

MK004_2301

FACTORS THAT INFLUENCE INTENTION
TO USE RECYCLED CLOTHES AMONG
GENERATION Z IN MALAYSIA

BY

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- (2) No portion of this FYP has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) Equal contribution has been made by each group member in completing the FYP.
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DEDICATION

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LIST OF ABBREVIATIONS

ATT	Attitude
AOC	Awareness of Consequences
AOR	Ascription of Responsibility
AV	Altruistic Values
BV	Biospheric Values
DV	Dependent Variables
EV	Egoistic Values
ITU	Intention To Use
IV	Independent Variable
PBC	Perceived Behavioural Control
PN	Personal Norm
SEM	Structural Equation Modelling
SN	Subjective Norm
TPB	Theory of Planned Behaviour
VBN	Value-Belief-Norm

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PREFACE

This project is conducted as a fulfilment of the requirement for the pursuit of Bachelor of Marketing (HONS) of Universiti Tunku Abdul Rahman (UTAR). The title of this study is “Factors that Influence Intention To Use Recycled Clothes among Generation Z in Malaysia”. Nowadays, people are more concerned about the environment and awareness of sustainable development. The development of the fashion industry and the constant changes in fashion have brought a huge negative impact on the environment. Recycled clothes, as a sustainable product, uses waste or old materials and reprocesses them into new materials to produce totally new clothing products, has a slowly growing trend in the global. It is therefore increasingly important to explore Gen Z’s motivations for adopting recycled clothing practices. This study aims to uncover how inner value affects Malaysian Generation Z intention to use recycled clothing, providing valuable insights to academia and industry. These insights can inform targeted strategy, policy, and marketing efforts to promote recycled clothes choices for this generation in Malaysia.

ABSTRACT

Nowadays, the fashion industry has brought an ultimately negative impact towards the natural environment due to the fast change demand. The concept and consciousness on sustainability among fashion industry was raised and gradually improving. Recycled clothes as one of the sustainable products that can reduce the harmful to environment, are in a continuous growing phase in Malaysia. Generation Z, as the largest population group in Malaysia, is increasingly more aware to negative consequences of environment and might willing to use recycled clothes for the conservation of nature. Therefore, this study has examined factors that influence the intention to use recycled clothes among Generation Z in Malaysia.

In this study, Value-Belief-Norm Theory (VBN) will be the main theory to determine the intention to used recycled clothes which includes 4 sections that comes with 7 variables, Altruistic Values (AV), Egoistic Values (EV), Biospheric Values (BV), Awareness of Consequences (AOC), Ascription of Responsibility (AOR), Personal Norm (PN), Intention to used recycled clothes (ITU). In addition, we have also integrated Theory of Planned Behaviour (TPB) 3 variables in to proposed framework which is Subjective Norms (SN), Attitude (ATT) and Perceived Behaviour Control (PBC).

A total of 384 respondents of Malaysian Generation Z's data has been collected through questionnaire. SmartPLS 4 software is applied in this study to analyse the data by conducting the measurement model and structural model, which will be used to investigate the relationship between these variables. According to the findings, all the hypotheses have a significant relationship that led to the intention to use recycled clothes in the context of Malaysia. This research can be beneficial to the researcher and practitioner to have more understanding the factors that influencing Malaysian Generation Z and take corresponding actions to enhance willingness of using recycled clothes.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Research Introduction

This chapter involves the overview of research study. In 1.1 and 1.2, the research background and problem are explained. Additionally, 1.3 and 1.4 include research objectives and questions. Finally, 1.5 clarifies research significance.

1.1 Research Background

Nowadays, the environmental effects of industrialization have significantly harmed the planet as the growth and development of globalisation (Zhang et al., 2022). According to World Bank (n.d.), more than 100 billion tonnes of raw materials entering the supply chain each year to be processed and turned into goods. In addition to depleting natural resources, the environment is negatively impacted by this extensive material consumption at every stage of the product life cycle, including manufacture, use, and end-of-life. It can be predicted that there will likely be 3.4 billion metric tonnes of trash in the world by 2050 (World Bank, n.d.). Among these, the clothing and textile industry stands out as a significant contributor to the environmental impact on our planet (Peters & Simaens, 2020).

The textile and clothing industry plays a significant role in people's everyday lives as clothing is one of the main objects of human desire. As a result, this industry is always growing and has an adverse impact on the environment (Madhav et al., 2018). To meet consumer demand, particularly for affordable clothes, clothing production has approximately doubled in just two decades (Jacometi, 2019). Based on Jacometi (2019), the reason is that people purchase more clothes than they need each year due to the fast fashion phenomenon and the ever-changing fashion trends, thus so-called out-of-date clothes are often thrown away. It is obvious that individuals treating clothing as "disposable" commodities that may be abandoned

after only seven or eight wears (Jacometi, 2019). As the clothing industry has continued to expand and develop globally in recent years, it brings a significant damage on the living environment of human beings (Peters & Simaens, 2020). Producing clothes generates millions of tons of waste and consumes trillions of liters of water every year. This indirectly causing chemical pollution, carbon dioxide emissions, and textile waste, which damages the surrounding environment and intensifies the problem of environmental deterioration (Niinimäki et al., 2020). Thus, the terms of “Sustainable Fashion” were carried out to reduce the adverse consequences toward environment.

According to Mandarić et al. (2020), sustainable fashion highlights reduced production, harmful consequences, as well as consumer and producer ethical behaviour (Mandarić et al., 2020). Furthermore, it prioritises the manufacture and acquisition of high-quality items instead of those produced and purchased in huge quantities. Mandarić et al. (2020) stated that it becomes crucial that sustainable fashion must encompass both ethical and green dimensions within clothing. The green dimension particularly places a strong emphasis on addressing environment concerns by the utilisation of recycled materials. Based on Hein (2022), recycling involves the practice of repurposing materials from used products to create new items of equal quality, thus contributing to environmental preservation. Thus, recycled clothes are considered as a sustainable fashion that can enhance the environment protection since it is utilizing decomposed and waste materials such as fabrics in old clothes and converts them into raw materials and then reprocesses them into new clothes products (Kim et al., 2021).

In short, current society is progressively encouraging individuals to take proactive efforts to protect the environment, reducing pollution and environmental impact (Papadopoulou et al., 2021). Nowadays, as Jung et al. (2021) mentioned, awareness of sustainable fashion has increase among the consumer in order to address the environment issues. Since consumer awareness of sustainable claims becomes more widespread, demand for sustainable products in the clothing industry will increase and sustainable consumption will gradually become the norm. These developments have piqued interest and consideration of the sustainable fashion industry. Additionally, according to Yahya et al. (2021), the younger generation in Malaysia

is more receptive to green advertising and has a favourable opinion of green products. Moreover, based on Shahrin et al. (2022), Malaysia fashion sector companies are emphasising the growth of eco-friendly materials and sustainable technology while remaining an affordable price. For instance, Uniqlo has started promoting sustainable fashion by using sustainable and recycled material to produce new clothes product. In addition, Uniqlo dedicated specific sections of the store to showcase their utilization of recycled materials in the production of new clothing items. As a result, Malaysia's sustainable fashion industry has the potential for growth, with the ability to positively benefit the country's environment.

1.2 Research Problem

Nowadays, fast fashion is harming the environment by producing cheap and trendy clothes made of low-quality materials that have a shorter lifespan (Agency, 2023; Bailey et al., 2022). Clothing consistently mass-produced to satisfy the prevailing trend and rapidly purchased by individuals to achieve the favoured look (Bailey et al., 2022). According to the news, the global consumption of clothing exceeds 100 billion pieces annually (Agency, 2023). Unfortunately, they are being dumped in landfills at an astonishing speed, almost one garbage truck per second, and a cotton t-shirt take approximately 6 years to degrade (Chen et al, 2021; Ch'Ng, 2018). This phenomenon is going to worsen, contributing to the release of harmful pollutants into the environment. Fashion industry is the second most polluting industry after oil, responsible for 10% of global greenhouse gas emissions (Agency, 2020; Muthukumarana et al., 2018). Additionally, 85% of all textiles end up in landfills worldwide each year, with Malaysia generating 2 million kg of textile waste per day. (Agency, 2020; Chng, 2018). Hence, these environmental issues have prompted fashion companies to place greater emphasis on sustainability topic.

The market for sustainable fashion is projected to increase from USD 5.84 billion in 2021 to USD 8.3 billion in 2025 (Kim et al., 2022) as companies start prioritising remanufactured materials with low carbon footprints or less waste in response to growing customer demand (Yang et al., 2022). Since customers' pre-textile and

post-textile waste can be remanufactured to make recycled clothes, textile recycling is one efficient approach in clothing industry for reducing environment pollution (Vehmas et al., 2018). Yamini et al. (2021) claimed that the global recycled textiles market had a value of \$5.6 billion in 2019 and is projected to reach \$7.6 billion by 2027. From 2020 to 2027, this market is anticipated to grow at a CAGR of 3.6%. Briefly, recycled textiles will become more common in the fashion industry, as seen in H&M's goal to incorporate 30% recycled materials to make recycled clothes by 2025 (H&M Group, 2020). Thus, studying customer preferences and intentions is important to the recycled clothing sector because this industry has an expected growing trend in the future.

Moving on, the Malaysia fashion industry has recently turned its attention to eco-friendly materials and sustainable technology, following the country's Shared Prosperity Vision 2030 (Shahrin et al., 2022; Government of Malaysia, 2019). This vision advocates for sustainable development and natural resource protection. Hence, Malaysia's clothing industry imitates international fashion companies such as Uniqlo, H&M, Bershka, Kloth, and Forever21, which implemented recycling initiatives to address environmental impact (Ali et al., 2020). Furthermore, Malaysian Generation Z demonstrates a greater willingness to invest in eco-friendly products and supports businesses that express their position on environmental concerns than other generations (Kim et al., 2022). Based on Gomes et al. (2023), Generation Z prefers to base their purchasing decisions on principles and values such as environmental, personal, and social. They are also early adopters who experiment with new ideas and products. However, most Malaysian are still unaware of the environmental influences of sustainable fashion consumption (Rosli, 2018). Despite considerable recycling and ethical manufacturing efforts, the recycled clothing sector is unable to deliver extraordinary results (Ali et al., 2020). Therefore, the Malaysia clothing market and Malaysian Generation Z were chosen specifically for investigation.

Aside from that, sustainability and ethical consumerism are crucial considerations in this carbon-neutral era (Kim et al., 2022). Since sustainable fashion have arisen as remedies to environmental issues, words include eco-friendly, recycle, and upcycle frequently blitzed consumers (Park et al., 2018). Recent research indicates

that consumers are increasingly interested in recycling and recognize the significance of repurposing textile waste to create new clothing (Vehmas et al., 2018). However, the gap between their value and intentions to use these recycled clothes is not well-understood. Despite consumers have adopted the values of environmental consumerism, they often fail to exhibit their beliefs when making purchases (Park et al., 2018). Consumer's intention to use is a significant factor for businesses, as it predicts actual behaviour (Judge et al., 2019). Generally, stronger positive intentions are more likely to result in increased actual behaviour (Conner & Norman, 2022). Although sustainable fashion is gaining popularity, there has been limited research conducted in this area. Previous studies have primarily focused on analyzing the aesthetic characteristics of reused and recycled fashion products from a marketing perspective rather than from a consumer perspective (Kim et al, 2021). Investigating customers' intentions to use recycled clothing can assist businesses in identifying future product development opportunities and better positioning their products and services in the marketplace (Yoo et al., 2021). As a result, enhancing our practical and academic understanding of customers' intentions to use recycled clothing is vital.

