# IDENTIFY THE FACTORS THAT AFFECT GEN Z CUSTOMER'S PURCHASE INTENTION ON SECOND-HAND ELECTRONIC GADGETS IN MALAYSIA

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DEPARTMENT OF MARKETING

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BY

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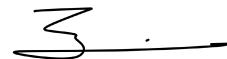| Name of student: | Student ID: | Signature: |
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# DEDICATION

This thesis is dedicated to our beloved families, whose unconditional love, patience, and encouragement have been the greatest source of strength throughout our academic journey. We also dedicate this work to our friends and all those who have inspired and motivated us to achieve our goals.

# **PREFACE**

This thesis has been prepared as part of the requirements for the completion of the Bachelor of Marketing at Universiti Tunku Abdul Rahman (UTAR). The research focuses on the factors that affect Generation Z's purchase intention on second-hand electronic gadgets in Malaysia, with the aim of applying the Theory of Planned Behavior (TPB) to better understand the determinants influencing their purchasing decisions.

The motivation for this study arose from the increasing popularity of second-hand electronic gadgets in Malaysia, as well as the rising concerns regarding electronic waste and sustainability. While Generation Z represents a large consumer group with strong influence on market trends, limited academic research has been conducted to examine their attitudes and intentions toward purchasing second-hand electronics.

In order to achieve the research objectives, we employed a quantitative research design using questionnaire surveys to collect data from Gen Z respondents in Malaysia. The data was then analysed using the Statistical Package for the Social Sciences (SPSS) to ensure reliability, validity, and meaningful interpretation of the results.

This thesis is organized into five chapters. Chapter One introduces the research background, problem statement, objectives, and significance of the study. Chapter Two reviews relevant literature and discusses the theoretical framework, particularly the Theory of Planned Behavior. Chapter Three presents the research methodology. Chapter Four reports the findings and provides data analysis. Chapter Five concludes the study with key insights, implications, and recommendations for future research.

We sincerely hope that this thesis will contribute to a deeper understanding of Generation Z's purchase intention toward second-hand electronic gadgets in Malaysia and serve as a useful reference for future studies in this field.

# ABSTRACT

This research investigates the elements that affecting Gen Z audiences to buy second-hand gadgets by employing Theory of Planned Behavior. Although there are second-hand products or used goods available on the market, particularly used vehicles and clothes, but there are exist the gap on Gen Z's intention to buy pre-owned electronic gadgets. This study aims to discover how Gen Z's buying intentions relate to several variables which are attitude, subjective norms, perceived behavioral control, price perception and performance perception. 317 Gen Z respondents in Malaysia participated in a quantitative survey, and SPSS was be used to analyze the results. The outcome revealed that attitude, subjective norms, perceived behavioral control and performance perception significantly predict Gen Z's purchase intention. However, price perception showed a not significant effect on the intention of Generation Z to acquire pre-owned electronic gadgets. The research's implication also has been discussed for marketers and second-hand gadgets campaigns, they need to put more emphasis on promoting environmental sustainability, fully utilizing social influence, more emphasis on perceived value than lower price. Then, to further understand in this topic area, future studies should take into account factors other than price, such as perceived value and brand trust.

Keywords: Purchase Intention, Second-Hand Electronic Gadgets, Gen Z, Theory of Planned Behavior (TPB), Consumer Behavior

Subject Area: HF5482-5482 Secondhand trade

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LIST OF ABBREVIATIONS

PI                                        Purchases Intention

ATT                                      Attitude

SN                                        Subjective Norm

PBC                                      Perceive Behavior Control

PrP                                       Price Perception

PeP                                       Performance Perception

# CHAPTER 1: RESEARCH OVERVIEW

## 1.1 Research Background

The global circular economy movement and growing awareness of sustainability have had a major impact on the second-hand products industry's recent explosive growth. According to the global second-hand electronics market report by Transparency Market Research (2023), the market is expected to increase from US dollar 93.7 billion in 2023 to US dollar 434.4 billion by 2034. In the Asia-Pacific region, including Malaysia, young consumers are the key drivers of growth, with increasing demand for affordable second-hand electronic devices. For instance, the Malaysian used smartphone market recorded a CAGR of 12.8% between 2016 and 2021 and is expected to grow further at 14.9% from 2022 to 2026 (Banerjee, 2022). This growth is driven by smartphone penetration, digital transformation enabled by 5G adoption, rising prices of new smartphones, and a large base of low- to mid-income consumers who seek affordable alternatives.

This trend is closely related to consumers' increased awareness of environmental protection, increased price sensitivity under economic uncertainty, and the younger generation's shift in consumer concepts to "experience over ownership". Due to their high unit prices and rapid technical advancements, products like laptops and smartphones, particularly in the category of electronic equipment, have emerged as among the most active categories in the second-hand trade market (Global Market Insights, 2024).

As a country with a rapidly developing digital economy in Southeast Asia, Malaysia's second-hand electronic products market has unique research value. In these few years, Malaysia's second-hand market has grown significantly especially for electronic gadgets. According to the Carousell Recommerce Index 2021, 46% of second-hand buyers preferred photography and electronics, including computers, mobile phones, and tablets (Hazim, 2021). Furthermore, as the second-hand

electronic gadgets market grows, companies like CompAsia offer certified used Apple and Samsung devices, and this gives consumers a reliable option for buying used electronics.

Known as Generation Z, people born between 1997 and 2012 are the natives of the digital age who not only control the electronics market but also support the second-hand economy (Hardcastle, 2022). Generation Z is a main drivers in the growth of the second-hand market because they actively seek for cost-effective and ecologically friendly alternatives to fast fashion and appreciate uniqueness, affordability, and sustainable options (Palmgren & Zylfijaj, 2022). This potential contradiction between values and behaviors makes it necessary to explore the influencing mechanism of their purchasing decisions.

While prior studies have examined factors like price sensitivity and perceived risk in second-hand purchases (Ragaur, 2022), there is limited research that has focused specifically on Gen Z's purpose to buy second-hand electronics in developing nations. As a multicultural society, Malaysia's young consumers may be affected by the triple influence of the frugality concept in Islamic doctrine, the penetration of Western consumer culture, and the marketing model of local social media (such as TikTok), forming a unique decision-making path. Therefore, this study aims to construct a second-hand electronic product purchase intention model applicable to Generation Z in Malaysia, provide a localized case for the academic community, and help companies develop precision marketing strategies.

## 1.2 Research Problem

The idea of "second-hand" today isn't limited to items that have already been used; it also includes new products that, for one reason or another, haven't been utilized for some times (Kawulur et al., 2022).

In recent year, there is a change has been observed in consumer habits, especially in the electronics sector. Data from CCS Insight highlights an interesting trend: the used electronic gadgets are now

outpacing new ones in market growth, with a 2.9% year-on-year increase, while the sales of new gadgets have dropped by 4.4% (CCS Insight, 2024). This clearly reflects a growing interest and demand for pre-owned devices.

Adding to that, Business Insider reported that Gen Z is showing a stronger inclination toward buying used smartphones than ever before. A report by CIPR further supports this by revealing that, as of 2024, about 13% of iPhone users are using second-hand devices. Among them, those aged between 18 to 24 and these teenagers are the core Gen Z group who make up around 16% of users who own a used iPhone (Azizan, 2024). These figures point to a generational shift in buying preferences, especially among younger consumers.

Despite the upward trend and clear interest in second-hand electronics, most academic attention still tends to focus on used clothing and fashion items (Koay et al., 2022; Wikcasono et al., 2024; Rathore et al., 2023). There exists a research gap regarding second-hand electronic gadgets, particularly in comprehending the factors that drive Gen Z to purchase them. Past research often links second-hand purchases to sustainable consumption habits (Borusiak et al., 2020; Chun et al., 2022), however, There has been insufficient exploration of the more personal or psychological dimensions, including individual motivations or perceptions, that influence Gen Z to do the decision in this area.

Given how rapidly the second-hand electronics market is growing, this gap presents a timely and important opportunity for researchers. Understanding what's really behind this shift — beyond just environmental consciousness — could provide significant understanding of the changing dynamics of consumer behavior.

## 1.3 Research Objectives

This study mainly seeks to recognize the determinants affecting Gen Z consumers in Malaysia when deciding to buy second-hand electronic gadgets. The research objectives is

- To explore the relationship between attitude, subjective norm, and perceived behavioral control in relation to Generation Z's intention to buy second-hand electronic gadgets in Malaysia.

- To explore how price perception and performance perception impact Generation Z's willingness to purchase second-hand electronic gadgets.

## 1.4 Research Questions

- What is the impact of attitude, subjective norms, and perceived behavioral control on Generation Z's intention to purchase second-hand electronic devices?

- How does price perception and performance perception affect Gen Z's purchase intention towards second-hand electronic gadgets?

## 1.5 Research Significant

This study's importance stems from its current focus on Malaysia's expanding market for used electronic devices, particularly among Generation Z. As Malaysia moves rapidly towards a digital economy, the demand for affordable and reliable electronic devices continues to grow (CCS Insight, 2024). Generation Z, as digital natives, represents a key demographic that is not only technologically savvy but also highly influenced by environmental awareness, cost-consciousness, and shifting lifestyle values (Wood, 2022). Understanding their behavioral intentions and

motivations in purchasing second-hand electronics provides valuable insights into evolving consumer trends.

Despite the fact that second-hand apparel and fashion have been extensively studied (Wicaksono et al., 2024), limited scholarly attention has been given to consumer behavior regarding pre-owned electronic devices. Furthermore, by integrating price perception and performance perception into the TPB framework, this research offers a more comprehensive model that reflects the rational and evaluative decision-making process involved in high-involvement purchases like electronics. Furthermore, the results can help companies, marketers, and legislators create focused plans to encourage sustainable consumption and further Malaysia's circular economy strategy.

# CHAPTER 2: LITERATURE REVIEW

## 2.1 Underlying Theory

Given the increasing environmental concerns and economic motivations among young consumers, understanding the drivers behind second-hand electronics purchases is crucial. The study's theoretical underpinnings is the well-known Theory of Planned Behavior (TPB) paradigm explains how decisions are made in consumer behavior scenarios. Ajzen (1991) developed the Theory of Planned Behavior (TPB) as an enhancement of Fishbein and Ajzen's Theory of Reasoned Action (TRA) (as cite in Montano et al., 2002). In order to handle behaviors that might not be entirely under volitional control, Ajzen added a third element known as perceived behavioral control, or PBC, into TRA, and it holds that a person's behavioral aim is determined by how they feel toward

the activity and subjective norms. This modification made TPB more applicable to real-world scenarios where individuals face constraints such as limited resources, time, or ability.

