐ Negeri Sembilan
   - ☐ Malacca
   - ☐ Johor
   - ☐ Kelantan
   - ☐ Terengganu
   - ☐ Pahang
   - ☐ Sabah
   - ☐ Sarawak
4. What is your educational level?
   - ☐ Upper Secondary
   - ☐ Diploma
   - ☐ Degree
   - ☐ Master
   - ☐ Doctoral
5. Which is your current status?

☐ Student

☐ Employee

☐ Employer

6. How much is your income level?

☐ Below RM3,000

☐ RM3,000-RM5,000

☐ Above RM5,000

7. Do you aware of reusable shopping bags?
Definition of Reusable Shopping Bags:
It is made from durable materials such as, cotton, canvas, nylon, or polypropylene which promotes sustainability by reducing waste from single-use plastic bags. Some common examples are jute bags, tote bags, eco-friendly bags and etc.

☐ Yes

☐ No

Section B: Factors Affecting the Purchase Intention of Reusable Shopping Bags

Please indicate your agreement level about the following statement based on a scale of 1 to 7 accordingly.

(1) = Strongly Disagree; (2) = Somewhat Disagree; (3) = Disagree; (4) = Neutral; (5) = Agree: (6) = Somewhat Agree; (7) = Strongly Agree

Green Awareness (GA)								
No.	Questions	Strongly Disagree	Somewhat Disagree	Disagree	Neutral	Agree	Somewhat Agree	Strongly Agree
GA1	I recently learned about reusable shopping bags.	1	2	3	4	5	6	7
GA2	I possess comprehensive knowledge and	1	2	3	4	5	6	7

	understanding regarding reusable shopping bags.							
GA3	Reusable shopping bags are not like traditional plastic bags.	1	2	3	4	5	6	7
GA4	I am aware that using reusable shopping bags helps the environment.	1	2	3	4	5	6	7
Green Attitude (GATT)								
No.	Questions	Strongly Disagree	Somewhat Disagree	Disagree	Neutral	Agree	Somewhat Agree	Strongly Agree
GATT 1	Environmental protection is important to me.	1	2	3	4	5	6	7
GATT 2	Using reusable shopping bags can be a great way to reduce pollution, including water and air pollution.	1	2	3	4	5	6	7

GTT3	Using reusable shopping bags can help to preserve the environment and conserve its resources.	1	2	3	4	5	6	7
GATT 4	Promoting a green living environment is important to me.	1	2	3	4	5	6	7
GATT 5	I am willing to make a positive contribution to society, both in the present and for the future.	1	2	3	4	5	6	7
Green Responsibility (GR)								
No.	Questions	Strongly Disagree	Somewhat Disagree	Disagree	Neutral	Agree	Somewhat Agree	Strongly Agree
GR1	My actions have an impact on the health of the environment.	1	2	3	4	5	6	7
GR2	I possess the ability to safeguard the	1	2	3	4	5	6	7

	environment.							
GR3	I want to learn how to contribute towards improving the environment.	1	2	3	4	5	6	7
GR4	I will work to make my surrounding environment better.	1	2	3	4	5	6	7
Green Knowledge (GK)								
No.	Questions	Strongly Disagree	Somewhat Disagree	Disagree	Neutral	Agree	Somewhat Agree	Strongly Agree
GK1	Using reusable shopping bags is an environmentally friendly option that helps reduce the amount of plastic waste in our environment.	1	2	3	4	5	6	7
GK2	I possess more knowledge about reusable	1	2	3	4	5	6	7

	shopping bags than an average person.							
GK3	Investing in reusable shopping bags could prove to be beneficial in the long run.	1	2	3	4	5	6	7
GK4	Using reusable shopping bags is a sustainable and eco-friendly alternative to single-use plastic bags.	1	2	3	4	5	6	7
GK5	Using reusable shopping bags has a greater positive impact on the environment compared to using plastic bags.	1	2	3	4	5	6	7
Green Trust (GT)								
No.	Questions	Strongly Disagree	Somewhat Disagree	Disagree	Neutral	Agree	Somewhat Agree	Strongly Agree
GT1	I believe that reusable shopping bags are	1	2	3	4	5	6	7

	committed to protecting the environment.							
GT2	I believe that using reusable shopping bags is a dependable way to improve the environment.	1	2	3	4	5	6	7
GT3	Generally, the environmental argument about the purchase of reusable shopping bag is trustworthy.	1	2	3	4	5	6	7
GT4	I trust that reusable shopping bags will fulfil their commitments to environmental protection.	1	2	3	4	5	6	7
Purchase Intention (PI)								
No.	Questions	Strongly Disagree	Somewhat Disagree	Disagree	Neutral	Agree	Somewhat Agree	Strongly Agree
PI1	I would like to buy some	1	2	3	4	5	6	7

	reusable shopping bags.							
PI2	I am willing to pay a higher price for reuse.	1	2	3	4	5	6	7
PI3	I prefer reusable shopping bag over plastic bag	1	2	3	4	5	6	7
PI4	I think it is a good idea to buy reusable shopping bags.	1	2	3	4	5	6	7

Completion of Questionnaire

We truly appreciate you spending your precious time filling out this questionnaire. Thank you!