Adopting the behaviour of using recycled clothes is an eco-friendly behaviour that that can benefit the earth. As evidenced by several studies, the adoption of eco-friendly behaviours by consumers is closely linked to individual factors, including personal values, beliefs, and norms (Gkargkavouzi et al., 2019). Personal's values, beliefs, and norms may shape individuals' attitudes towards the environment and their willingness to engage eco-friendly actions (Yıldırım et al., 2019). Values have been demonstrated to be a significant antecedent of several pro-environmental behaviour. Li et al. (2021) proposes that people's value orientations influence their perspective, leading to the development of a specific viewpoint. The worldview formed by value orientations will generate beliefs, such as recognizing the outcomes of behaviour and taking responsibility for the environment. These beliefs will then activate various individual norms at different levels, ultimately driving people to adopt environmental protection behaviours. On the others hand, Li et al. (2021) claimed that deliberate thinking is a key determinant of human behaviour. Alongside attitudes and subjective norms, they propose that perceptual behaviour control plays a crucial role in understanding people's behaviour more

comprehensively. In addition, according to Rhee et al. (2019), they stated that there is a behavioural gap between attitudes towards the sustainability and actual behavioural. Thus, this gap become a major obstacle to the implementation of sustainable fashion (Jalil et al., 2019), However, based on our current knowledge, we have not found any study that explores the link between personal norms, beliefs, values, and attitudes towards the intention to use recycled clothes. Therefore, our research can fill up the gap in the literature field on intention to use recycled clothes.

1.3 Research Objective

1.3.1 General Objectives

1. To investigate factors that influence the intention to use recycled clothes.

1.3.2 Specific Objective

1. To examine the relationship between altruistic, egoistic, biospheric values and awareness of consequences.
2. To examine the relationship between awareness of consequences and ascription of responsibility.
3. To examine the relationship between ascription of responsibility and personal norm.
4. To examine the relationship between personal norm and attitude.
5. To examine the relationship between attitude and intention to use recycled clothes.

6. To examine the relationship between subjective norm and intention to use recycled clothes.
7. To examine the relationship between perceived behavioural control and intention to use recycled clothes.

1.4 Research Questions

1. Does altruistic values, egoistic values, and biospheric values affect awareness of consequences?
2. Does awareness of consequences affect ascription of responsibility?
3. Does ascription of responsibility affect personal norm?
4. Does personal norm affect attitude?
5. Does attitude affect intention to use recycled clothes?
6. Does subjective norm affect intention to use recycled clothes?
7. Does perceived behavioural control affect intention to use recycled clothes?

1.5 Research Significance

1.5.1 To Academics

From the perspective of theoretical, the research findings might help researchers or students in gathering and examining information on

incorporating Value-Belief-Norm theory and the Theory of Planned Behaviour to find out the factors that influence the intention to use recycled clothes. By using integrating theory, it can provide a more comprehensive perspective on the intention to used recycled clothes. As a consequence, this study may offer beneficial ideas and use the methods adopted as a guide for future research.

1.5.2 To Practitioners

From the perspective of practical, the results of this study may have practical implications for the fashion industry and policy maker. Throughout the findings from this research, the fashion industry might foresight the future market potential of sustainable clothes in Malaysia, understand the factors that influence Generation Z's intentions, and develop effective strategies to promote recycled clothes made from recycled fabrics. In addition, policy maker may hold the activity campaign related to sustainability to young generation that encourage the use of recycled clothes and reduce environmental problems. For instance, the Ministry of Education (MOE) can promote some campaigns to raise awareness of environmental protection through the education institution about environmental protection and promote recycled clothes.

1.6 Conclusion

Overall, this chapter describes our research's outline and aim. The chapter's background, problem, objectives, questions, and significant set the stage for the following chapter.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter will review the study's theories and explain each variable. The proposed framework and hypothesis are also discussed to discover the factors that influence intention to use recycled product among Malaysian Generation Z.

2.1 Underlying Theories

2.1.1 Value-Belief-Norm Theory (VBN)

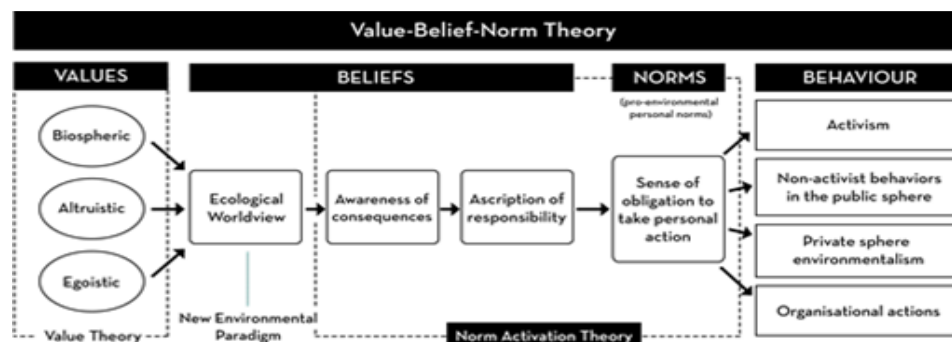


Figure 2.1: The Value-Belief-Norm Model

Adapted from Stern, P. C. (2000). New environmental theories: Toward a coherent theory of environmentally significant behaviour. *Journal of Social Issues*, 56(3), 407–424.

Stern et al. (1999) first proposed the Value-Belief-Norm Theory (VBN) to explain how individual values shape behaviour in the context of environmentalism. VBN theory had posited a single causal chain that examine the relationship between values, beliefs, norms and their impact on pro-environmental behaviour and behavioural intention (Ghazali et al.,

2019). From the perspective of value, value reflects an individual belief and action including thoughts that will act based on one's own preferences (De Groot & Steg, 2007). In VBN theory, the first stage comprises values, which consist of altruistic values (AV), egoistic values (EV), and biospheric values (BV) (Stern et al., 2000). The next stage involves beliefs which include new ecological paradigm (NEP), awareness of consequences (AOC), influencing ascription of responsibility (AOR). Following is the formation of personal norms (PN), which describes the duty to act in environmentally friendly behaviour to reduce the negative environmental impacts (Liu & Wu, 2020). It has an ultimate impact on pro-environment behaviour and intention. According to VBN theory, if a person believes that environmental attributes will cause some negative or positive consequences to the objects he values, while he or she could reduce this threat, then personal norms can be generated through this behaviour. In this case, environmental behaviour is more likely to be enforced (Snelgar, 2006). However, according on the research of Steg et al. (2011), NEP does not have a significant contribution on the variables while the value can be a well predictor on variables in VBN theory. Thus, NEP will be excluded in our research context.

2.1.2 Theory of Planned Behaviour (TPB)

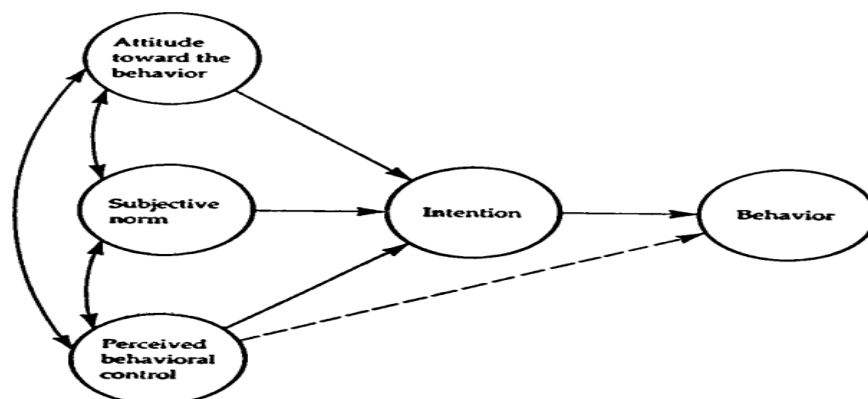


Figure 2.2: Theory of Planned Behaviour Model

Adapted from Ajzen, I., 1991. The theory of planned behaviour. *Organ. Behav. Hum. Decis. Process.* 5U (2), 1/9-211.

Theory of planned behaviour (TPB), introduced by Icek Ajzen in 1985, has become a prevalent framework for investigate individual behaviour (Si et al., 2019). Ajzen (1991) derived TPB from Theory of Reasoned Action. Based on Savari and Gharechae (2020), TPB offers an insightful structure to better comprehend the drives behind one's personal behaviour. Most research have found that intention is a good predictor of actual environmental behaviours in TPB (Savari & Gharechae, 2020). TPB stated that people's intention to action is primarily determined by three factors which are attitude, subjective norms, and perceived behaviour control (Soorani & Ahmadvand, 2019). According to Ajzen (1991), an individual's attitude towards a certain behaviour might be favorable or unfavorable, depending on how positively or negatively they view the action. The subjective norm includes perceived social pressure for action and an individual's views on the importance of certain people. Perceived behaviour control refers to the perceived difficulty or ease of an action, influenced by prior experience or anticipated obstacles. Hence, TPB effectively predicts behavioural intention by considering individual, social, and environmental factors (Koshkaki & Zarei, 2018). Moreover, prior research has proven TPB's usefulness in explaining eco-friendly clothing (Chang & Watchravesringkan, 2018; Chaturvedi et al., 2020). Thus, this research used the TPB model as a part to examine the factors that influence behavioural intentions to use recycled clothes.

2.1.3 Integrating VBN and TPB Theory

Based on our research topic, combining VBN and TPB will be an appropriate integrated theory for this study. Bigliardi et al. (2020) tested the combination of VBN theory and TPB to understand consumers' willingness to buy recycled products and suggest that it remains important in researching individuals' intention to use recycled products. Additionally, Hein (2022) has mention on adding more related variables and theory to achieve a more completed picture on the intention of consumer instead of

using VBN theory only. Same as research of Hasbullah et al. (2022), they suggested that in future research on sustainable apparel should conduct the theories or dimensions that can covered the internal, external, social dimensions. Apart from that, Yuriev et al. (2020) claimed that while TPB emphasizes attitudes, individual intentions for green actions are also significantly shaped by internal factors not covered by TPB theory, such as self-identity, connection to nature, and moral obligations. Thus, TPB may have limited predictive power, and we will need to incorporate VBN to provide strong support for our research. This integration theory can demonstrate a holistic way on how people's values, beliefs, and personal norms shape their attitude towards the intention to use recycled clothes.

2.2 Review of Variables

2.2.1 Dependent Variable (DV)

2.2.1.1 Intention to Use Recycled Clothes (ITU)

Behavioural intention is "an indication of a person's preparedness to participate in a certain behaviour" (Ajzen, 2002). Besides that, the phrase "intention" is used to describe a person's propensity to participate in a certain behaviour (Sultan, 2021), and his willingness to expend the necessary effort to carry out that behaviour (Nimri et al., 2020). Ajzen (1991) stated that usage intention is an action plan that facilitates the achievement of a specific objective. Based on PAVLIĆ et al. (2014), intention can be measured using a straightforward criterion (a user is likely to do an action) or criteria with additional characteristics (select among several activities). Apart from that, Mailizar et al. (2021) used behavioural intention to define the desire to adopt technology in the future. Shen et al. (2022) claim that behavioural intention pertains to the probability that students will utilize AR (Augmented Reality) /VR (Virtual Reality) applications for educational purposes. Hence, in our

context, intention is a variable that evaluates whether Generation Z have any plans to use recycled clothes.

2.2.2 Independent Variables (IVs)

2.2.2.1 Altruistic Values (AV)

AV is referring to the practise of self-sacrificing activities for the benefit of others or anything other than oneself, regardless of any outcomes (Conte et al., 2021). Werff & Steg (2016) stated that people with AV centre on consideration of the costs and benefits of others and act in a pro-environmental manner to benefit others. They aim to have a positive impact on the people and objectives they valued, and these take precedent over self-consideration (Werff & Steg, 2016). According to the Pinto et al. (2019), they found that the AV have a significant impact on the decision of purchasing green product. Thus, in our context, AV are utilised to investigate Generation Z's genuine care for the well-being of others, notably in terms of recycled clothes.

2.2.2.2 Egoistic Values (EV)

EV is defined as self-interest towards society and encompasses power, riches, and influence (Ghazali et al., 2019). Individual influenced by EV focus only on the interests that affect them and are usually more self-centred (Stern et al., 1999). In contrast to AV, individuals assessing personal costs and benefits in green consumption prioritize their own interests, rather than making environmentally conscious purchases without personal sacrifice (Sivapalan et al., 2021). In the aspects of EV, consumer values that consider the functionality, economy, conditionality, and aesthetics of a product are more important to them. Moreover, Prakash et al. (2019) stated that EV is a significant variable which will influence purchase intention towards eco-

friendly package product. Therefore, in our context, EV are used to explore whether Generation Z will influence their decisions on recycled clothes by prioritizing personal interests.