Numerous empirical studies have adopted TPB to examine purchase intentions across various industries. Previous studies have repeatedly shown that the elements of TPB, which are consumer attitudes, together with subjective norms and perceived behavioral control, are positively impacted by environmental beliefs and thrifty living, which in turn influence the motivation to buy second-hand clothing  (Wicaksono et al., 2024). Additionally, a study on second-hand apparel found that attitudes, moral standards, and perceived behavioral control all strongly influenced the desire to buy second-hand apparel, with attitudes being influenced most by emotional and environmental values (Koay et al., 2022).

Despite its extensive use, TPB has also been criticised for underemphasizing emotional or moral dimensions. TPB "does not adequately consider cognitive and affective processes known to influence human judgment and behavior," said Ajzen (2011), particularly the emotional, illogical, and unconscious aspects. Nonetheless, it continues to be a strong and economical model appropriate for organized, logical decision-making procedures, such as buying second-hand electronics gadgets, where buyers typically consider price, quality, and dependability.

Thus, TPB provides a suitable and useful theoretical framework for this research, allowing for a thorough analysis of the psychological elements affecting the propensity of Malaysia Generation Z's to buy used electronic devices.
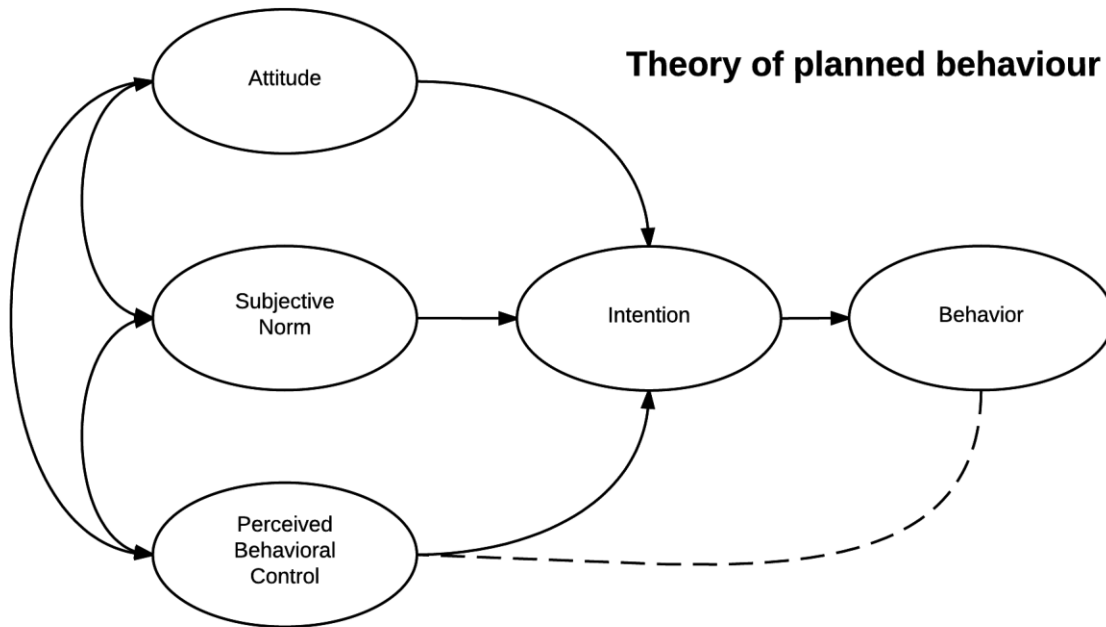
*Figure 2.1 Theory of Planned Behavior (TPB) (Ajzen, I., 1991).*

## 2.2 Review of Variables

### 2.2.1 Dependent Variables

#### 2.2.1.1 Purchases Intention

In marketing, purchase intention is a key construct used to anticipate and influence consumer decision-making. Purchase intention is described as customers' subjective likelihood evaluation of making purchasing based on their present state of mind, attitude, and outside influences (Khan et al., 2024). Zhuang et al., (2021) define purchasing intention as a prerequisite that motivates buyers to obtain any specific items or services. Purchase intention in the context of electronic products, particularly reconditioned or used electronics, indicates not only the customers' enthusiasm for the product but also their thorough evaluation of the product's origins, quality, cost, and hazards, etc (Wallner et al., 2024). In order to assess marketing tactics, product acceptance, customer

satisfaction, and brand loyalty, purchase intention is essential (Morwitz, 2014). Additionally, purchase intention is essential to comprehending the connection between perceived value, recurring business, and customer loyalty. It also acts as a useful predictor of purchasing behavior (Nguyen, 2025).

## 2.2.2 Independent Variables

### 2.2.2.1 Attitude

Ajzen (1991) defined attitude as the extent to a individuals views the conduct of interest favorably or unfavorably. Through the research of Stolz (2022), it is shown that attitudes are mainly influenced by personal motivations such as economic and moral factors. This was supported by actual data that demonstrated a favorable and noteworthy impact on customers' intents to buy products, including used ones. (Wicaksono et al., 2024, Borusiak et al., 2020). Conversely, the inability to decide whether purchase the product was linked to the unfavorable attitude. For example in fast fashion industry, some people rejected second-hand clothing that had previously belonged to strangers because they believed it to be unhealthy and of poor quality (Armstrong & Park, 2020). Therefore, attitude is anticipated to be defined in this study as customers' attitudes on the purchase of used electronic devices.

### 2.2.2.2 Subjective Norms

Subjective norm describes how a person perceives social pressure, and the judgments of significant referents such as family or friends, who may or may not agree with the intended behaviour, create social pressure (Ajzen, 1991). This means that when consumers make decisions, the opinions of

their peers around them will influence their choices. According to Borusiak et al. (2020), it is stated that when individuals perceive social pressure from significant others (e.g. ,parents, friends, or social groups), they will reduce their desire to acquire second-hand goods. However, research by Wicaksono et al. (2024) shows that positive reviews of products by consumer groups can encourage higher purchase intentions. According to the research mentioned above, we characterize subjective norms as the social pressure that could influence Gen Z consumers' acquisition of used electronic devices.

**2.2.2.3 Perceived Behavioral Control**

Ajzen (1991) suggested that perceived behavioral control influences not only intentions but also the likelihood of actual behavior. Koay et al. (2022) claim that a customer's perception of how simple it is to purchase secondhand clothing is related to perceived behavioral control. This also applies to how customers view how convenient it is to purchase used electronics. Furthermore, the findings of the study show that when shoppers believe they can afford to purchase second-hand goods, their chances of buying something are greater. (Borusiak et al., 2020). Related research have also examined the mediating role of perceived behavioral control in sustainable consumption behavior, indicating that PBC influences purchase intention directly, but by raising consumers' self-efficacy, It might also promote the use of sustainable consumption habits (Salleh et al., 2024). Considering the research mentioned above, perceived behavioral control is described as Gen Z's evaluation of the ease of purchasing used electronic devices.

**2.2.2.4 Price Perception**

Price perception reflects how consumers subjectively evaluate or interpret the cost of a product (Utami et al., 2024). Rodrigues et al. (2023) found that the element affecting the desire to buy is pricing perception, which emphasized how consumers perceive price impacts their attitudes and willingness to buy secondhand items. In the other industry of study, such as automotive products, purchase intention is significantly positively impacted by pricing perception. Customers are more willing to purchases if they have a higher pricing perception (Ayub & Kusumadewi, 2021). Additionally, Yan et al. (2024) further confirmed how consumers' perceptions of pricing impact their propensity to purchase. This study highlights the consistent influence of price perception in various consumption situations and supports the significance of price perception in consumer choice. Thus in this study, price perception may strongly affect Gen Z's decision making for purchasing second-hand electronic gadgets.

### 2.2.2.5 Performance Perception

Performance perception describes how consumers judge whether the goods or service meets expected functional standards or quality (Johnson et al., 1996, Patterson & Spreng, 1997). Consumers utilize performance perception as a cognitive evaluation, to determine the value of a product. Consumers are willing to consider a product dependable and useful when they think it performs well, conversely if they have doubts about the performance, even if other aspects like price or appearance are advantageous, their confidence will be weakened and they will be less inclined to purchase (Yu, 2023). A strong performance perception might reduce the usual risk associated with used items, increasing trust and purchasing intention (Yan et al., 2024). Therefore, we will explore Genaration Z's performance perception of second-hand electronic gadgets to explore whether their purchasing intentions are influenced by product performance perception.

## 2.3 Conceptual Framework
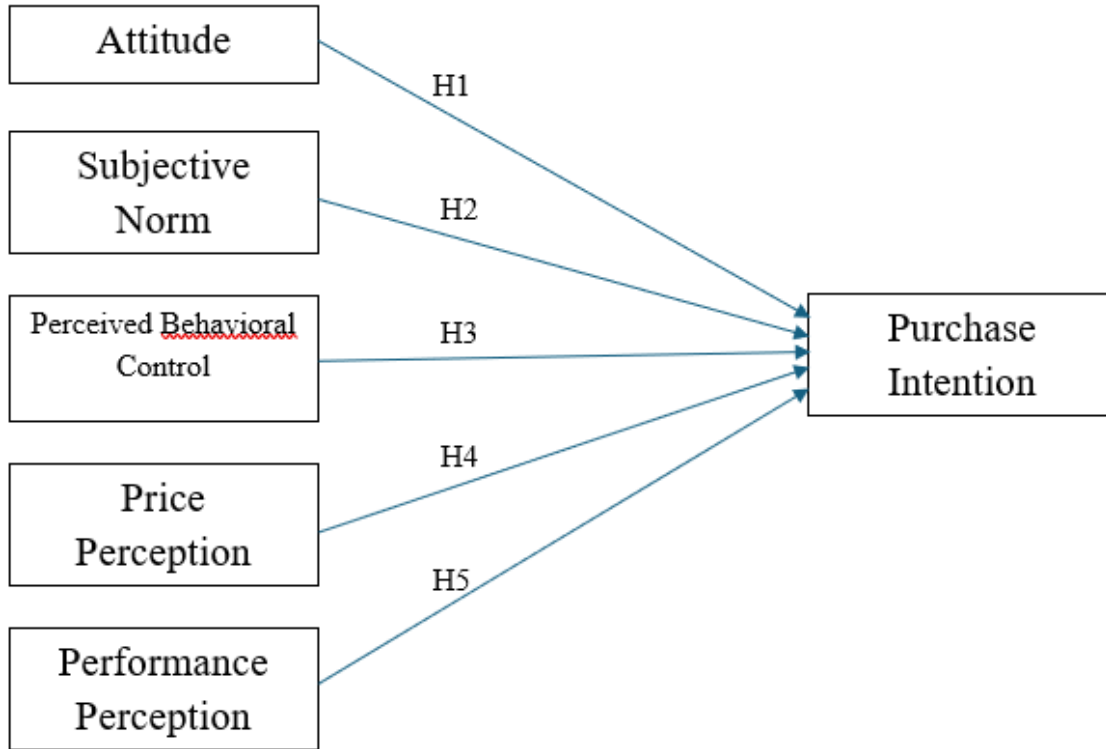


*Figure 2.2 Conceptual Framework of study*

## 2.4 Hypothesis Development

### 2.4.1 Relationship between Attitude and Gen Z's purchase intention on second-hand electronic gadgets

Azjen's theory emphasizes that the term of 'attitude' describe how someone feels about a particular behaviour, whether it be positively or negatively (Ajzen, 1991). When consumers acknowledge their inclination to buy second-hand luxury products and are prepared to do so, they will exhibit a positive attitude to buy it (Yan et al., 2024). Besides that, people intend to have positive attitudes towards the behavior that profit when the person believes that the action can result in favourable

outcomes (Koay et al. , 2022). Another past research found that even if they might be concerned about the lower quality, people who have a good opinion regarding refurbished cellphones will counteract any negative effects on their desire to buy. (Agostini et al., 2021). Alyahya et al. (2023) have investigated the impact of attitude on purchase intention and discovered that reconditioned items are useful for forecasting consumer behavior and buy intention. As observed by Dinh et al. (2024), a possible positive relationship can be identified between one's attitude and the intention to buy refurbished smartphones. An individual is likely to demonstrate a favorable disposition towards pre-owned electronic gadgets if they perceive that they can derive advantages from them in the framework of the second-hand marketplace. Consequently, this illustrates the importance of one's attitude regarding the intention to purchase second-hand items.

**H1: Attitude and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated**

## 2.4.2 Relationship between Subjective Norm and Gen Z's purchase intention on second-hand electronic gadgets

Azjen's theory highlights that the term 'subjective norms' refer to societal pressures individuals face to either engage in or refrain from particular actions. (Azjen, 1991). The past research shows that staying at a specific environment and interact with unique society will guide to a positive force for the person although the impact from subjective norms is based on individual opinion and circumstances, and they may investigate that attitude have positive relationship towards purchase intention refurbished smartphones (Dinh et al., 2024). Then, according to Rukhsar et al. (2024) stated that the way society views a product will affect how consumers feel and decide whether to buy it, and they come to the conclusion that subjective norms significantly influence consumers' purchasing intentions. Earlier research have demonstrated that social influence is a key factor in determining individuals' intentions to participate in certain behaviors (Lee & Chow, 2020).

Considering the second-hand market, other people's perception towards the second-hand electronic gadgets will influence another person's perception towards second-hand gadgets.

**H2: Subjective norms and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated**

## 2.4.3 Relationship between Perceived Behavioral Control and Gen Z's purchase intention on second-hand electronic gadgets

Azjen's theory emphasizes that the term 'perceived behavioral control' describe a person's judgment of the simplicity or complexity in completing a task. (Ajzen, 1991). Existing literature suggests that perceived behavioral control has a positive correlation with purchasing behavior in the context of second-hand clothing (Koay et al., 2022), remanufactured automotive parts (Pisitsankkhakarn & Vassanadumrongdee, 2020) and in second-hand product area (Borusiak et al., 2020). In the realm of the second-hand electronics market, it pertains to the ability of an individual to purchase pre-owned devices, as these items are generally available at a lower cost in comparison to their newly manufactured equivalents (Dinh et al., 2024), If individuals are aware that they have the option to purchase pre-owned mobile devices., they may be will buy, but for the people that have no ability to buy for example, low income level group, they will not buy.

**H3: Perceived behavioral control and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated**

## 2.4.4 Relationship between Price Perception and Gen Z's purchase intention on second-hand electronic gadgets

Price is describe as a value for people doing the buying and selling transaction (Amanda et al., 2021). Prior studies have demonstrated that consumers evaluate the product price which are cheap or expensive and they have found the price has influences purchase intention positvely (Muljani & Koesworo, 2019). A research carried out by James et al. (2024) suggests that price significantly influences Nigerian university students' decisions to buy the pre-owned smartphones. Another past research showed that The desire to purchase a pre-owned item is favorably influenced by price orientation. (Kawulur et al., 2022). In relation to the market for used devices, consumers will have access to the price of used gadgets, and they think only the low prices can match with the used gadgets.

**H4: Price perception and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated**

## 2.4.5 Relationship between Performance Perception and Gen Z's purchase intention on second-hand electronic gadgets

Performance perception can be characterized as the quality of service or product as perceived by the consumer, also it can be said as the evaluation from customers towards products overall performance or advantages (Zeithaml, 1988). Past study showed a positive influence of product quality to intention to buy the remanufactured automotive parts and they also stated that increasing consumers' awareness of product quality will boost their propensity to buy confidence level on remanufactured product (Asyraf et al., 2023). A previous study similarly found that the quality of a product possess a notable effect on purchase intention toward used smartphones. (James et al., 2024). Product attributes are used to describe a characteristic of a product such as colour, material, quality, packaging (Kalesaran et al., 2022). Given that product attributes can also serve to define the quality of a product, it has been shown that they exert a beneficial effect on consumers' buying intentions on second-hand apparel. In relation to the market for used gadgets, customers will assess the functionality and quality of used electronic gadgets when making a purchase.

**H5: Product performance perception and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated**

# CHAPTER 3: METHODOLOGY

## 3.1 Research Design

This research utilizes quantitative methodologies to gather and analyze the data. We choose quantitative research to continue our study because we want to use the collected data to describe our hypothesis which is to collect their perception towards second-hand electronic gadgets. In order to evaluate our hypothesis, we must develop a series of questionnaires relevant to our issue and employ the survey method to gather the data. We adopted the descriptive research in this research as we employ survey techniques to collect the perception and we are using these data collected to describe purchase intention towards second-hand electronic gadgets.

## 3.2 Sampling Design

### 3.2.1 Target Population

Our study concentrates on Generation Z in Malaysia. Gen Z can be agreed as the people that were born after 1995 (Jayatissa, 2023). Generation Z comprises persons who possess been raised in the

era of digital technology, signifying their constant engagement with the internet, smartphones, and social media platforms (Wandhe, 2024). Generation Z is a focal point for marketing efforts due to their emphasis on variety and inclusiveness, seeking brands that cultivate a sense of community and represent a broad spectrum of identities (Prasanna & Priyanka, 2024). The focus area is Malaysia, which are 14 states of Malaysia. The range of our population Gen Z is between 13 - 28 years old. The range of age selected because they possess the ability to buy a good or service, but for the people aged below 18 need get the consent from their parents before answering the questionnaire because people aged below 18 is considered as minority and they have not ability to do the purchase decision.

## 3.2.2 Sampling Frame

The sampling frame for study is available which are the people that buying and using the second-hand gadgets, but we are not able to access due to the terms and condition for a buyer and their personal information is being protected, so we not able to get the complete name list of the population.

## 3.2.3 Sampling Technique

This investigation will employ non-probability techniques.Judgmental sampling will be employed in this research, whereby the selection of the sample is based on the researcher's knowledge and judgment.(Reddy & Ramasamy, 2016). Then, we have set the screening questions for our questionnaire as we have several restrictions which are age restrictions, we target people between 13 - 28, we will set a question about actual age for respondents and filter out the unfulfilled

respondents, which is below the age of 13 and above the age of 28. Then, the next important restriction is the respondents must have the experience to use second-hand gadgets. Last restriction is the nation, we only accept Malaysian respondents. Only the respondents who fulfilled these 3 requirement can answer the questionnaire.

### 3.2.4 Sample Size

In the year 2025, the current update report from the Department of Statistics Malaysia (2025) indicates that Malaysia's population stands at 34.2 million. (refer to appendix 3.1). The population of people between 15 - 64 years old is 24 million. While we can estimate that the Gen Z population in Malaysia is expected to be 24 million which is 29%. Therefore, we are using Cochron's sample to define our sample size. The alpha level usually is more used of either 0.05 or 0.01 in most research studies (Ary, Jacobs and Razavieh, 1996). In this study, 0.5 alpha level will be used and t-value is 1.96 according to the Z table. Following the guideline of Krejcie and Morgan (1970), the study adopts 0.05 as an tolerable range of inaccuracy. The calculated proportion of the population, estimated at 0.29, is obtained by dividing the number of Gen Z individuals, which stands at 10,222,943, by the total population of Malaysia, which is 35,865,975. Therefore, we can calculate that our sample size is 317 respondents. We will select 317 respondents and let them respond to about 23 survey questions.

$$n_0 = \frac{Z^2 pq}{e^2}$$

N : sample size

Z : Z-score for 95% = 1.96

P : estimated population proportion = 0.29

Q : (1-P)

E : margin of error = 0.05

# 3.3 Data Collection Method

## 3.3.1 Primary Data

As stated by Mazhar et al. (2021), the data that we first gathered are known as primary data, and they are unique and current. Additionally, primary data includes various types of methods which include observation, interview, questionnaire and schedule methods. A questionnaire, which serves as the study's major data source, will be created utilizing a Google form with an estimated 26 items. Questionnaire survey methods are widely use in business section to collect the data from consumer (Aithal & Aithal, 2020). We will connect with our respondents through social media platforms, and we will also distribute the questionnaire via email to engage a substantial number of respondents.

## 3.3.2 Research Instrument

We planned to have 26 questions for each independent variable (IV) and dependent variable (DV). The respondents' answer data will be gathered for this study by using the likert scale. The Likert

scale will consist of ranging from five points of strongly disagree to strongly agree. As we employ Google Form to conduct questionnaires, we will generate a QR code that connects our Google Form to our respondents. The questionnaire consists of inquiries concerning our dependent variable (DV) and independent variables (IV). For IV, it encompassed three models of the Theory of Planned Behaviour: Attitude, Subjective Norm, and Perceived Behavioral Control, along with two additional models, namely Price Perception and Performance Perception. For DV is Gen Z's purchase intention on second-hand electronic gadgets in Malaysia.