2.2.2.3 Biospheric Values (BV)

BV refers to the individual's great concern towards nature and environment and consider the environment interests as a priority (Werff & Steg, 2016). Furthermore, individuals with BV primarily focus their attention on the non-human elements of the environment. As stated from Choi et al. (2015) the perceived advantages and costs for the biosphere, is important to the individual with high BV while they are willing to sacrifice their own benefits to have a better environment. In addition, BV was observed to have a larger effect on customers' pro-environmental attitudes and behaviours. (Hein, 2022), it is an important element to predict on individual's environmental attitude. Hence, BV are employed in our study to explore Generation Z's intrinsic connection to nature and their drive to engage in ecologically friendly practises, particularly in the field of recycled clothes.

2.2.2.4 Awareness of Consequences (AOC)

The belief that environmental problems have negative consequences that endanger other people, other species, or the biosphere is referred to as AOC (Hansla, 2011; Ghazali et al., 2019). Wahid et al. (2022) argue that an individual's awareness of consequences is primarily shaped by their perception of the outcomes resulting from their actions. In simpler term, it refers to the circumstances where an individual believes that their actions could potentially cause harm or worsen existing problems. Based on Choi et al. (2015), they defined AOC as the awareness of negative environmental consequences that individuals place a high value on. Additionally, Choi et al. (2015) stated that AOC is useful in predicting pro-environmental behaviour. Thus, AOC refer to Generation Z's awareness of the adverse environmental consequences associated with clothing production.

2.2.2.5 Ascription of Responsibility (AOR)

Opinions, beliefs, and presumptions about who should take responsibility for specific situation are known as AOR (Stern et al., 1999). It refers to the occurrence of adverse consequences caused by the individual's failure to adopt pro-social behaviours, and he believes that he has a certain responsibility for reduce such adverse situation (Wahid et al., 2022; Choi et al., 2015). This concept is used to evaluate someone's capability to accept responsibilities. Attribution of responsibility is the process of determining who is more to be responsible for a situation or who is more responsible for carrying out a task. The AOR often manifests itself when a person is faced with a situation that calls for taking responsibility (Ariestiningsih et al., 2018). Based on Hein (2022), the AOR of consumers is an important trigger in environmental behaviour. Therefore, in our context, AOR refer to how Generation Z perceives their role in addressing environmental concerns by using recycled clothes.

2.2.2.6 Personal Norm (PN)

PN represents the morality and obligations that individuals consider when engaging in the behaviour (Stern et al., 1999). A person's self-concept is intrinsically linked to their PN, which may be described as the individual's own set of beliefs (Ajzen., 2002). According to Chaturvedi et al. (2020), PN are one's perceptions about oneself and might be seen as a moral responsibility to behave rightly. Additionally, PN is identified as an individual's internal moral factor (Han & Hyun, 2018). Based on Sandhu et al. (2019), an individual pride and shame are associated to PN. For instance, obedience can bring about feelings of pride, while disobedience can bring about feelings of guilt and shame. Apart from that, based on Fauzi et al. (2022), PN relates to the extent to which an individual should actively participate to the underlying issues and make significant effort to address environmental issues. PN were discovered to be a variable that leads to the adoption of green products (Nguyen et al., 2017; Chaturvedi et al., 2020).

Thus, PN in our context refers to Generation Z's moral viewpoint and ethical commitment to sustainable practices in the recycled clothing industry.

2.2.2.7 Attitude (ATT)

ATT is interpreted as a positive or negative appraisal of a particular behaviour (Ajzen., 1991). It is determined by the function of salient beliefs, which can be influenced by inferential process, secondary data, or observation (Abbasi et al., 2020). Additionally, attitude includes emotional factor and cognitive factor. The emotional element refers to how one feel about a certain behaviour, and the cognitive factor refers to ones understanding of why a particular conduct is the way it is (Wang et al., 2019). Apart from that, Verma and Chandra (2018) used the TPB to find that ATT is the most significant predictor of visitors' intentions of staying in eco-friendly hotels. Kim et al. (2021) defined ATT as the fundamental orientation of personal dislikes and likes toward phenomena, objects and people, implying that it is the foundation for consumer behaviour. Hence, ATT in this research refers to consumers' overall favourable or unfavourable evaluation towards using recycled clothes.

2.2.2.8 Subjective Norm (SN)

SN are the belief that individual, as defined by society or a group of powerful individuals, approve of a particular action. SN are social pressures that drive individuals to behave according to others' opinions (Bigliardi et al., 2020). According to Belanche et al. (2019), SN is an individual's perception of how significant others, like family, colleagues, and friends, view a behavior, influencing their motivation to conform to those expectations and beliefs. Fishbein et al. (2011) claimed that SN must take in to account both subjective descriptive norm and subjective injunctive norm. Subjective descriptive norm refers to key referents' behaviour in a

specific social situation. Subjective injunctive norm relates to socially accepted or unapproved behaviours. Likewise, Wang et al. (2022) stated that the SN primarily include recycled product recognition, the recycled product market environment and applicable government promotion policies. Many studies observe that SN have a significant role to predicate the intention in environment friendly industry. For illustration, SN can determine purchase intention for sustainable clothes (Rausch & Kopplin, 2021) and intention to participate e-waste online recycling (Wang et al., 2019). Therefore, SN refer to how Generation Z responds to the expectations of their social circle in the ITU of recycled clothes.

2.2.2.9 Perceived Behaviour Control (PBC)

PBC measures an individual's ability to control conditions that enable or limit their behaviours in a given situation (Ajzen, 1991). Generally, PBC is related with how simple or complex a given activity appears to the one who is attempting to perform it. In addition, Wang et al. (2021) proposed that PBC involves both external and internal perception factors. External perception factors include energy, time, cost, and other aspects, whereas internal factors primarily relate to knowledge, skills, confidence and information identification. Based on Ajzen (2002), PBC should consider controllability and self-efficacy. Controllability refers to a person's perception of whether the behaviour is completely under control (Liu et al., 2020). Self-efficacy is defined as an individual's perceived confidence and ease in carrying out a specific behaviour (Liu et al., 2020). Apart from that, many study is widely believed that PBC is a crucial determinant of energy-saving intention (Ru et al., 2018), intention of garbage sorting (Wang et al., 2021), intention to reduce PM2.5 (Ru et al., 2018). Thus, in our research, PBC can reflect a consumer's willingness to embrace recycled clothes when presented with the ease-of-use factors.

2.3 Proposed Theoretical

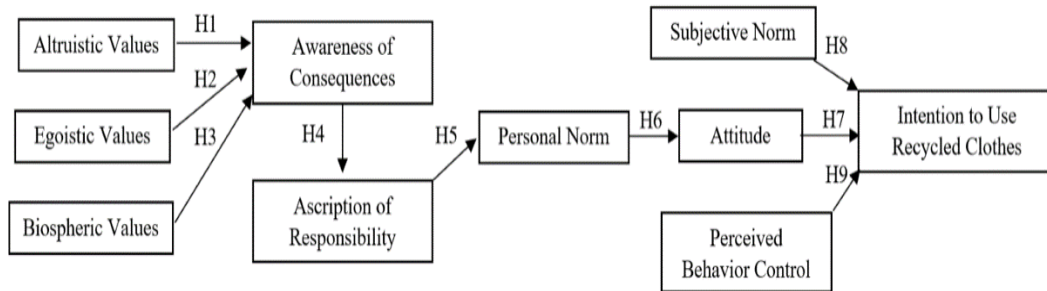


Figure 2.3: Proposed Research Framework

Based on the figure 2.3, the independent variables (IVs) are altruistic values (AV), egoistic values (EV), biospheric values (BV), awareness of consequences (AOC), ascription of responsibility (AOR), personal norm (PN), attitude (ATT), subjective norm (SN) and perceived behaviour control (PBC). The dependent variable (DV) is the intention to use recycled clothes (ITU). From this framework, it shows that the IVs affect the DV.

2.4 Hypothesis Development

2.4.1 Relationship Between Values and Awareness of Consequences

According to Stern et al. (1999), there is a causal relationship between consequence awareness and value orientation. Everyone tends to gravitate towards information that is consistent with their value orientation and overlook information that is inconsistent with their value. Therefore, AOC will emerge differently based on individual's personal values (Hansla et al., 2008). In context of Malaysia, the study by Ghazali et al. (2019) that consist of two ethnic groups pro-environmental, they found that in both racial AV and BV has influenced AOC. According to De Groot et al. (2008) which

study on relationship between value orientation with beliefs and norm, and De Groot et al. (2008) which research on reducing car use, EV has found to have contributed significant to the explanation of AOC. Furthermore, Choi et al. (2015) claims that BV has a significant impact on AOC. Individuals with a higher BV had a strong pro-environmental belief which influence individual norm to have intention to visit green hotel. Additionally, De Groot and Steg (2007) showed that AV, EV, and BV have significant contribution to the AOC among the investigated countries. These findings stated that AV, EV, and BV have an impact on customers become aware of the negative effects on the environment due to a variety of factors. Anticipately, Generation Z with high AV, EV, and BV is expected to develop an AOC as a result of their clothing choices, which will influence the environment. Thus, based on these studies, we proposed the hypothesis:

H1: There is a significant relationship between AV and AOC.

H2: There is a significant relationship between EV and AOC.

H3: There is a significant relationship between BV and AOC.

2.4.2 Relationship Between Awareness of Consequences and Ascription of Responsibility

According to Stern (2000), individuals who are aware that certain circumstances may endanger the environment will feel a feeling of responsibility and will wish to take action to avoid these consequences. For instance, once an individual realized that resource depletion is caused by water waste, a person may feel responsible for this issue. Moreover, Shin et al. (2018) proposed a causal chain which increased in AOC leads to greater AOR. Wahid et al. (2022) also found that AOC is a factor of AOR. In other words, learning that actions leading to environmental damage result in negative outcomes may make a person feel responsible (Wahid et al., 2022). Besides that, according to Fenitra et al. (2022), there is a positive relationship between AOC and AOR. When the tourist that visit to park

aware that their action of littering might affect the environment of the park, they will feel responsible to prevent this by taking some action. Based on previous research, the result shows that the effects of AOC on AOR are significantly positive when investigating purchase intentions for recycled products (Hein, 2022). Similarly, in our context, Generation Z individuals who possess an awareness of the environmental consequences associated with clothing production will feel a responsibility to address these issues through the use of recycled clothing. Therefore, we posit:

H4: There is a significant relationship between AOC and AOR.

2.4.3 Relationship Between Ascription of Responsibility and Personal Norm

As mentioned before, in VBN theory, individuals' beliefs create a moral obligation to act within its beliefs (Stern, 1999). When they feel responsible for a negative situation, they will form a moral responsibility to behave in pro-environmentally (Wahid et al., 2022). Besides that, the relationship between AOR and PN has been prove by previous studies. For instance, Carfora et al. (2021) study on intention of purchase natural food has found that there is a significant relationship. Furthermore, a study on intention to visit green hotel also proven that AOR significantly influence the PN (Fauzi et al., 2022). Additionally, in the study context of recycled product from Hein (2022), the relationship of AOR links to PN has been stated same as the others study. As expected, Generation Z who are responsible for environmental conservation will have a moral obligation to choose recycled clothes. With these supports, hypothesis is developed:

H5: There is a significant relationship between AOR and PN.