The survey will be segmented into six sections and PI, SN, PBC and PrP got 4 questions, ATT and PeP got 5 questions. Below table shows the questions for each study parts

*Table 3.1*

*Sources of Measurement Items*

| Construct | Operationalization | | Source |
|---|---|---|---|
| Purchase Intention | PI1 | I will buy the second-hand gadgets in future | Wang et.al, 2013 |
| | PI2 | I will recommend my friend and family to buy second-hand gadgets | |
| | PI3 | I would hesitate before purchasing second-hand gadgets | |
| | PI4 | I will buy second-hand gadgets after this | |

| Attitude | A1 | I will buy second-hand gadget because of valuable | ÖGEL, 2022 |
| | A2 | Buying second-hand gadgets makes me happy | |
| | A3 | I feel good for buying second-hand gadgets | |
| | A4 | I will buy second-hand gadgets because of enjoyable | |
| | A5 | I buy second-hand gadgets to reduce electronic waste | |
| Subjective Norm | SN1 | My family and friends are buying and using the second-hand gadgets | Wang et.al, 2013 |
| | SN2 | My colleagues and friends suggest me to buy second-hand gadgets | |
| | SN3 | People that around me (boss) support me to buy second-hand gadgets | |

| | SN4 | I rely on others' recommendations to buy second-hand gadgets | |
|---|---|---|---|
| Perceived Behavioral Control | PBC1 | I think when I need second-hand gadgets, I will buy it | ÖGEL, 2022 |
| | PBC2 | The decision to buy second-hand gadgets is decided by me | ÖGEL, 2022 |
| | PBC3 | It is easy for me to buy second-hand gadgets | ÖGEL, 2022 |
| | PBC4 | I can identify the second-hand gadgets | Wang et.al, 2013 |
| Price Perception | PrP1 | I buy second-hand gadgets because it is cheap | ÖGEL, 2022 |
| | PrP2 | I buy second-hand gadgets because I want to spend less money | ÖGEL, 2022 |
| | PrP3 | I buy second-hand gadgets because the price is match with the quality | Pisitsankkhakarn and Vassanadumrongdee, 2020 |

| | | | |
|---|---|---|---|
| | PrP4 | I buy second-hand gadgets because low price compared to new gadgets | Kabel et al., 2020 |
| Performance Perception | PeP1 | I buy second-hand gadgets because of product quality | |
| | PeP2 | Second-hand gadgets last as long as I expected | |
| | PeP3 | I buy second-hand gadgets because it can offer the same function with new gadgets | |
| | PeP4 | I buy second-hand gadgets because it quality and performance already can fulfill my needs | |
| | PeP5 | I buy second-hand gadgets because it still can function as new gadgets | |

## 3.3.3 Pilot Study

The pilot study has been identified as being utilized in a greater number of investigations (Eldridge et al., 2016), and it is also described as being carried out on a limited scale to inquire whether the questions can be effectively addressed (Bond et al., 2023). According to Thabane et al. (2010), pilot study can be applied to both quantitative and qualitative research. Pilot studies are necessary for our research because we are doing quantitative research. 10% of the total study size is recommended as the pilot test sample size (Lackey and Windgate, 1998).

Our target population for this research is Gen Z second-hand gadgets user, and our sample size is almost 300 respondents, and taken 10% from it. Therefore, we will take 30 respondents aged 13-28 to conduct the pilot test.

# 3.4 Proposed Data Analysis Tool

## 3.4.1 Descriptive Analysis

Descriptive Analysis is used to combine a set of data after observation for the purpose of linking the largest amount of information easily (Mishra et al., 2019). As noted by Aggarwal and Ranganathan (2019), descriptive analysis serves to elucidate the allocation of variables without addressing causes or hypotheses. Kaur et al. (2018) emphasized that descriptive statistics serve a vital function in data analysis by condensing information and clarifying the connections among variables in a population or sample.

 In this research, we will use frequency distribution to measure the components in each scale range.

## 3.4.2 Reliability Test

Cronbach (1951) posits that the Cronbach alpha reliability test is the most commonly utilized instrument for evaluating reliability in the fields of social and organizational science. (as cited in Bonett & Wright, 2014). Cronbach alpha is adopted in various journals to measure the reliability (Taber, 2017). Based on Izah et al. (2023), during the development and validation of the measurement tool, cronbach alpha is used to ensure that the items are accurate and coherent. Table 3.1 shows the Cronbach alpha measurement and it ranges from 0 - 1, and the minimum score needed to achieve is 0.7.

In the present study, reliability will be evaluated using Cronbach's alpha. As we are using likert scale and it is suitable used for cronbach alpha reliability test.

*Table 3.2*

*Cronbach's Alpha*

| Cronbach's Alpha | Consistency |
|---|---|
| $\alpha \geq 0.9$ | Excellent |
| $0.8 \leq \alpha < 0.9$ | Good |
| $0.7 \leq \alpha < 0.8$ | Acceptable |
| $0.6 \leq \alpha < 0.7$ | Questionable |
| $0.5 \leq \alpha < 0.6$ | Poor |
| $\alpha < 0.5$ | Unacceptable |

Source from Habidin, N. F., Mohd Zubir, A. F., Mohd Fuzi, N., Md Latip, N. A., & Azman, M. N. A. (2015). *Sustainable Performance Measures for Malaysian Automotive Industry*. https://doi.org/DOI: 10.5829/idosi.wasj.2015.33.06.257

## 3.4.3 Inferential Analysis

### 3.4.3.1 Pearson's Correlation Analysis

According to Schober et al. (2018), correlation analysis serves as a method for identifying the association between two variables. It has been noted by Schober et al. (2018) emphasized that values of the correlation coefficient fall within the range of −1 to +1, where 0 represents a lack of linear association. Table 3.2 shows the range and the acceptable range is from 0.4, less than 0.4 is defined as weak correlation.

*Table 3.3*

*Pearson's Correlation Coefficient*

| Correlation Coefficient Range | Explanation |
|:---:|:---:|
| 0.00-0.10 | Negligible correlation |
| 0.10-0.39 | Weak correlation |
| 0.40-0.69 | Moderate correlation |
| 0.70-0.89 | Strong correlation |
| 0.90-1.00 | Very strong correlation |

Source from Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia &amp; Analgesia*, *126*(5), 1763–1768.

**3.4.3.2 Multiple Linear Regression Analysis**

Multiple regression analysis, described by Black et al. (2019) and referenced in Ruan (2024), is a method of statistical analysis applied to explore how dependent and independent variables are connected. This method is employed to obtain coefficient estimates for the independent factors within the model. As observed by Sun et al. (2023), a single variable is generally affected by multiple other variables.

The following equation is for multiple linear regression:

**$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \varepsilon$**

- Y= Dependent Variable (DV)

- B0 = intercept term

- Bi = coefficient of independent variable

- Xi = Independent Variable (IV)

- $\varepsilon$ = error term

In this study, Y is referred to DV, which is Gen Z's purchase intention on second-hand electronic gadgets; X1 referred to attitude; X2 referred to subjective norm; X3 referred to perceived behavioral control; X4 referred to price perception; X5 referred to performance perception. Therefore, the equation formed in this research study:

**$PI = \beta_0 + \beta_1(ATT) + \beta_2(SN) + \beta_3(PBC) + \beta_4(PRP) + \beta_5(PEP)$**

- Y = Gen Z's purchase intention on second-hand electronic gadgets (PI)

- B0 = Constant

- X1 = Attitude (ATT)

- X2 = Subjective Norm (SN)

- X3 = Perceived Behavioral Control (PBC)

- X4 = Price Perception (PRP)

- X5 = Performance Perception (PEP)

# CHAPTER 4: DATA ANALYSIS

## 4.1 Introduction

In Chapter 4, the results of the questionnaire survey will be examined and discussed. A total of 317 valid replies were obtained from this poll, which is adequate to reflect our target respondents, the Gen Z demographic. The data analysis will not consider any responses that are deemed invalid, and the data analysis instrument for this study is SPSS version 31.0.0.0.

## 4.2 Descriptive Analysis

The gender distribution of those who answered the questionnaire is displayed in Figure 4.1. There is a fairly equal representation of both genders in the sample, with 49.5% of respondents being female (157 respondents) and 50.5% being male (160 respondents).
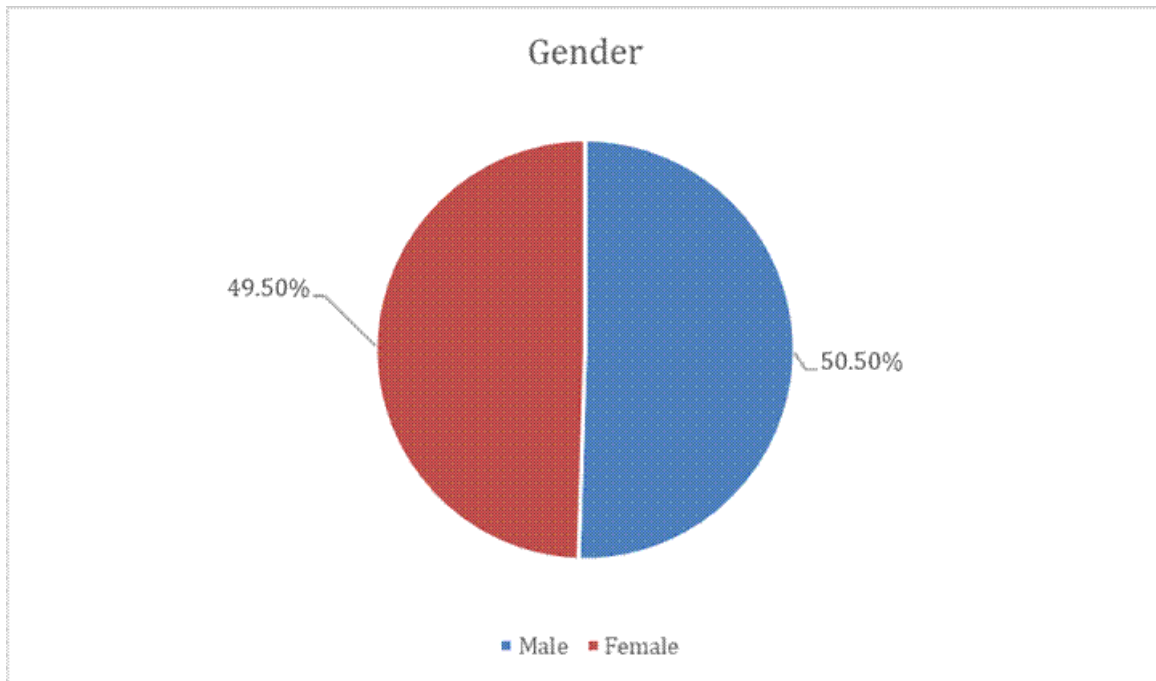
*Figure 4.1 Respondent's Gender*