2.4.4 Relationship Between Personal Norm and Attitude

PN were viewed as an extension of attitudes by Ajzen (2005). Nonetheless, he discovered that PN require to via ATT to having a significant link with intentions. Besides that, PN and moral norms are used interchangeably (Munerah et al., 2021). Ru et al (2019) stated that personal moral norms better predict people's ATT. Individual moral orientation determines his or her perspective and evaluation of specific events (Ru et al., 2019). Arundati et al. (2020) claim that people will adopt a positive ATT towards the environment as a result of their moral obligations towards society and the environment. According to Ru et al. (2019), people who have positive personal moral norms will have a positive ATT towards reducing PM2.5. Correspondingly, personal moral norms were discovered to have a strong positive effect on the intention of Gen Z customers to purchase recycled clothing (Chaturvedi et al., 2020). People will be more committed and hold a positive ATT about recycled clothes if they sense a moral obligation to participate in it. Considering this, this present study hypothesized that:

H6: There is the significant relationship between PN and ATT.

2.4.5 Relationship Between Attitude and Intention to Use

ATT plays a vital role as a predictor of behavioural intention (Koay et al., 2022). When someone has a strong preference ATT for a particular behaviour, it will positively influence their intention, otherwise it will negatively affect their intention (Yu et al., 2018). It is the most significant factor of behaviour since a more favourable ATT will motivate an individual to engage in a certain behaviour (Fauzi et al., 2019). Lee et al. (2020) reported that consumers' intentions to rent clothing online are positively associated to their ATT. Wang et al. (2022) revealed, in a study similar to our research, that a person's ATT towards the use of recycled products positively influence individual behavioural intentions. Predictably, if a

person feels that recycled clothes are improve and meaningful to the environment, he or she will keep a good ATT and may establish a behavioural intention to use recycled clothes. Hence, we hypothesized that:

H7: There is a significant relationship between ATT and intention to use recycled clothes.

2.4.6 Relationship Between Subjective Norms and Intention to Use

A person's intentions are typically shaped by the approval or disapproval of other individuals they consider important, such as family, colleagues, friends, and significant others (Fauzi et al., 2022). Generally, if people think that their significant others would approve of a behaviour, they will experience social pressure to adopt and implement that behaviour. Si. et al. (2019) demonstrated that SN has a positive impact on intention of sustainable bike usage. Ateş (2020) revealed that the people who have a powerful perceived SN from significant people have high degree of intention to conduct in an ecologically responsible manner. In the case of recycled clothes, if recycled clothes are perceived as a socially desirable action, the person is more willing to use it. Hence, we postulate:

H8: There is a significant relationship between SN and intention to use recycled clothes.

2.4.7 Relationship Between Perceived Behaviour Control and Intention to Use

The influence of PBC on behavioural intention stems from an individual's capacity and available opportunities to perform a particular action (Fauzi et al., 2022). Liu et al. (2020) found that people are more likely to engage in

simple and under-control actions than complex and outside-control ones. Based on Kumar (2021), customers who have the necessary time, resources, and opportunity are more willing to purchase green products. According to Ateş (2020), in the environmental sector, the primary reasons for environmentally friendly consumers refrain from buying pro-environmental products may be explained by higher pricing and lower availability. Chaturvedi et al. (2020) stated that the purchase intention of recycled clothing is strongly influenced by PBC. Liu et al. (2020) observed individuals with a high level of control over these obstacles or discomforts have a higher behavioural intention. Evidently, if a person does not believe that he or she can successfully carry out recycled clothes of workable, the likelihood of establishing an intention to use recycled clothes is quite low. Thus, we develop a proposed hypothesis:

H9: There is a significant relationship between PBC and intention to use recycled clothes.

2.5 Conclusion

This chapter deeply explained the theories and developed a new framework. It investigated each variable that could influence the intention to use recycled clothes and their relationships by examining relevant articles.

CHAPTER 3: METHODOLOGY

3.0 Introduction

This chapter covers our research methodology, including 3.1 research design and 3.2 sampling design, 3.3 data collection method, and 3.4 proposed data analysis tools.

3.1 Research Design

Research design is a technique used to make sure that the data collected in a systematic way and effective in solving the research problem (Abbott & McKinney, 2013). Descriptive research is an instrument enable researchers to find out more about a specific population or topic by gathering and observing data on it. It provides a comprehensive and accurate picture of an individual's characteristics and behaviors within a specific sample population. It is an efficient method to gather data that may be used in developed hypotheses and propose linkage (Marczyk et al., 2005; Dudovskiy, 2018). Hence, this method can help to examine the collected data from target population respondent to explain the variables and hypothesis in our study.

Moving on, quantitative research approach is the practice of gathering and analyzing numerical data and expands findings to a wider population with utilizing statistical analysis to reach the findings. The use of statistics and formal, systematic measurement are key components in quantitative research (Marczyk et al., 2005). Thus, quantitative research approach is used in our study to investigate on the developed hypothesis among value, belief, norm towards intention to use recycle clothing.

3.2 Sampling Design

3.2.1 Target Population

Target population is a selected group of units with a specific definition and same characteristics that will use the survey data to make inferences. The definition determines whether the sampled case meets the investigation requirement (Lavrakas, 2008). In this study, the target population will be Malaysia Generation Z between 16 years old and 26 years old. Generation Z is the largest age group in Malaysia which comprising of 29% of population and having a \$327 million of monthly disposable income (Tjiptono et al., 2020). Additionally, Generation Z has a strong spending power which has reach \$100 billion in globally (Vase.ai, 2022). These individuals have been selected as target respondent based on previous result of surveys shows that majority of Generation Z consumers like sustainable companies and will be more willing to spend on environmentally friendly product according to their own values (Gomes et al., 2021). Moreover, according to Noor (2017), it has found out that Malaysia Generation Z has aware green lifestyle and have the intention to buy a environment friendly product. Besides that, Kim et al. (2022) stated that 90% of Generation Z who make up the next generation of consumers agree that brands in the fashion sector should express their position on environmental concerns. Hence, Generation Z will be our target population.

3.2.2 Sampling frame and Sampling Location

Since our study has a large scope which focusing on Generation Z in Malaysia, sampling frame is not applicable in our study. Malaysia Generation Z between 16 years old and 26 years old is in a large amount and it is impossible to obtain a full information detail. Thus, research questionnaires will be disseminated online via Google Forms, as the internet

offers the advantage of being geographically unrestricted, enabling us to reach a broader range of locations.

Moving on, as said by Uzir Mahidin, head statistician of the Department of Statistics Malaysia (DoSM), the five economic best-performing states were Penang with a 6.8% growth rate, Selangor with 5%, Terengganu with 3.6%, Perak with 3.5%, and Kedah with 3.2% (FMT, 2022). Since consumer spending is one of the important factors that enhancing the economy performance, focus on these areas with great economy growth can explore the potential opportunity of recycled clothes in market. As a result, based on this data statistic, the sampling locations for this study are Selangor, Penang, Terengganu, Kedah, and Perak.

3.2.3 Sampling Size

Sample size is a term to define the number of respondents that participate in our research to represent a population. According to Worldometer (n.d.) latest update, Malaysia current population has reached 33,550,724 people; while there is 29% of the population in Malaysia is Generation Z. Determining an appropriate sample size is important, it can avoid invalid results that do not represent the reality of the study population. Conversely, a sample that is too large will also result in an increase in the required involving cost. Thus, we have referred to sample size table that calculated with using Krejci and Morgan's formula to confirm sample size for our study.

$$\text{Gen Z Population} = \text{Malaysia Population} \times 29\% = 9,729,710$$

Based on the Figure 3.1, sample size table, we decide the sample size will be 384 to represent the population of 9.73 million Generation Z.

Population Size	Confidence 95.00%				Confidence 99.00%			
	Degree of Accuracy/Margin of Error				Degree of Accuracy/Margin of Error			
	0.05	0.035	0.025	0.01	0.05	0.035	0.025	0.01
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
900	269	419	568	823	382	541	672	854
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
264,000,000	384	784	1537	9603	663	1354	2654	16586

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), 607–610.

3.2.4 Sampling Technique

Non-probability sampling refers to sampling technique that involves selecting members of a sample group based on the accessibility of the sample or the judgment of the researcher. Dudovskiy (2018) claimed that not every member of a population can participate in research. In our research, non-probability sampling technique – snowball effect method has

been chosen. By using this method, those respondents involved in research can nominate others as potential sources to participate in research. Since it can be difficult to reach a large number of people when we conduct population research, through this method, those first respondents who participate in the research can nominate others as potential sources to participate in the research to help successfully reach more population (Simkus, 2023).

3.3 Data Collection Method

3.3.1 Primary Data

Primary data information is referred to the process of collecting data directly from a first-hand resource or data such as questionnaires, interview, and observations for a specific objective (Ajayi, 2017). In this study, questionnaires will be the instrument tools with Google Form to collect the primary data from the target respondents without having interactions with researcher.

3.3.2 Questionnaire Design

The questionnaire will be distributed via Instagram, WhatsApp, and Facebook using Google Forms in English. Refer to Appendix 3.1, our survey consists of two primary sections: Section A and Section B. Section A aims to gather demographic data from respondents through six questions covering gender, age, location, education level, employment status, and income level. According to Table 3.1, Section B comprises 62 questions that assess Generation Z's intention to use recycled clothing, focusing on both independent and dependent variables. The questions in Section B were designed using a seven-point Likert Scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Table 3.1

Sources of Measurement Items

Variables	Items		Sources
Altruistic Values	AV1	I am concerned about environmental problems because I believe that the consequences will affect everyone.	Ghazali et al. (2019)
	AV2	I am concerned about environmental problems because I believe that everyone should free from environmental issues.	
	AV3	I am concerned about environmental problems because I believe that everyone has the equal opportunities to enjoy a sustainable future.	
	AV4	I am concerned about environmental problems because I believe that the consequences will affect the people in the community.	
Egoistic Values	EV1	I am concerned about environmental problems because of the people around me inspire me to protect the environment.	García et al. (2021)
	EV2	I am concerned about environmental problems because it is important for the community	Ghazali et al. (2019)

		to promote the well-being of the people and the planet.	
	EV3	I am concerned about environmental problems because it improves my standard of living.	
	EV4	I am concerned about environmental problems because of the rights of being socially responsible.	
Biospheric Values	BV1	I am concerned about environmental problems because preventing pollution is my responsibility.	Ghazali et al. (2019)
	BV2	I am concerned about environmental problems because respecting the Earth is my responsibility.	
	BV3	I am concerned about environmental problems because being environmental friendly is my responsibility.	
	BV4	I am concerned about environmental problems because protecting the environment is my responsibility.	
Awareness of Consequences	AOC1	I think global warming is a real problem for the society.	Ghazali et al. (2019)

	AOC2	I think environmental pollution is a problem for the society.	
	AOC3	I think it will be difficult to change people's habits if recyclable products cannot be promoted in time.	Wang et al. (2020)
	AOC4	I think using recycled clothes can reduce environmental pollution.	
	AOC5	I think using recycled clothes can reduce resource waste.	
	AOC6	I think buying recycled clothes will be advantageous for our country.	Hein (2022)
	AOC7	I think the quality of the environment will improve if people buy more recycled clothes.	
Ascription of Responsible	AOR1	I am responsible for environmental pollution.	Hein (2022)
	AOR2	I am responsible for the increase in environmental pollution.	
	AOR3	I am responsible for environmental pollution together with the government and industry.	
	AOR4	I am responsible for environmental pollution that	

		caused by textile waste from clothing.	
Personal Norm	PN1	I feel that I should protect the environment.	Ghazali et al. (2019)
	PN2	I feel it is important that people in general protect the environment.	
	PN3	I feel an obligation to do something to help future generations.	
	PN4	I feel an obligation to behave in an environmentally friendly because of my own values and beliefs.	
	PN5	I feel an obligation to conserve natural resources as much as possible.	
	PN6	I feel an obligation to use recycled clothes where possible.	Yıldırım et al. (2019)
	PN7	I feel a strong personal obligation to use recycled clothes.	
Subjective Norm	SN1	Most people think that I should use recycled clothes.	Carfora et al. (2021)
	SN2	Most people would prefer me to use recycled clothes.	
	SN3	Most people started to use recycled clothes.	

	SN4	Most people who are important to me would want me to use recycled clothes.	Yadav et al. (2016)
	SN5	Most people who are important to me would think I should use recycled clothes.	
	SN6	Most people who are important to me have started using recycled clothes	Wang et al. (2020)
	SN7	Experts in related fields call for the usage of recycled clothes.	
	SN8	Public advocates the usage of recycled clothes.	
Perceived Behaviour Control	PBC1	I have the financial resources to use recycled clothes.	Carfora et al. (2021)
	PBC2	I have the opportunity to use recycled clothes.	
	PBC3	I have the knowledge to use recycled clothes. .	
	PBC4	I have control over whether I use recycled clothes or non-green clothes.	
	PBC5	If I want to, I have no trouble to use recycled clothes.	Yadav et al. (2016)
	PBC6	I think using recycled clothes is easy for me.	

	PBC7	It depends on me whether I influence others to use recycled clothes.	
Attitude	ATT1	I would prefer to use the clothes that made with recycled materials.	Prakash et al. (2019)
	ATT2	I would wish to use recycled clothes.	
	ATT3	I would use recycled clothes even if they belong to a less well-known company.	
	ATT4	I think that using recycled clothes is a good move.	Wang et al. (2020)
	ATT5	I think that using recycled clothes is beneficial.	
	ATT6	I think that using recycled clothes is delightful.	
	ATT7	I think that using recycled clothes is wise.	
	ATT8	I think that using recycled clothes is meaningful.	
Intention to Use	ITU1	I am positive towards using recycled clothes.	Hein (2022)
	ITU2	I have the intention of using recycled clothes.	
	ITU3	I think it is a good idea to use recycled clothes.	

	ITU4	I would like to use recycled clothes.	Wang et al. (2020)
	ITU5	I will insist on using recycled clothes in the future.	
	ITU6	I will lead the people around me to use recycled clothes.	
	ITU7	I will be more cooperative with the usage of recycled clothes.	

3.3.3 Pre-Test

Pretesting is a crucial role in survey research, where survey questionnaires are tested on lecturer to assess reliability and validity of survey instruments, improve data collection, and enhance quality of research, using a variety of methods (Hu, 1970). As a result, we obtained two lecturers' opinions to assist us in identifying any inaccuracies or shortcomings in the questionnaires.

3.3.4 Pilot Study

Based on Ruel et al. (2016), a pilot study is a crucial stage in research that assesses the potential of a future project before undertaking large-scale quantitative research. It helps identify potential problems and assess the feasibility of the project, allowing researchers to make final revisions before full-scale investigation. Memon et al. (2017) recommended a sample size of 30 individuals to ensure that the sample mean closely approximates the population mean in the target population. Thus, this pilot study involved distributing 30 set questionnaires to individuals from Generation Z through

online. The collected data was analyzed by SmartPLS 4 software to assess composite reliability test and interpreted in Table 3.2.

Table 3.2
Reliability Analysis for Pilot Test

Variable	Number of Item	Cronbach's Alpha Values	Results of Reliability	
Dependent Variable (DV)	ITU	7	0.965	Good
Independent Variables (IV)	AV	4	0.952	Good
	EV	4	0.897	Good
	BV	4	0.965	Good
	AOC	7	0.889	Good
	AOR	4	0.930	Good
	PN	7	0.939	Good
	ATT	8	0.975	Good
	PBC	8	0.928	Good
	SN	7	0.933	Good

3.4 Proposed Data Analysis Tool

3.4.1 Descriptive Analysis

Based on Bhattacharjee (2012), descriptive analysis is a statistical methodology for collecting, summarising and describing data employing measures such as central tendency and variability. The calculation of central tendency and variability of the data aims to facilitate a more convenient understanding of the information. The central tendency is represented by the mean, mode, and median, whereas the variability is represented by the range, variances, and standard deviation. Researchers can use descriptive analysis

to identify associations and trends in data, make conclusions, and develop new hypotheses.

The researchers in this study utilized descriptive analysis to simplify the raw data collected from the survey questionnaire into a comprehensible and interpretable form. This is accomplished through rearranging, ordering, and manipulating the data to produce descriptive information. Furthermore, the data that has been converted will be presented in a clear and concise graphical format such as tables, bar charts, pie charts, and so on. For instance, demographic data collected from the survey questionnaire, such as gender, age, state, education level, employment status, and income level, can be effectively presented to readers through a pie chart, enabling easy comprehension.

3.4.2 Inferential Analysis

According to Bhattacharjee (2012), inferential statistics refer to statistical methodology that are used a sample of data to draw conclusions or predictions about a population. A seven-point Likert Scale is commonly employed to rank variables on a continuum from low to high extremes in inferential analysis. It is a tool for measuring the relationship between variables. This method is specifically intended to test hypotheses, as opposed to descriptive statistics which only describe the data.

This study utilizes inferential analysis to measure values, beliefs, norms, attitudes, perceptions, and intentions, where the variables are rated on a seven-point Likert Scale ranging from the lowest level of 1 to the highest level of 7. The gathered data can undergo inferential statistical analysis to make inferences about the population under investigation by assigning scores to statements or questions based on this measurement scale.

3.4.3 Structural Equation Modelling (SEM)

According to Deng et al. (2018), SEM commonly used to analyse social, behavioural and health science data that containing many variables. It can help researchers to easily measure and investigating at correlations between variables that are visible and latent with a large enough sample size. Confirmatory factor analysis and path analysis are two statistical techniques that merge into a SEM (Fan, et al., 2016). The goal of confirmatory factor analysis is to assess hidden psychological qualities like satisfaction and attitude. On the other hand, route analysis makes use of a path diagram to identify the causal connection between various variables.

Furthermore, SEM can be distinguished as variance-based SEM (PLS-SEM) and covariance-based SEM (CB-SEM) (Henseler, et al., 2016). According to Dash and Paul (2021), PLS-SEM proves to be a suitable methodology when the research aims to foster theory development and predictive capabilities. In contrast, CB-SEM should be used wherever possible to test and validate (or reject) theories. As a result, SmartPLS 4 will be used to apply partial least square structural equation modelling (PLS-SEM) to this research investigation. By using PLS-SEM, measurement model and structural model need to be accessed.

3.4.3.1 Measurement Model

Mustafa et al. (2020) employed four evaluations to assess the measurement model: composite reliability (CR) for internal consistency, outer loading for reliability, average variance extracted (AVE) for convergent validity, and heterotrait-monotrait ratio of correlations (HTMT) for discriminant validity. CR focuses on individual variable reliability with values between 0.6 and 0.7 indicating satisfactory variable dependability (Hair et al., 2020; Hensele&,Sarstedt, 2013). According to Hair et al. (2021), each variable's item reliability can be evaluated by evaluating OL, with validity recognised

for indicators greater than 0.708. Indicators with OL below 0.4 are to be discarded; if OL falls between 0.4 and 0.7, their use depends on AVE and CR meeting standard values (Ramayah et al., 2018). AVE, as defined by Hair et al. (2020), measures the matching between variables and their indicators using a criterion of greater or equal to 0.50. Meanwhile, HTMT investigates a variable's ability to be distinguished from other variables within the model by using criteria values ranging from -1 to 1. (Janadari et al., 2016; Hair et al., 2020).

3.4.3.2 Structural Model

After measurement models are confirmed, then structural model can be proceeded. Structural model displays the relationships between the construct and how the latent variables are related to each other (Hair, et al., 2021). As strong correlations between each set of predictor constructs have the potential to affect both point estimates and standard errors, so it is crucial to perform variance inflation factor (VIF) and path coefficient calculations to check the structural model regressions for any potential collinearity issues. According to Hair, et al. (2021), if VIF values more than 5, it is a warning sign of potentially harmful collinearity between predictor constructs. Then, the path coefficients are to be used to estimate the hypothesised relationships between the constructs with relies on p-value, t-value, and R square value. The acceptable values for two tail tests: p-value < 0.01, t-value > 1.96, and R square value of 0.75, 0.50, and 0.25 are considered substantial, moderate, and weak (Hair, et al., 2021). In addition, F square (effect size) will used to measure the strength of the relationship between variables. Based Cohen (1988), small effect size (0.02), medium effect size (0.15), and substantial effect size (0.35) are the three levels of indication for F square.

3.5 Conclusion

To sum up, this chapter provide a detailed explanation of the research instrument that was utilised for this study.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

In this chapter, we use SmartPLS 4 to analyse and interpret the collected data, including demographic, measurement, and structural modelling analyses.

4.1 Descriptive Analysis

A total of 495 questionnaire has been distributed and there are 111 sets of questionnaires are invalid due to the filtering question. This research is only focused on Generation Z between 16 years old and 26 years old from 5 states in Malaysia which consist of Selangor, Perak, Penang, Kedah, Terengganu. Thus, only 384 sets of responds are qualified to conduct this research.

Based on Table 4.1, it indicates that there are 61.2% respondents (N=235) are female respondents while the rest of male respondents are 38.8% (N=149). In addition, 60.4% of the respondents (N=232) are aged between 21 – 26, 39.6% of respondents (N=152) are aged between 16 – 20. Among the 384 valid respondents, respondents from Selangor accounted for the largest portion of 39.8% (N=153), followed by 28.6% of respondents (N=110) from Perak, 16.9% of Penang respondents (N=65), 8.6% of respondents from Kedah (N=33) and 6% of Terengganu respondents (N=23).

Furthermore, for education level, 78.6% of respondents (N=302) achieve degree education, 18% of respondents (N=69) have the upper secondary education, while the remaining respondents are from diploma (N=8), master (N=4) and doctoral (N=1). Subsequently, majority of 89.8% respondents (N=345) are unemployed And 10.2% of respondents (N=39). Then, most of the respondents, 71.4% of them (N=274) income level is below RM500, income level between RM501 – RM1500

consist of 20.8% respondents (N=80), the rest of respondents are 4.7% (N=18) at income level of RM1501 – RM2500, 2.6 % of respondents (N=10) at income level of RM2501 – 3500, and 0.5% of respondents (N=2) at income level of RM3501 – 4500. Finally, a demographic question of “Are you aware of recycled clothes?” was collected. It shows that 80.2% of respondents (N=308) have aware on the recycled clothes and 19.8% of respondents (N=76) did not aware of recycled clothes.

Table 4.1

Demographic Summary Table

Variable		Count	Percentage
Gender	Male	149	38.8%
	Female	235	61.2%
Age	16 - 20	152	39.6%
	21 - 26	232	60.4%
State	Kedah	33	8.6%
	Penang	65	16.9%
	Perak	110	28.6%
	Selangor	153	39.8%
	Terengganu	23	6%
Education Level	Upper Secondary	69	18%
	Diploma	8	2.1%
	Degree	302	78.6%
	Master	4	1%
	Doctoral	1	0.3%
Employment Status	Employed	39	10.2%
	Unemployed	345	89.8%
Income Level	RM500 below	274	71.4%
	RM501 – RM1500	80	20.8%
	RM1501 – RM2500	18	4.7%
	RM2501 – RM3500	10	2.6%
	RM3501 – RM4500	2	0.5%
Awareness of Recycled Clothes	Yes	308	80.2%
	No	76	19.8%

4.2 PLS-SEM

4.2.1 Measurement Model Assessment

The measurement model is tested with (1) composite reliability (CR) for internal consistency, (2) outer loading for reliability, (3) average variance extracted (AVE) for convergent validity, and (4) heterotrait-monotrait ratio of correlations (HTMT) for discriminant validity.

4.2.1.1 Composite Reliability

As shown in table 4.2 below, the CR values of each variable range from 0.896 to 0.958. Since the values are more than 0.70, both variables are regarded to have achieved internal consistency reliability.

Table 4.2

Result of Reliability for Each Variable

Variables	No. Items	Composite Reliability	Reliability Level
AV	4	0.935	Good
EV	4	0.910	Good
BV	4	0.950	Good
AOC	7	0.896	Good
AOR	4	0.934	Good
PN	7	0.930	Good
SN	8	0.958	Good
ATT	8	0.955	Good
PBC	7	0.937	Good
ITU	7	0.956	Good

4.2.1.2 Outer Loadings

According to the table 4.3 below, OL were assessed to determine the reliability of each variable's items, and all values were higher than 0.7 with the exception of AOC 6. However, whereas AOC6 <- AOC 6 values range from 0.40 to 0.70, it is closest to 0.70 and its CR or AVE have up to standard, so it may be retained. This demonstrates that all item's reliability was good and supports to its specified variables.