The bulk of respondents, at 69.4% (220 respondents), were Chinese, as shown in Figure 4.2. Next in line are the Malay, who make up 18.0% of the sample (57 respondents), and the Indians, who make up 12.6% (40 respondents).
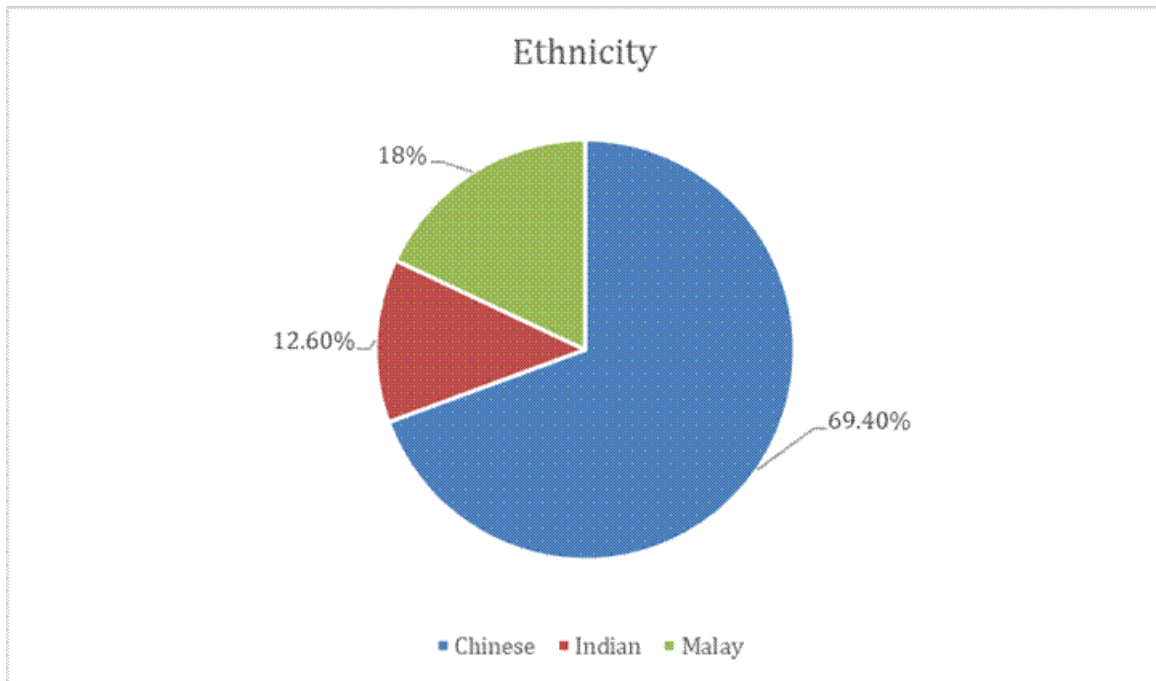
*Figure 4.2 Respondent's Ethnicity*

Figure 4.3 displays the educational attainment of the respondents. Almost half of them had a bachelor's degree at 47.9% (152 respondents), followed by those with a diploma at 17.0% (54 respondents) and foundation qualification at 16.4% (52 respondents). Additionally, 12.0% (38 respondents) of respondents had a high school, while a smaller proportion which is 6.6% (21 respondents) possessed a Master's degree.

## Education Level

- 47.90% — Bachelor of Degree
- 16.40% — Foundation
- 17% — Diploma
- 12% — High Schol
- 6.60% — Master
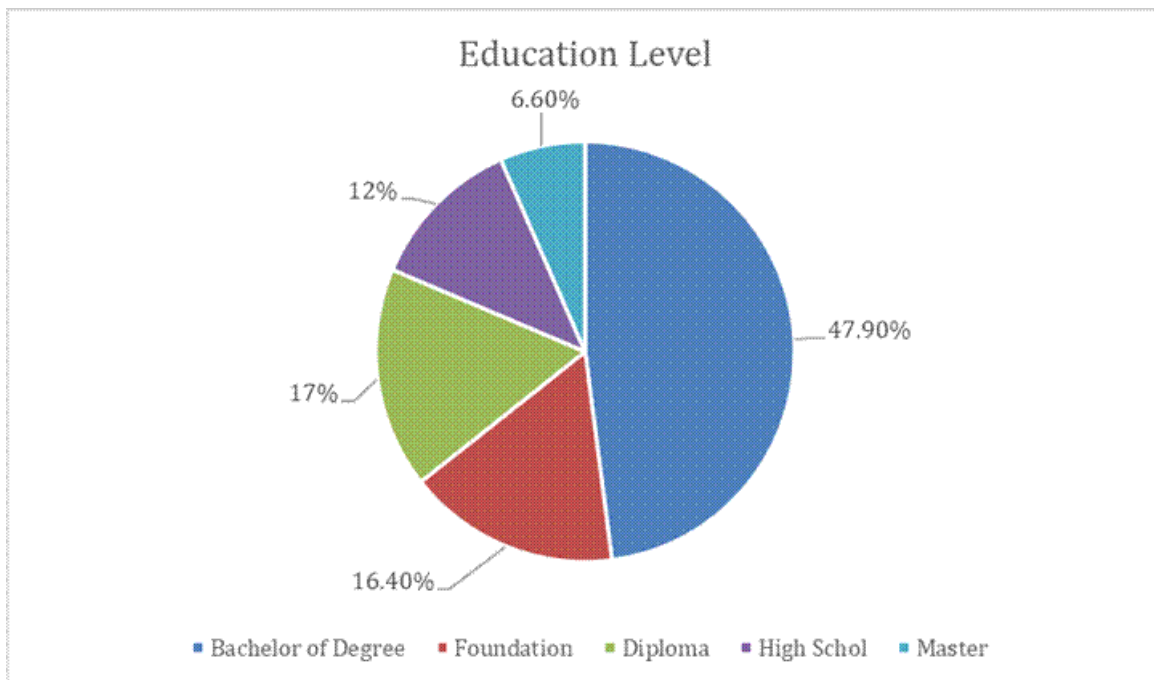
*Figure 4.3 Respondent's Education Level*

Figure 4.4 illustrates the geographical distribution. All of the respondents were came from various states in Malaysia, with the highest representation from Selangor at 15.1% (48 respondents), followed by Perak at 14.2% (45 respondents), Penang at 9.5% (30 respondents), Terengganu at 8.2% (26 respondents), Kuala Lumpur at 7.6% (24 respondents), Pahang at 6.9% (22 respondents), Sabah at 6.9% (22 respondents), Kelantan at 5.7% (18 respondents), Melaka at 5.4% (17 respondents), Kedah at 5% (16 respondents), Negeri Sembilan at 4.7% (15 respondents), Johor at 4.4% (14 respondents), Perlis at 4.1% (13 respondents) and Sarawak at 2.2% (7 respondents).
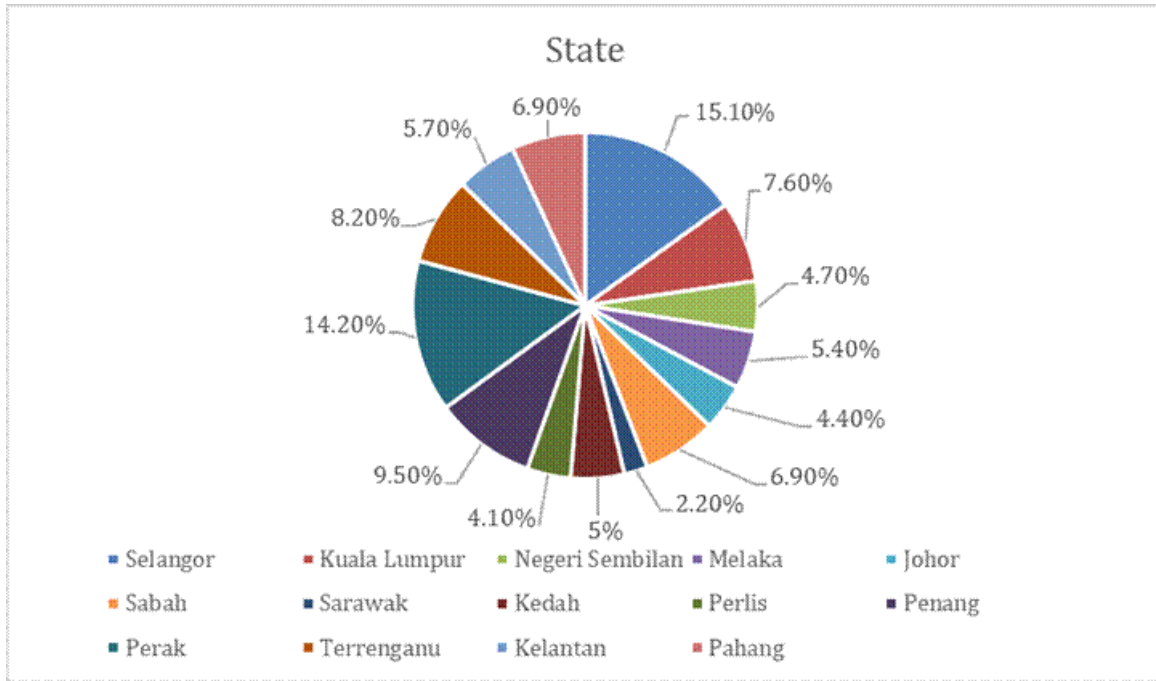
*Figure 4.4 Respondent's Geographical Distribution*