Table 4.3

Result of Reliability for Each Variable's Indicators

	Outer loadings		Outer loadings
ATT1 <- ATT	0.809	ITU1 <- ITU	0.880
ATT2 <- ATT	0.880	ITU2 <- ITU	0.890
ATT3 <- ATT	0.770	ITU3 <- ITU	0.836
ATT4 <- ATT	0.866	ITU4 <- ITU	0.885
ATT5 <- ATT	0.865	ITU5 <- ITU	0.867
ATT6 <- ATT	0.896	ITU6 <- ITU	0.847
ATT7 <- ATT	0.871	ITU7 <- ITU	0.883
ATT8 <- ATT	0.853	PBC1 <- PBC	0.800
AOC1 <- AOC	0.732	PBC2 <- PBC	0.834
AOC2 <- AOC	0.741	PBC3 <- PBC	0.860
AOC3 <- AOC	0.793	PBC4 <- PBC	0.828
AOC4 <- AOC	0.779	PBC5 <- PBC	0.812
AOC5 <- AOC	0.746	PBC6 <- PBC	0.863
AOC6 <- AOC	0.690	PBC7 <- PBC	0.769
AOC7 <- AOC	0.720	PN1 <- PN	0.808
AOR1 <- AOR	0.890	PN2 <- PN	0.799
AOR2 <- AOR	0.880	PN3 <- PN	0.814
AOR3 <- AOR	0.877	PN4 <- PN	0.797
AOR4 <- AOR	0.888	PN5 <- PN	0.861

AV1 <- AV	0.906	PN6 <- PN	0.811
AV2 <- AV	0.856	PN7 <- PN	0.767
AV3 <- AV	0.901	SN1 <- SN	0.855
AV4 <- AV	0.875	SN2 <- SN	0.888
BV1 <- BV	0.902	SN3 <- SN	0.852
BV2 <- BV	0.895	SN4 <- SN	0.911
BV3 <- BV	0.918	SN5 <- SN	0.915
BV4 <- BV	0.923	SN6 <- SN	0.887
EV1 <- EV	0.729	SN7 <- SN	0.781
EV2 <- EV	0.880	SN8 <- SN	0.782
EV3 <- EV	0.878		
EV4 <- EV	0.894		

4.2.1.3 Average Variance Extracted

Referring to table 4.4 below, the AVE values are within 0.553 and 0.827. Since all the AVE values displayed exceed 0.5 and fall within the acceptable rang, the convergent validity is deemed to be well established. It shows that all the variables have been comprehensively characterised by the variance, evidencing the variables and the underlying indicators fit together well.

Table 4.4

Result of Alignment of Variables and its Indicators

Variables	No. Items	Average Variance Extracted	Result
AV	4	0.783	Accepted
EV	4	0.719	Accepted
BV	4	0.827	Accepted
AOC	7	0.553	Accepted
AOR	4	0.781	Accepted

PN	7	0.654	Accepted
SN	8	0.741	Accepted
ATT	8	0.726	Accepted
PBC	7	0.680	Accepted
ITU	7	0.757	Accepted

4.2.1.4 Heterotrait-monotrait Ratio of Correlations

Based on table 4.5 below, all the HTMT results in both models satisfy the specified criterion of being within the range between negative 1 to 1. Furthermore, most of the HTMT values are less than 0.9, which demonstrates that all variables in my study are distinct from each other.

Table 4.5

Result of Variable Distinctiveness

	ATT	AOC	AOR	AV	BV	EV	ITU	PBC	PN	SN
ATT										
AOC	0.725									
AOR	0.623	0.648								
AV	0.526	0.811	0.502							
BV	0.521	0.795	0.608	0.837						
EV	0.549	0.831	0.640	0.878	0.900					
ITU	0.888	0.665	0.598	0.499	0.506	0.538				
PBC	0.813	0.635	0.520	0.400	0.385	0.465	0.789			
PN	0.714	0.831	0.700	0.737	0.767	0.783	0.712	0.579		
SN	0.687	0.446	0.524	0.198	0.268	0.353	0.708	0.759	0.490	

4.2.2 Structural Model Assessment

4.2.2.1 Path Analysis

Table 4.6 shows the results of VIF values, path coefficients, T-statistics and P value for each variable and hypotheses. All the VIF values are within the acceptable range which are under the value of 5. Thus, there are no multicollinearity issues (Hair, et al., 2021). Furthermore, t-value that greater than 1.96 and a p-value that less than 0.01 is a requisite for two tailed tests in this research. Based on the results, t-values of all hypotheses are over 1.96, and the p-values are lesser than 0.01. Thus, all the hypotheses were substantiated since the t-value and p-value are within acceptable range. To summarize, all the hypotheses (H1, H2, H3, H4, H5, H6, H7, H8, H9) were supported after conducting path analysis from PLS-SEM analysis.

Table 4.6

Result of Path Analysis

	Path	VIF	T- Statistics	P-Value	Results
H1	AV → AOC	2.979	5.134*	0.000	Support
H2	EV → AOC	3.579	4.015*	0.000	Support
H3	BV → AOC	3.406	3.308*	0.001	Support
H4	AOC → AOR	1.000	12.649*	0.000	Support
H5	AOR → PN	1.000	12.458*	0.000	Support
H6	PN → A	1.000	18.847*	0.000	Support
H7	ATT → ITU	2.529	13.376*	0.000	Support
H8	SN → ITU	2.178	3.629*	0.000	Support
H9	PBC → ITU	2.937	2.672*	0.008	Support

*p < 0.01

4.2.2.2 R Square and F Square Effect Size

The R square value is a measure of how much of the variance of a dependent variable can be accounted for by an independent variable. Based on Table 4.7, the R square values of AOC (0.603), ITU (0.742) demonstrate the moderate predictive value of the model's exogenous constructs, while the remaining ATT (0.449), PN (0.413), AOR (0.334) consider as weak predictive value.

Table 4.7

Result of R Square

	R-square	Result
AOC	0.603	Moderate
AOR	0.334	Weak
ATT	0.449	Weak
ITU	0.742	Moderate
PN	0.413	Weak

In addition, effectiveness of each predictor variable in explaining endogenous variables is determined by F square. According to the Table 4.8, H4 (0.500), H5 (0.705), H6 (0.816), H7 (0.583) are larger than 0.35 which indicates as big effect size. Furthermore, H1 (0.080), H2 (0.053), H3 (0.049), H8 (0.045), H9 (0.032) are between 0.02 and 0.15. Thus, they considered as small to medium effect size.

4.3 Conclusion

This chapter concludes with interpretation and tables showing SmartPLS descriptive analysis, measurement model, and structural model results. As a result, our data is sufficiently reliable and valid, as well as 9 hypotheses generated in the preceding chapter were support.

Table 4.8

Result of F Square Effect Size

	AOC	Effect Size	AOR	Effect Size	PN	Effect Size	A	Effect Size	ITU	Effect Size
AV	0.080	Small to Medium								
EV	0.053	Small to Medium								
BV	0.049	Small to Medium								
AOC			0.500	Substantial						
AOR					0.705	Substantial				
PN							0.816	Substantial		
SN									0.045	Small to Medium
PBC									0.032	Small to Medium
ATT									0.583	Substantial

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter has summarized the statistical results and discuss the major findings in this research. In addition, theoretical and practical implications have been covered as well as the limitations and recommendations for this research will be explained to improve future studies.

5.1 Summary of Statistical Analysis

The results of all hypothesis testing (H1-H9) have been summarized and shown in table 5.1.

Table 5.1

Results of hypothesis testing

H1	There is a significant relationship between altruistic values and awareness of consequences.	<i>Supported</i>
H2	There is a significant relationship between egoistic values and awareness of consequences.	<i>Supported</i>
H3	There is a significant relationship between biospheric values and awareness of consequences.	<i>Supported</i>
H4	There is a significant relationship between awareness of consequences and ascription of responsibility.	<i>Supported</i>
H5	There is a significant relationship between ascription of responsibility and personal norm.	<i>Supported</i>
H6	There is the significant relationship between personal norm and attitudes.	<i>Supported</i>

H7	There is a significant relationship between attitudes and intention to use recycled clothes.	<i>Supported</i>
H8	There is a significant relationship between subjective norm and intention to use recycled clothes.	<i>Supported</i>
H9	There is a significant relationship between perceived behaviour control and intention to use recycled clothes.	<i>Supported</i>

5.2 Discussion of Major Findings

5.2.1 Demographics

Based on the results shown in Chapter 4, female respondents accounted for the majority of 61.2% among the respondents while male respondents consist of 38.8%. It might be due to the consciousness of female towards fashion industry more than male (Ibrahim, et al., 2012). Hence, in this research female respondents have more than male respondents. Since this research is aiming on Malaysian Generation Z, the age range of respondents fall between 16 to 26 years old. Most of the Generation Z in this research are from 21 to 26 years old and still pursuing their education which most respondents are from degree education level then upper secondary education level. This mean that the individual with a high education level might be more aware sustainability and willing to use recycled clothes. Furthermore, most of respondents are in a status of unemployed as well as their income level will be lower that might influence their intention to use recycled clothes since the income most likely are provided by parents as living expenses and pocket money.

In addition, only five states of Malaysia have been researched, which most respondents are from Selangor, then followed by Perak, Penang, Kedah, Terengganu. This indicates that the state with more population will have more individual that having the intention to use the recycled clothes. Hence, according to Department of Statistics Malaysia (2022), allocation of

respondent from targeted states Selangor, Perak and Terengganu are reasonable and acceptable to represent the population with having intention to use recycled clothes for respective states. However, although population of Kedah is larger than Penang, in this research the number of Penang respondents is more than Kedah. This may be due to the development of Penang is greater than Kedah, individual in Penang might have larger purchase powers and attractive consume environment which leads to the difference on intention to use recycled clothes.

Lastly, 80% of the respondents are aware of the existence of recycled clothes product which indicates that most of them has a sense of awareness toward sustainable product and this has in line with the statement of Jung et al. (2021). Thus, research results shown that Generation Z in Malaysia has a basic awareness of sustainable products, which means that recycled clothing has the potential to continue to grow in Malaysia.

5.2.2 Relationship Between Values and Awareness of Consequences

The findings show that each of the value, AV, EV, and BV has significant relationship with AOC. These results are consistent with the previous study of De Groot and Steg (2007) that in each of investigated country, AV, EV and BV has contribution towards awareness of consequences which proven that values orientations can ultimately impact belief and intentions that related to environmental behaviour. Furthermore, the statement from De Groot et al. (2008) and Ghazali et al. (2019) also indicates that values have significant relationship with AOC, EV have been discovered significantly impact on AOC in the topic of reducing car use, and the AV, BV are crucial component in the context of Malaysia. Hence, this study has explored and approved that these three values of Generation Z in Malaysia has led to an influence towards awareness of consequences such as air and water pollution, global warming, waste resources and so on.

5.2.3 Relationship Between Awareness of Consequences and Ascription of Responsibility

The results have shown that AOC has a direct impact on AOR in our study context. Malaysian Generation Z will feel that they are responsible for the environment changes when they have realized negative consequences appear in their surroundings. Based on the earlier studies, when an individual has noticed on adverse consequences happen, it will lead to the AOR which individual naturally form the sense of responsibility for some circumstances. For instance, tourist will be caution on his behaviour to avoid littering which cause negative impact on the park (Fenitra et al., 2022). Furthermore, according to Hein (2022), its study results have shown that AOR will affect by AOC regarding the purchase intention on recycled product. These studies have support that there is a significant relationship between AOC and AOR.

5.2.4 Relationship Between Ascription of Responsibility and Personal Norm

There is significant relationship between AOR and PN in the context of recycled clothes. Hence, it is proven that Malaysian Generation Z would form personal norm due to the sense of responsibility towards the adverse consequences which may lead to intention to use recycled clothes. The result in this research is consistent with the previous studies. According to Fauzi et al. (2022), individuals that feel responsible for the consequences of environmental will feel to have the moral obligation to visit green hotel to reduce negative impact toward environment while traveling. Besides that, it is also supported by Hein (2022) who research on recycled product have found that, AOR will impact an individual PN to form their specific moral standard towards recycled product.

5.2.5 Relationship Between Personal Norm and Attitude

The findings reveal that PN has a significant impact on Generation Z's ATT towards using recycled clothing in Malaysia. This study revealed that Malaysian Generation Z has a feeling of a moral responsibility to engage in eco-friendly actions, which motivates them to be more passionate and have a favourable attitude towards using recycled clothes. The result is compatible with the prior study. Based on Ru et al. (2019), it was found that individuals with strong moral principles tend to significantly favour PM2.5-reduction behaviours and evaluate them positively.

5.2.6 Relationship Between Attitude and Intention to Use

According to the findings, ATT significantly influences Malaysian Generation Z's intention to use recycled clothes. Malaysian Generation Z feels that recycled clothes are meaningful to and improve the environment, and they keep a good attitude as well as establish the intention to use recycled clothes. When they have a higher degree of recognition of recycled products from resources, their intentions to use recycled clothes will increase. The result is consistent with past research by Wang et al. (2022), which revealed that a person's attitudes towards the use of recycled products positively influence their behavioural intention.

5.2.7 Relationship Between Subjective Norm and Intention to Use

The path coefficient results indicated that SN of Malaysian Generation Z has positive influences on their intentions to use recycled clothes. This implies that they will consider their family, friends, colleagues, and significant others to decide their intention to recycled clothes. This study point to the fact that if Generation Z think that their significant others would

approve of using recycled clothes, they will experience social pressure and willing using recycled clothes. This discovery aligns with Ateş's (2020) research, which demonstrated that individuals who perceive a strong subjective norm from influential figures are more inclined to express a heightened intention to engage in environmentally friendly behaviours.

5.2.8 Relationship Between Perceived Behavioural Control and Intention to Use

The findings observed that PBC has a significant impact on Generation Z's intention towards using recycled clothing in Malaysia. When Malaysian Generation Z have the necessary time, resources, and opportunity to using recycled clothes, they tend to use more of recycled clothes because they have been perceiving afford the expenses that is needed to make them using decision is simple and under their control. This finding points to the fact that a lot of using decisions are made based on their feel comfort zone when using the recycled clothes. This finding is in consistency with Liu et al. (2020) observed individuals with a high level of control over these obstacles or discomforts have a higher behavioural intention.

5.3 Implications of The Study

5.3.1 Theoretical Implications

In the perspective of theoretical implications, this research has contributed with integrating VBN model and TPB model to examine the intention to use recycled clothes among Generation Z in Malaysia. While VBN model is emphasize on how an individual's values and beliefs influence their behaviour, and shed light on why individuals take environmental action, the prediction of the TPB model does not include more detailed variables such as how personal values and beliefs affect attitudes, so it is impossible to

understand the core reasons in essence, resulting in relatively one-sided results. Thus, proposed frameworks have combined these model and conduct research through two aspects. The main research content is to emphasize how individual internal factors from initial values to attitudes and finally affect the willingness to use recycled clothes (AV, EV, BV, AOC, AOR, PN, ATT), while the other two variables (SN, PBC) of the TPB model will be used as external influences that impact on intention to use recycled clothes. The integrated model has provided a holistic analysis on the intention to use recycled clothes among Generation Z in Malaysia and the finding of this study will helps the researcher which investigate on the relevant topic will be benefit. Furthermore, the integration model can used as a reference when researchers want to understand how an individual's personal internal factors and external factors affect the environmental behaviour.

5.3.2 Practical Implications

The findings from this research could help spur the development of recycled clothing in the Malaysia fashion industry. By delivering crucial results, it enables the government to effectively raise sustainable awareness among Malaysians and help the growth of recycled clothing in Malaysia. Moreover, by applying successful strategies, Malaysia's fashion business can increase the appetite of customers to buy and use recycled clothes.

In the perspective of policy maker, department such as Ministry of Education (MOE) can cultivate Malaysian to care for the environment from childhood to shape everyone's inner values, which could raise consciousness towards environment. For instance, the Ministry of Education can publicize the adverse consequences of the environment from preschool education to university education by enhancing the education system, stimulate students to form a sense of responsibility for taking care of the environment by understanding the negative issues. The individual might form an obligation

to conserve natural resources and reduce negative impact towards environment which can influence them willing to use recycled clothes.

In the perspective of fashion industry, after knowing the intention of Malaysian Generation Z to use recycled clothes through the finding in this research, apart from attracting more companies to invest in the development of recycled clothes in Malaysia, it also can execute effective strategies to attract consumers and stimulate consumers' willingness to use recycled clothes. For example, by organizing an exhibition themed on recycled clothes, publicize the current negative environmental conditions and demonstrate the benefits provided by recycled clothing throughout the producing process, and introduce the materials and technologies used in the process. In order to increase the authority of the event, well known experts in this field can be invited to help publicize, so that the information accepted by consumers is sufficient and correct. This can enhance consumer confidence towards recycled clothes and increase intention to use it.

5.4 Limitations and Recommendations

This study effectively identified the factors influencing Generation Z's intention to use recycled clothing in Malaysia. However, it is essential to acknowledge several significant implications. Firstly, this research focused solely on specific states in Malaysia, which might limit our findings to other regions. This might influence the accuracy of data and will be a problem at study due to unbalanced representation. Each region has its unique cultural and value, and it would be beneficial to involve a more diverse representation to better understand the broader Malaysian context. Thus, we suggest future study can include all states in regions in Malaysia.

Moreover, we only employed and analysed the data from individuals aged 16 to 26 years old. This limits the ability to comprehend different age generations, resulting in the loss of valuable perspectives from other age groups. For other researchers can consider include Generation X and Millennials. The reason is that their significant

spending power and influence on fashion trends make them crucial. Valuing their perspectives enhances understanding of diverse consumer segments and boosts generalizability.

Furthermore, this research focuses more in depth on internal factors, with just a brief investigation of external factors. This might lead to an inadequate comprehension of the research topic, which may form the negligence of critical factors and drivers that influence customer intentions. For future study suggestions, researchers may incorporate the potential mediation, moderation, and interaction impacts in our model. This allows us better understanding variable relationships and increasing the hypothesised model's predictability. Apart from that, investigate other external elements related with perceived value or risk also can enhance the future studies.

This study utilises quantitative methods, requiring respondents to answer just the questions provided and refraining from providing additional details. Respondents were unable to provide any additional information beyond agree or disagree. As worth to mention that some respondents reported that certain questions appeared to be leading them towards a favourable response, as disagreeing may show a lack of moral standards. For future study, it can employ qualitative methods or a combination of qualitative and quantitative methodologies. The reason is that it can obtain detailed and descriptive information, received valuable insights into the participants' thoughts, emotions, and motivations.

5.5 Conclusion

To sum up, this study proves that major finding on all hypotheses is accepted. Besides that, limitations of this study were also pointed out in this chapter and a few recommendations were suggest to future researchers.

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Appendices

Appendix 3.1: Questionnaire



UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF BUSINESS AND FINANCE

BACHELOR OF MARKETING (HONS)

UNDERGRADUATE FINAL YEAR PROJECT [FYP]

Title of Topic: Factors that Influence Intention To Use Recycled Clothes among Malaysia Generation Z in Malaysia

Survey Questionnaire

Dear respondent,

We are students currently pursuing Bachelor of Marketing (Honours) in Universiti Tunku Abdul Rahman (UTAR). We are conducting research on the topic of "The Factors that Influence Intention to Use Recycled Clothes among Generation Z in Malaysia".

Participation of this survey is voluntary. The completion of this survey will take you approximately 5 to 10 minutes.

Your response will be kept PRIVATE and CONFIDENTIAL and will be used solely for academic purposes. Your participation would be appreciated and by submitting your responses, you are hereby consent to the researcher to utilize your data for this study.

If you have any enquiries, please do not hesitate to contact us at email howying.1031@lutar.my or ziyang7299@lutar.my

Thank you for your time and cooperation to answer the questionnaire.

Yours sincerely,

Ang How Ying

Lee Zi Yang

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? *

Mark only one oval.

<input type="checkbox"/>	Male
<input type="checkbox"/>	Female

2. What is your age? *

Mark only one oval.

<input type="checkbox"/>	16 below
<input type="checkbox"/>	16 – 20
<input type="checkbox"/>	21 – 26
<input type="checkbox"/>	27 – 32
<input type="checkbox"/>	33 - 38
<input type="checkbox"/>	39 – 44
<input type="checkbox"/>	45 – 50
<input type="checkbox"/>	50 above

3. Where are you from (state)? *

Mark only one oval.

- | | |
|--------------------------|-----------------|
| <input type="checkbox"/> | Perlis |
| <input type="checkbox"/> | Kedah |
| <input type="checkbox"/> | Penang |
| <input type="checkbox"/> | Perak |
| <input type="checkbox"/> | Selangor |
| <input type="checkbox"/> | Negeri Sembilan |
| <input type="checkbox"/> | Malacca |
| <input type="checkbox"/> | Johor |
| <input type="checkbox"/> | Kelantan |
| <input type="checkbox"/> | Terengganu |
| <input type="checkbox"/> | Pahang |
| <input type="checkbox"/> | Sabah |
| <input type="checkbox"/> | Sarawak |

4. What is your education level? *

Mark only one oval.

- | | |
|--------------------------|-----------------|
| <input type="checkbox"/> | Upper Secondary |
| <input type="checkbox"/> | Diploma |
| <input type="checkbox"/> | Degree |
| <input type="checkbox"/> | Master |
| <input type="checkbox"/> | Doctoral |

5. What is your employment status? *

Mark only one oval.

- | | |
|--------------------------|------------|
| <input type="checkbox"/> | Employed |
| <input type="checkbox"/> | Unemployed |

6. What is your income level? *

Mark only one oval.

- | | |
|--------------------------|-----------------|
| <input type="checkbox"/> | RM500 below |
| <input type="checkbox"/> | RM501 – RM1500 |
| <input type="checkbox"/> | RM1501 – RM2500 |
| <input type="checkbox"/> | RM2501 – RM3500 |
| <input type="checkbox"/> | RM3501 – RM4500 |
| <input type="checkbox"/> | RM4500 above |

7. Are you aware of the recycled clothes? *

Definition of Recycled Clothes: It is the use of decomposed and recycled waste materials for example fabrics from old clothes or recycled polyester from plastic bottle and converts them into new raw materials and then reprocesses them into new clothes products.

Mark only one oval.

- | | |
|--------------------------|-----|
| <input type="checkbox"/> | Yes |
| <input type="checkbox"/> | No |

8. Do you have intention to use recycled clothes? *

Mark only one oval.

- | | |
|--------------------------|-----|
| <input type="checkbox"/> | Yes |
| <input type="checkbox"/> | No |

Section B - Factors that Influence Intention to Use Recycled Clothes

Questions

Definition of Recycled Clothes: It is the use of decomposed and recycled waste materials for example fabrics from old clothes or recycled polyester from plastic bottle and converts them into new raw materials and then reprocesses them into new clothes products.