As seen in Figure 4.5, 120 respondents, or 37.9% of the sample, said they made less than RM 2,000 a month. In contrast, 104 respondents, or 32.8%, made between RM2,000 and RM4,000. Just 9.8% of respondents (31 respondents) reported earnings over RM6,000, while 19.6% of respondents (62 respondents) reported earnings between RM4,000 and RM6,000.
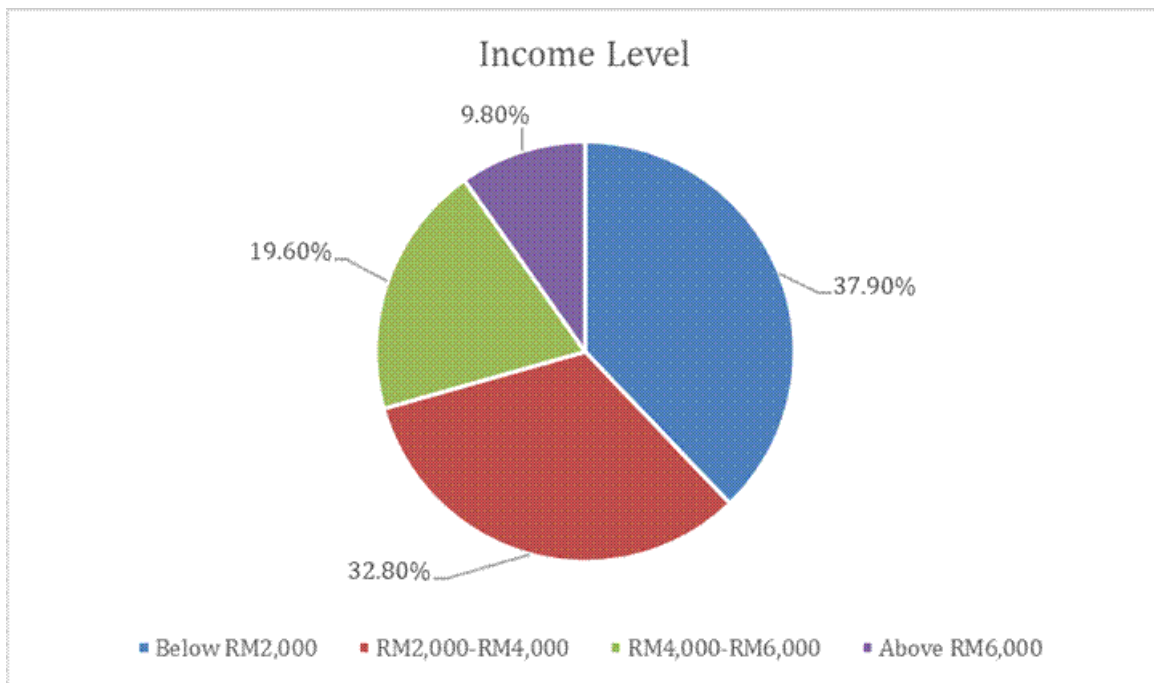
*Figure 4.5 Respondent's Income Level*

Overall, the demographics reveal a diverse demographic among Malaysia's Generation Z consumers, with a balanced gender distribution, a predominantly Chinese population, respondents from diverse regions, diverse educational backgrounds, and varying income levels. This diversity enhances the reliability of subsequent analysis of used electronics purchase intentions.

## 4.3 Reliability Test

### 4.3.1 Pilot Study's Reliability Test

A test study with 30 respondents in Malaysia was conducted prior to the questionnaire's distribution in order to assess each variable's dependability. The outcomes of the reliability tests for the pilot test are shown in Table 4.1. The pilot test took almost 3 days' time to collect responses.

According to the results, all five independent variables (AT, SN, PBC, PrP, PeP) —as well as the dependent variable (PI) are higher than the Cronbach's Alpha value of 0.70, which is generally considered to be appropriate for research purposes and indicates good internal reliability. (Ahmad et al., 2024).

*Table 4.1*

*Reliability Test Result for Pilot Study*

| Variables | No. of Items | Cronbach's Alpha | Level of Reliability |
|---|---|---|---|
| Dependent Variable | | | |
| Purchases Intention (PI) | 4 | 0.789 | Acceptable |
| | | | |
| Independent Variables | | | |
| Attitude (AT) | 5 | 0.919 | Excellent |
| Subjective Norm (SN) | 4 | 0.853 | Good |

| | | | |
|---|---|---|---|
| Perceived Behavioral Control (PBC) | 4 | 0.780 | Acceptable |
| Price Perception (PrP) | 4 | 0.885 | Good |
| Performance Perception (PeP) | 5 | 0.903 | Excellent |

## 4.3.2 Actual Study's Relibility Test

The reliability test outcomes for the actual study are shown in Table 4.2. Cronbach's Alpha values for every construction exceed the recommended threshold of 0.70, indicating adequate internal consistency. Specifically, the highest variable is Attitude recorded an alpha of 0.816, followed by Performance Perception 0.813, Price Perception 0.799, Subjective Norms 0.771, Purchases Intention 0.750and Perceived Behavioral Control 0.711. These outcomes confirm that the instruments for measurement used in this study are valid and appropriate for additional research.

*Table 4.2*

*Actual Study's Relibility Test*

| Variables | No. of Items | Cronbach's Alpha | Level of Reliability |
|---|---|---|---|
| | | | |

| Dependent Variable | | | |
|---|---|---|---|
| Purchases Intention | 4 | 0.750 | Acceptable |
| | | | |
| Independent Variables | | | |
| Attitude | 5 | 0.816 | Good |
| Subjective Norm | 4 | 0.771 | Acceptable |
| Perceived Behavioral Control | 4 | 0.711 | Acceptable |
| Price Perception | 4 | 0.799 | Acceptable |
| Performance Perception | 5 | 0.813 | Good |

## 4.4 Inferential Analysis

## 4.4.1 Pearson Correlations Coefficient Analysis

Table 4.3 shows that the dependent variable, Purchases Intention (PI), is positively correlated with each of the independent variables which are, Attitude (AT), Subjective Norms (SN), Perceived Behavioral Control (PBC), Price Perception (PrP), and Performance Perception (PeP). Attitude (AT) is the variable with the highest correlation value at 0.770, followed by Performance Perception (PeP) at 0.757, Perceived Behavioral Control (PBC) at 0.747, Subjective Norm (SN) at 0.733 and Price Perception (PrP) at 0.677.

*Table 4.3*

*Result of Pearson Correlations Coefficient Analysis*

|      | AT    | SN    | PBC   | PrP | PeP | PI |
|------|-------|-------|-------|-----|-----|----|
| AT   | 1     |       |       |     |     |    |
| SN   | 0.716 | 1     |       |     |     |    |
| PBC  | 0.771 | 0.708 | 1     |     |     |    |
| PrP  | 0.728 | 0.598 | 0.719 | 1   |     |    |

| | | | | | |
|---|---|---|---|---|---|
| PeP | 0.754 | 0.654 | 0.683 | 0.718 | 1 |
| PI | 0.770 | 0.733 | 0.747 | 0.677 | 0.757 | 1 |

*Note: Correlation is significant at 0.01 level (2-tailed)*

## 4.4.2 Multiple Regression Analysis

As shown in Table 4.4, the model produced a correlation coefficient (R) of 0.850, demonstrating a robust favorable relationship between purchase intention and the independent variables. With a coefficient of determination ($R^2$) of 0.722, the model's predictors accounted for roughly 72.2% of the variance in purchase intention. When the number of predictors is taken into account, the model's modified $R^2$ value of 0.717 shows that its explanatory power is only slightly diminished. Furthermore, the standard error of the estimate was 0.48579, which indicates a comparatively low degree of prediction error.

*Table 4.4*

*Result of Model Summary*

| Model | R | R Square | Adjust R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.850 | 0.722 | 0.717 | 0.48579 |

The results of the ANOVA in Table 4.5, where the F value is 161.342 and p < 0.001, demonstrate that the regression model is statistically significant. This suggests that the separate factors taken together have a considerable impact on Genarations Z consumers' inclination to purchase second-hand electronics gadgets, and that the model fits well overall.

*Table 4.5*

*Result of ANOVA Table*

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 190.380 | 5 | 38.076 | 161.342 | <.001b |
| Residual | 73.395 | 311 | .236 | | |

| | | |
|---|---|---|
| Total | 263.774 | 316 |

Table 4.6 displays the outcomes from the analysis of the coefficients, show how much each predictor variable contributes to Gen Z consumers' desire to purchase second-hand electronic gadgets in Malaysia. Among the five predictors, Attitude (AT) ($\beta = 0.205$), Subjective Norm (SN) ($\beta = 0.229$), Perceived Behavioral Control (PBC) ($\beta = 0.207$), and Perceived Price (PeP) ($\beta = 0.283$) were observed to have a statistically significant positive association with purchase intention, and all of them are significant at $p < 0.05$. This implies that among Gen Z consumers, higher perceived pricing value, a more positive mentality, sharper subjective standards, and greater perceived control are all associated with increased purchase intention.

Conversely, Price Perception (PrP) ($\beta = 0.040$, $p = 0.410$) did not show a statistically significant effect on purchase intention, stated that price perception alone may not be a determining factor for Gen Z consumers when considering second-hand electronic gadgets.

*Table 4.6*
 *Result of Coefficients*

| Model | Understandardized B | Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|

| 1 | (Constant) | .120 | .131 | | .916 | .360 |
|---|---|---|---|---|---|---|
| | AT | .205 | .058 | .204 | 3.563 | <.001 |
| | SN | .229 | .045 | .236 | 5.074 | <.001 |
| | PBC | .207 | .055 | .199 | 3.742 | <.001 |
| | PrP | .040 | .049 | .041 | .824 | .410 |
| | PeP | .283 | .050 | .284 | 5.652 | <.001 |

1. Dependent Variable: PI

## 4.5 Conclusion

In summary, the Gen Z purchasing intentions survey towards second-hand electronics gadgets in Malaysia discovered that the majority of those surveyed are Chinese (69.4%) and male (50.5%). 37.9% make less than RM2,000 per month, and bachelor's degrees accounted for over half of the respondents' educational backgrounds (41.9%). Selangor has the highest rate (15.1%).

Additionally, all measurement constructs obtained Cronbach's Alpha values above the suggested cutoff of 0.70, according to the reliability test results, indicating that the survey instrument had excellent internal consistency and was appropriate for additional statistical analysis.

Proceeding to the examination of the Pearson correlation coefficient, it was shown that there exists a noteworthy positive connection between the desire to buy and important predictor factors (AT, SN, PBC, PrP, PeP). These results suggest that Gen Z consumers' purchase intention toward second-hand electronic gadgets is associated with psychological and social factors rather than price considerations alone.