Altruistic Values

Questions		Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
AV1	I am concerned about environmental problems because I believe that the consequences will affect everyone.	1	2	3	4	5	6	7
AV2	I am concerned about environmental problems because I believe that everyone should free from environmental issues.	1	2	3	4	5	6	7
AV3	I am concerned about environmental problems because I believe that everyone has the equal opportunities to enjoy a sustainable future.	1	2	3	4	5	6	7
AV4	I am concerned about environmental problems because I believe that the consequences will affect the people in the community.	1	2	3	4	5	6	7

Egoistic Values

	Questions	Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
EV1	I am concerned about environmental problems because of the people around me inspire me to protect the environment.	1	2	3	4	5	6	7
EV2	I am concerned about environmental problems because it is important for the community to promote the well-being of the people and the planet.	1	2	3	4	5	6	7
EV3	I am concerned about environmental problems because it improves my standard of living.	1	2	3	4	5	6	7
EV4	I am concerned about environmental problems because of the rights of being socially responsible.	1	2	3	4	5	6	7

Biospheric Values

	Questions	Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
BV1	I am concerned about environmental problems because preventing pollution is my responsibility.	1	2	3	4	5	6	7
BV2	I am concerned about environmental problems because respecting the Earth is my responsibility.	1	2	3	4	5	6	7

BV3	I am concerned about environmental problems because being environmental friendly is my responsibility.	1	2	3	4	5	6	7
BV4	I am concerned about environmental problems because protecting the environment is my responsibility.	1	2	3	4	5	6	7

Awareness of Consequences

	Questions	Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
AOC1	I think global warming is a real problem for the society.	1	2	3	4	5	6	7
AOC2	I think environmental pollution is a problem for the society.	1	2	3	4	5	6	7
AOC3	I think it will be difficult to change people's habits if recyclable products cannot be promoted in time.	1	2	3	4	5	6	7
AOC4	I think using recycled clothes can reduce environmental pollution.	1	2	3	4	5	6	7
AOC5	I think using recycled clothes can reduce resource waste.	1	2	3	4	5	6	7
AOC6	I think buying recycled clothes will be advantageous for our country.	1	2	3	4	5	6	7
AOC7	I think the quality of the environment will improve if people buy more recycled clothes.	1	2	3	4	5	6	7

Ascription of Responsibility

	Questions	Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
AOR1	I am responsible for environmental pollution.	1	2	3	4	5	6	7
AOR2	I am responsible for the increase in environmental pollution.	1	2	3	4	5	6	7
AOR3	I am responsible for environmental pollution together with the government and industry.	1	2	3	4	5	6	7
AOR4	I am responsible for environmental pollution that caused by textile waste from clothing.	1	2	3	4	5	6	7

Personal Norm

	Questions	Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
PN1	I feel that I should protect the environment.	1	2	3	4	5	6	7
PN2	I feel it is important that people in general protect the environment.	1	2	3	4	5	6	7
PN3	I feel an obligation to do something to help future generations.	1	2	3	4	5	6	7
PN4	I feel an obligation to behave in an environmentally friendly because of my own values and beliefs.	1	2	3	4	5	6	7

PN5	I feel an obligation to conserve natural resources as much as possible.	1	2	3	4	5	6	7
PN6	I feel an obligation to use recycled clothes where possible.	1	2	3	4	5	6	7
PN7	I feel a strong personal obligation to use recycled clothes.	1	2	3	4	5	6	7

Subjective Norm

	Questions	Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
SN1	Most people think that I should use recycled clothes.	1	2	3	4	5	6	7
SN2	Most people would prefer me to use recycled clothes.	1	2	3	4	5	6	7
SN3	Most people started to use recycled clothes.	1	2	3	4	5	6	7
SN4	Most people who are important to me would want me to use recycled clothes.	1	2	3	4	5	6	7
SN5	Most people who are important to me would think I should use recycled clothes.	1	2	3	4	5	6	7
SN6	Most people who are important to me have started using recycled clothes	1	2	3	4	5	6	7
SN7	Experts in related fields call for the usage of recycled clothes.	1	2	3	4	5	6	7
SN8	Public advocates the usage of recycled clothes.	1	2	3	4	5	6	7

Perceived Behavioural Control

	Questions	Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
PBC1	I have the financial resources to use recycled clothes.	1	2	3	4	5	6	7
PBC2	I have the opportunity to use recycled clothes.	1	2	3	4	5	6	7
PBC3	I have the knowledge to use recycled clothes. .	1	2	3	4	5	6	7
PBC4	I have control over whether I use recycled clothes or non-green clothes.	1	2	3	4	5	6	7
PBC5	If I want to, I have no trouble to use recycled clothes.	1	2	3	4	5	6	7
PBC6	I think using recycled clothes is easy for me.	1	2	3	4	5	6	7
PBC7	It depends on me whether I influence others to use recycled clothes.	1	2	3	4	5	6	7

Attitude

	Questions	Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
ATT1	I would prefer to use the clothes that made with recycled materials.	1	2	3	4	5	6	7
ATT2	I would wish to use recycled clothes.	1	2	3	4	5	6	7

ATT3	I would use recycled clothes even if they belong to a less well-known company.	1	2	3	4	5	6	7
ATT4	I think that using recycled clothes is a good move.	1	2	3	4	5	6	7
ATT5	I think that using recycled clothes is beneficial.	1	2	3	4	5	6	7
ATT6	I think that using recycled clothes is delightful.	1	2	3	4	5	6	7
ATT7	I think that using recycled clothes is wise.	1	2	3	4	5	6	7
ATT8	I think that using recycled clothes is meaningful.	1	2	3	4	5	6	7

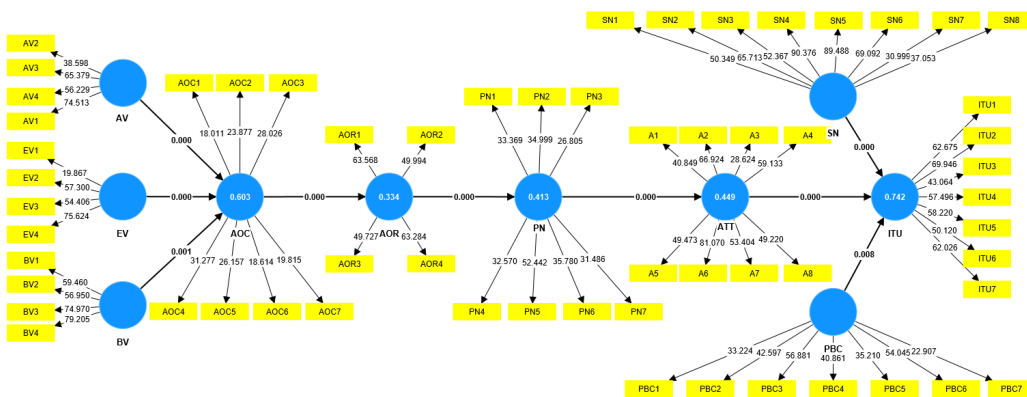
Intention to Use

	Questions	Strongly Disagree	Disagree	Somewhere Disagree	Neutral	Somewhere Agree	Agree	Strongly Agree
ITU1	I am positive towards using recycled clothes.	1	2	3	4	5	6	7
ITU2	I have the intention of using recycled clothes.	1	2	3	4	5	6	7
ITU3	I think it is a good idea to use recycled clothes.	1	2	3	4	5	6	7
ITU4	I would like to use recycled clothes.	1	2	3	4	5	6	7
ITU5	I will insist on using recycled clothes in the future.	1	2	3	4	5	6	7
ITU6	I will lead the people around me to use recycled clothes.	1	2	3	4	5	6	7
ITU7	I will be more cooperative with the usage of recycled clothes.	1	2	3	4	5	6	7

Appendix 3.2: Pilot Test Results

	Cronbach's alpha
AOC	0.889
AOR	0.930
ATT	0.975
AV	0.952
BV	0.965
EV	0.897
ITU	0.965
PBC	0.928
PN	0.939
SN	0.933

Appendix 4.1: Partial Least Square (SmartPLS 4) Model



Appendix 4.2: Composite Reliability and Average Variance Extracted Results

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AOC	0.865	0.867	0.896	0.553
AOR	0.907	0.912	0.934	0.781
ATT	0.946	0.947	0.955	0.726
AV	0.907	0.908	0.935	0.783
BV	0.930	0.932	0.950	0.827
EV	0.867	0.877	0.910	0.719
ITU	0.946	0.947	0.956	0.757
PBC	0.921	0.923	0.937	0.680
PN	0.912	0.913	0.930	0.654
SN	0.949	0.950	0.958	0.741

Appendix 4.3: Outer Loading Results

	Outer loadings		Outer loadings		
A1 <- ATT	0.809	AV4 <- AV	0.875	PBC6 <- PBC	0.863
A2 <- ATT	0.880	BV1 <- BV	0.902	PBC7 <- PBC	0.769
A3 <- ATT	0.770	BV2 <- BV	0.895	PN1 <- PN	0.808
A4 <- ATT	0.866	BV3 <- BV	0.918	PN2 <- PN	0.799
A5 <- ATT	0.865	BV4 <- BV	0.923	PN3 <- PN	0.814
A6 <- ATT	0.896	EV1 <- EV	0.729	PN4 <- PN	0.797
A7 <- ATT	0.871	EV2 <- EV	0.880	PN5 <- PN	0.861
A8 <- ATT	0.853	EV3 <- EV	0.878	PN6 <- PN	0.811
AOC1 <- AOC	0.732	EV4 <- EV	0.894	PN7 <- PN	0.767
AOC2 <- AOC	0.741	ITU1 <- ITU	0.880	SN1 <- SN	0.855
AOC3 <- AOC	0.793	ITU2 <- ITU	0.890	SN2 <- SN	0.888
AOC4 <- AOC	0.779	ITU3 <- ITU	0.836	SN3 <- SN	0.852
AOC5 <- AOC	0.746	ITU4 <- ITU	0.885	SN4 <- SN	0.911
AOC6 <- AOC	0.690	ITU5 <- ITU	0.867	SN5 <- SN	0.915
AOC7 <- AOC	0.720	ITU6 <- ITU	0.847	SN6 <- SN	0.887
AOR1 <- AOR	0.890	ITU7 <- ITU	0.883	SN7 <- SN	0.781
AOR2 <- AOR	0.880	PBC1 <- PBC	0.800	SN8 <- SN	0.782
AOR3 <- AOR	0.877	PBC2 <- PBC	0.834	AV1 <- AV	0.906
AOR4 <- AOR	0.888	PBC3 <- PBC	0.860		
AV2 <- AV	0.856	PBC4 <- PBC	0.828		
AV3 <- AV	0.901	PBC5 <- PBC	0.812		

Appendix 4.4: Heterotrait-monotrait Ratio of Correlations Results

	AOC	AOR	ATT	AV	BV	EV	ITU	PBC	PN	SN
AOC										
AOR	0.648									
ATT	0.725	0.623								
AV	0.811	0.502	0.526							
BV	0.795	0.608	0.521	0.837						
EV	0.831	0.640	0.549	0.878	0.900					
ITU	0.665	0.598	0.888	0.499	0.506	0.538				
PBC	0.635	0.520	0.813	0.400	0.385	0.465	0.789			
PN	0.831	0.700	0.714	0.737	0.767	0.783	0.712	0.579		
SN	0.446	0.524	0.687	0.198	0.268	0.353	0.708	0.759	0.490	

Appendix 4.5: Path Coefficients Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AOC -> AOR	0.578	0.579	0.046	12.649	0.000
AOR -> PN	0.643	0.645	0.052	12.458	0.000
ATT -> ITU	0.617	0.612	0.046	13.376	0.000
AV -> AOC	0.308	0.308	0.060	5.134	0.000
BV -> AOC	0.256	0.255	0.078	3.308	0.001
EV -> AOC	0.274	0.275	0.068	4.015	0.000
PBC -> ITU	0.156	0.165	0.058	2.672	0.008
PN -> ATT	0.670	0.670	0.036	18.847	0.000
SN -> ITU	0.159	0.156	0.044	3.629	0.000

Appendix 4.6: R-square Results

	R-square	R-square adjusted
AOC	0.603	0.600
AOR	0.334	0.332
ATT	0.449	0.448
ITU	0.742	0.740
PN	0.413	0.412

Appendix 4.7: F-square Results

	f-square
AOC -> AOR	0.500
AOR -> PN	0.705
ATT -> ITU	0.583
AV -> AOC	0.080
BV -> AOC	0.049
EV -> AOC	0.053
PBC -> ITU	0.032
PN -> ATT	0.816
SN -> ITU	0.045