Lastly, the multiple regression analysis proved the statistical significance of the model. (R = 0.850, $R^2$ = 0.722, F = 161.342, p < 0.001), indicating that 72.2% of the variance in purchase intention can be explained by independent variables. Among the predictors, AT, SN, PBC, and PeP had significant positive effects on purchase intention, while PrP was found to be insignificant. According to this study, Generation Z consumers place greater importance on perceived control, social influence, and intrinsic worth than just price when evaluating second-hand electronic gadgets.

# CHAPTER 5: DISCUSSION, IMPLICATION AND CONCLUSION

## 5.0 Introduction chapter

A detailed brief overview of statistical discoveries will be presented in Chapter 5. Additionally, the implications of both the theoretical and practical dimensions will be examined, along with the study's constraints and suggestions for future investigations.

## 5.1 Overview of statistical result

*Table 5.1*

*Summary of the results of the hypothesis testing*

| Hypothesis | Significance | Outcome |
|---|---|---|
| H1: **Attitude and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated** | <0.01 | Supported |

| | | |
|---|---|---|
| H2: **Subjective Norms and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated** | <0.01 | Supported |
| H3: **Perceived Behavioral Control and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated** | <0.01 | Supported |
| H4: **Price Perception and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated** | .410 | Not Supported |
| H5: **Performance Perception and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated** | <0.01 | Supported |

## 5.1.1 Discussion of Major Findings

H1: **Attitude and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated**

The outcome indicated a favorable correlation between consumer attitude and the intention to buy second-hand electronic devices. This discovery indicates that Generation Z in Malaysia exhibits a favorable disposition towards purchasing pre-owned electronic gadgets. This discovery aligns with

the study performed by Stolz (2022), which demonstrated that attitude significantly influences the intention to purchase second-hand luxury items. Moreover, Keong et al., (2020) shows that positive consumer attitude in purchasing the remanufactured products. Thus, these findings emphasize the significance of attitude on second-hand or remanufactured products, and it also will affect the motivations of Generation Z to acquire pre-owned electronic devices.

## H2: Subjective Norms and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated

A favorable relationship was noted between subjective norms and purchase intention toward second-hand electronic devices. This research reveals that Malaysian Generation Z's intention to purchase pre-owned items is significantly affected by their social circle, including family, friends, supervisors, and coworkers. This discovery aligns with the research on purchasing second-hand clothing (Azzahra, 2024; Hoang 2022). In addition, it found a high probability that if one of your surrounding people successfully adopts a certain technology, the other friend will follow, and the purchase decision is shaped by the information and experience of other people (Gunawan, 2023). So, Gen Z will be affected strongly by their surroundings when using second-hand gadgets, and the desire to acquire pre-owned electronic devices also will increase.

## H3: Perceived Behavioral Control and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated

The outcome indicated a favorable correlation between perceived behavioral control and the intention to purchase second-hand electronic gadgets. The result demonstrates that Generation Z intention on purchasing second-hand gadgets increases when they own the ability to control themselves to acquire the product. The discovery corresponds with the studies regarding the intention to acquire remanufactured automotive parts (Asyraf et al., 2023). Our findings also

consistent with Ariffin (2025), perceived behaviour intention have beneficial impact on buying intention.

### H4: **Price Perception and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated**

The finding showed a negative relationship between price perception and tendency to purchase pre-owned electronics. The result shows that people will measure the price with the second-hand gadgets, if the price is closer to the new gadgets's price, people will think it is not worth it to buy it. This conclusion aligns with Darto (2024), indicating that price negatively influences the intention to buy a second-hand IPhone. Thus, the price set for second-hand electronic gadgets must be low even though the quality and function of gadgets is good due to having been used by other people.

### H5: **Performance Perception and Gen Z's purchase intention on second-hand electronic gadgets are positively correlated**

Evidence from the findings indicate a statistically significant positive linkage between performance perception and Gen Z's willingness to buy pre-owned electronic devices. The improved performance of second-hand items increases the likelihood of purchase by customers. This conclusion is in agreement with the results of Bus & Aryani (2020), suggesting that a correlation exists between product quality and the intention to purchase. Consequently, individuals are more inclined to purchase pre-owned devices when they are confident that these gadgets continue to operate efficiently and dependably.

## 5.2 Implication of Study

### 5.2.1 Theoretical Implications

This research utilizes Theory of Planned Behavior to explore the elements shaping the perspectives of Generation Z's tendency to purchase pre-owned electronic devices in Malaysia. This research explores the associations involving five independent constructs, which include attitude, subjective norms, perceived behavioral control, along with two additional variables, namely price perception and performance perception. The outcome of this research shows that ATT, SN,PBC, PEP favourably impact the intention to buy second-hand gadgets except PRP.

PRP and purchase intention are negatively correlated, this conflicts with traditional assumptions, where usually a lower price of a second-hand product will attract people to purchase. These findings open up a new discussion about Gen Z values perceived fairness and value for money over just affordability. Besides that, research findings indicate that PEP possesses the greatest beta value (0.284), so it constitutes the most critical element impacting Gen Z's purchase intention.

Future researchers may conduct the research to investigate why these variables influence purchase intention on second-hand gadgets, but PRP negatively impact toward second-hand gadgets and it may have a positive effect on other research. Furthermore, previous research on the second-hand or refurbished title is more focused on clothing, so this research offered a different subject on second-hand product titles.

## 5.3 Practical Implications

The findings indicate that certain attitudes have been demonstrated to positively impact Gen Z's decision to acquire second-hand electronics. Thus , second-hand gadgets platforms should promote a positive attitude towards second-hand gadgets. For example, second-hand gadgets companies should emphasize environmental sustainability for using second-hand gadgets such as reducing e-waste. They can organize a campaign about the importance of sustainability of electronic products to educate the consumer not to create electronic wastage, for example Samsung also implemented this concept as their Samsung Galaxy S25 series that was introduced in 2025 was using the recycled material such as recycled copper, gold, silver and aluminium (Circular economy: Planet: Sustainability: Samsung Electronics, n.d.). Other than that, the notion of a circular economy is also encouraged to convey to consumers, for example, the Apple company has introduced a trade-in program that allows customers to swap their old devices for new Apple products. This strategy and concept should be implemented by the second-hand gadgets companies, and it is important because it can help to shape the new perception for the users on second-hand gadgets, not just affordability but also can protect the environment and a responsible decision by using second-hand gadgets.

Besides that, subjective norms have also been proved that positively affect the buying intentions of Generation Z regarding second-hand electronic gadgets. Therefore, second-hand gadgets businesses should utilize the influence by collaborating with the macro and micro influencers or key opinion leaders who are related to Gen Z to boost the benefit of second-hand gadgets. For example, second-hand companies can collaborate with social media influencers on Instagram and Tiktok and promote the advantages of second-hand gadgets. Usually, influencers on social media platforms hold the most engagement with their followers because social media is a mainstream entertainment channel currently. In addition, second-hand platforms should fully utilize the user generated contents to influence perceived social norms on second-hand gadgets, such as the review of second-hand gadgets video and unboxing video.

In addition, perceived behavioral control has been proved that positively affect the buying intention of Gen Z with respect to pre-owned electronics. So, the second-hand gadgets companies should ensure that their platforms are providing the complete product information such as the battery life, storage, gadget system, etc.. Besides that, companies should simplify their purchasing process by providing the buying tips and guidelines to reduce their hesitation especially for the first time user. Other than that, product warranties, after sales repair services also can offer to the customer to reduce their perceived risk. In addition, second-hand company can emphasize on the comparison between second-hand gadgets and new gadgets, by explaining the benefits of purchasing second-hand gadgets can help consumers to increase the confident in selecting the right gadgets.

Besides, although the result showed price perception does not significantly affect Gen Z's purchase intention on second-hand gadgets, it was still encouraged to provide another aspect that similar to price to shape consumers' willingness to buy used gadgets. Price is not a factor that Gen Z will consider as maybe they will think the lowest price indicates that the quality of gadgets is bad, and those overpriced second-hand gadgets will lower down their intention to purchase. Thus, second-hand gadgets companies should emphasize pricing based on perceived value, which can consider product condition and services provided rather than just provided lower price. For example, they can duplicate the ways new gadgets companies promote their gadgets by providing at least 1 year warranty for second-hand gadgets. By copying the way of how new gadgets companies promote their gadgets on second-hand gadgets, second-hand gadgets buyers will increase their intention to buy second-hand gadgets as it is not just low price gadgets but the add ons service also provided. Besides, second-hand gadgets companies can increase the customer's perceived value through providing the bundling accessories such as charger, charging cable and earphone, and extended warranties also can provide for customers.

Last, performance perception has the strongest power to affect Gen Z's decision to acquire pre-owned gadgets, and the result showed a strong relationship with purchase intention indicating that performance is a critical factor for Gen Z to purchase second-hand gadgets. Hence, second-hand

gadgets companies should emphasize on the performance of gadgets by showing transparency to customers, such as providing stringent gadget quality checks including the performance and condition check. Besides that, second-hand gadgets companies also can increase their credibility by offering certificates of performance testing to customers, and this also can increase consumer confidence. Then, the detailed information of gadgets is also important to provide for consumers, such as the most important aspect of battery life, and the replacement gadgets component record. Moreover, post purchase technical support and repair services also can bring a strong performance assurance for consumers to increase the customer satisfaction and repurchase intention.

## 5.4 Limitation of the study

A small number of shortcomings in the current study need to be recognized. This research is limited by the observation that price perception does not play a significant role in shaping Generation Z's intention to acquire second-hand electronic gadgets. Although, the overall model shows a strong explanation that the $R^2$ is 0.722, but the price perception variable's p-value is 0.410. This suggests that price might not be a critical consideration for Generation Z regarding the purchase of pre-owned devices.

This study is also limited by the restricted accessibility of participants who are users of second-hand electronic products. The second-hand gadgets users or buyers are considered as a niche group, normally people will consider the new gadgets compared to second-hand gadgets especially for Gen Z. Thus, we are facing difficulty when we collect the data as we need to approach many Gen Z people to get enough data. Additionally, although we have approached many second-hand gadgets buyers and users, there is also the risk of dishonesty from the respondents.

## 5.5 Recommendation of the study

Based on the limitation identified, to address the limitation of price perception that does not significantly affect PI on second-hand gadgets, future researchers are encouraged to investigate other financial related variables that may capture Gen Z's purchase intention. For instance, future research can explore further constructs such as perceived value, brand trust or product warranty as independent variables. The added alternative predictors could help to build more accurate Gen Z's second-hand purchase behaviour.

To solve the limitation of difficult to reach second-hand gadgets buyers and users, future researchers are encouraged to broaden the sampling frame, in which they can collect the data of second-hand gadgets buyers and potential buyers which are the people that want to purchase the second-hand gadgets. Additionally, snowball sampling can be used by researchers in the future to gather data, as they can ask the existing respondents to invite their friends and family who also have used the second-hand gadgets. In addition, future researchers can also approach second-hand gadgets platforms to get the verified second-hand gadgets users.

## 5.6 Conclusion

Overall, the study is directed at analyzing the drivers that shape Gen Z's intention to acquire used electronic items. The results indicate that the findings demonstrate a significant influence of Attitude (AT), Subjective Norm (SN), Perceived Behavioral Control (PBC), and Performance perception (PEP) on Generation Z's intention to purchase second-hand gadgets, with the exception of Price perception (PrP). Additionally, this study had pointed out the shortcomings and suggestions for how future researchers could enhance their work in this field of second-hand goods.

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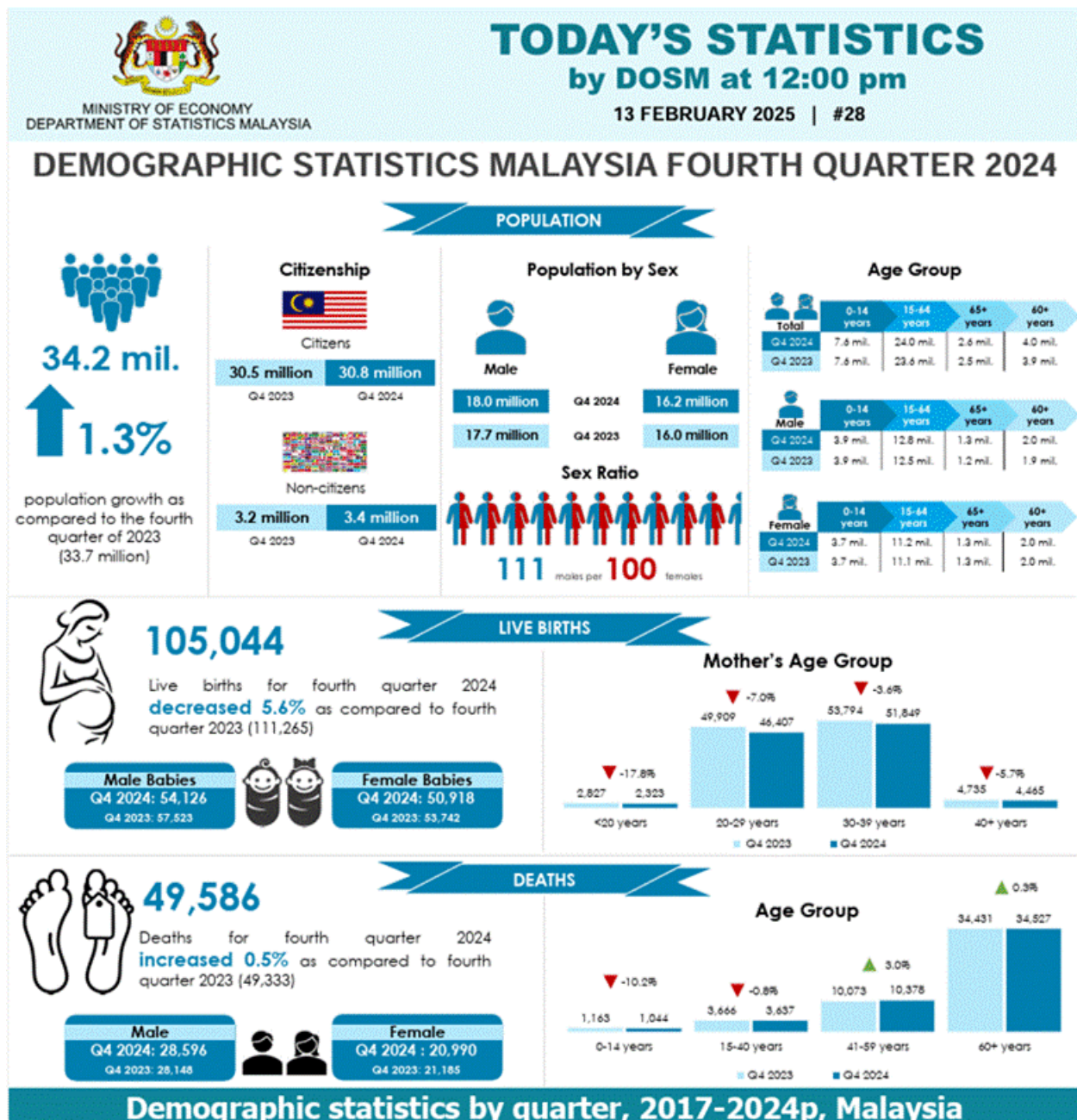
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# APPENDIX

**Appendix 3.1**

# RESEARCH INSTRUMENT

Section A: Screening Questions

1.Are you Malaysian?

  o Yes

  o No

2. Are you aged between 13 – 28 years old?

  o Yes

  o No

3. Have you purchased second-hand gadgets before?

  o Yes

  o No

**\*For those who answer 'Yes' in both questions will move forward directly to section B and C**

**\*For those who answer 'No' in either one question is directed to exit the survey questionnaire**

**\*For those who are aged between 13-17 years old need to get the consent from your parent before answer this questionnaire.**

Section B: Demographic Questions

This section is to collect the important background information of respondents in order to proceed the data analysis process

1.What is your ethnicity?

- o Malay

- o Chinese

- o Indian

- o Others: Please specify

2. Gender?

- o Male

- o Female

3. What is your educational level?

- o High school

- o Diploma

- o Foundation

- o Bachelor of Degree

- o Master

4. What is your state?

- o Kedah

- o Perlis

- o Penang

- o Perak

- o Terengganu

- o Kelantan

- o Pahang

- o Selangor

- o Kuala Lumpur

- o Negeri Sembilan

- o Melaka

- o Johor

- o Sabah

- o Sarawak

What is your income level?

- o Below RM2000

- o RM2000 – RM4000

- o RM4000 – RM6000

- o Above RM6000

Section C: Factors that affect Genz customer purchase intention on second-hand electronic gadgets in Malaysia.

**For each statement, indicate your agreement based on your current views about second-hand gadgets.Please select an option that is represent with your own answer**

**1- Strongly Disagree**

**2- Disagree**

**3- Neutral**

**4- Agree**

**5- Strongly Agree**

| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| DV1 | Purchase Intention | | | | | |
| PI1 | I will buy the second-hand gadgets in future | 1 | 2 | 3 | 4 | 5 |
| PI2 | I will recommend my friend and family to buy second-hand gadgets | 1 | 2 | 3 | 4 | 5 |

| PI3 | I would hesitate before purchasing second-hand gadgets | 1 | 2 | 3 | 4 | 5 |
|-----|--------------------------------------------------------|---|---|---|---|---|
| PI4 | I will buy second-hand gadgets after this | 1 | 2 | 3 | 4 | 5 |

|     |     | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-----|-----|-------------------|----------|---------|-------|----------------|
| IV1 | Attitude |              |          |         |       |                |
| ATT1 | I will buy second-hand gadget because of valuable | 1 | 2 | 3 | 4 | 5 |
| ATT2 | Buying second-hand gadgets makes me happy | 1 | 2 | 3 | 4 | 5 |
| ATT3 | I feel good for buying second-hand gadgets | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| ATT4 | I will buy second-hand gadgets because of enjoyable | 1 | 2 | 3 | 4 | 5 |
| ATT5 | I buy second-hand gadgets to reduce electronic waste | 1 | 2 | 3 | 4 | 5 |

| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| IV2 | Subjective Norm | | | | | |
| SN1 | My family and friends are buying and using the second-hand gadgets | 1 | 2 | 3 | 4 | 5 |
| SN2 | My colleagues and friends suggest me to buy second-hand gadgets | 1 | 2 | 3 | 4 | 5 |
| SN3 | People that around me (boss) support me to buy second-hand gadgets | 1 | 2 | 3 | 4 | 5 |

| SN4 | I rely on others' recommendations to buy second-hand gadgets. | 1 | 2 | 3 | 4 | 5 |
|-----|-----|---|---|---|---|---|

| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|-----|-----|-----|-----|-----|-----|-----|
| IV3 | Perceived Behavioral Control | | | | | |
| PBC1 | I think when I need second-hand gadgets, I will buy it | 1 | 2 | 3 | 4 | 5 |
| PBC2 | The decision to buy second-hand gadgets is decided by me | 1 | 2 | 3 | 4 | 5 |
| PBC3 | It is easy for me to buy second-hand gadgets | 1 | 2 | 3 | 4 | 5 |
| PBC4 | I can identify the second-hand gadgets | 1 | 2 | 3 | 4 | 5 |

| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| IV4 | Price Perception | | | | | |
| PRP1 | I buy second-hand gadgets because it is cheap | 1 | 2 | 3 | 4 | 5 |
| PRP2 | I buy second-hand gadgets because I want to spend less money | 1 | 2 | 3 | 4 | 5 |
| PRP3 | I buy second-hand gadgets because the price is match with the quality | 1 | 2 | 3 | 4 | 5 |
| PRP4 | I buy second-hand gadgets because low price compared to new gadgets | 1 | 2 | 3 | 4 | 5 |

| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| IV5 | Performance Perception | | | | | |

| PEP1 | I buy second-hand gadgets because of product quality | 1 | 2 | 3 | 4 | 5 |
|------|------|------|------|------|------|------|
| PEP2 | Second-hand gadgets last as long as I expect | 1 | 2 | 3 | 4 | 5 |
| PEP3 | I buy second-hand gadgets because it can offer the same function with new gadgets | 1 | 2 | 3 | 4 | 5 |
| PEP4 | I buy second-hand gadgets because it quality and performance already can fulfil my needs | 1 | 2 | 3 | 4 | 5 |
| PEP5 | I buy second-hand gadgets because it still can function as new gadgets | 1 | 2 | 3 | 4 | 5 |