THE IMPULSIVENESS OF GEN Z BUYERS. A STUDY OF BUY-NOW-PAY-LATER SERVICES

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DECLARATION

I hereby declare that:
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(2)   No portion of this FYP has been submitted in support of any application for
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(3)   Equal contribution has been made in completing the FYP.

(4)   The word count in this research report is 13806.

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Date: 12/12/2023

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LIST OF ABBREVIATIONS

EX	Extraversion
CON	Conscientiousness
OP	Openness
AGR	Agreeableness
NER	Neuroticism
IM	Impulse Buying
BNPL	Buy Now, Pay Later
SmartPLS	Smart Partial Least Squares
HTMT	Heterotrait-monotrait ratio

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ABSTRACT

Regarding impulse buying things, "buy now, pay later" services, and other behaviours, Gen Z demonstrates a number of traits and tendencies. Since they were raised in the digital era, members of Generation Z are more inclined to make impulsive purchases. This study intends to investigate how the five-factor personality model affects the adoption of "buy now, pay later" services and impulsive purchase behaviour among Generation Z. 309 replies from a Malaysian online poll were included in the study. In order to assess 309 sets of data that moderated the influence of the five-factor personality model on Generation Z's impulse buying behaviour and use of "buy now, pay later" services, this study used the Smart Partial Least Squares (SmartPLS). The results of this study realize the valuable influence of the independent variables, namely Extraversion, Conscientiousness, Openness, Agreeableness and Neuroticism have a significant impact on Generation Z's impulse buying behaviour and "buy now, pay later" service usage. This study provides researchers with an interactive approach to assess psychological, and social moderating influences on technology adoption. It can also help practitioners identify important factors that influence consumers' impulse consumption, thereby further influencing consumers' willingness to adopt BNPL services in the analysis report. The novelty of this study is tested through the theoretical variables of the five-factor personality model, explains consumers' impulse consumption and intention to adopt BNPL services that are limited by the adopted theory, and makes further suggestions for supplementing the variance.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

The five-factor personality model's effects on impulsive purchasing and the utilization of the Buy-Now-Pay-Later service have been the subject of recent research. These results imply a relationship between various aspects of the five-factor personality model and a person's propensity for impulsive purchases and use of Buy-Now-Pay-Later services. Understanding this correlation helps us better understand people's purchasing behaviour and provide them with appropriate financial management advice and support.

1.1 Research background

1.1.1 Generation Z

According to Debczak (2023), the birth years of Generation Z are 1997 to 2012, and the age range of this generation is between 11 and 26 years old. According to Dimock (2019), the term "Generation Z" describes the group of people born between 1997 and 2012, commonly referred to as "millennials" or "post-millennials". However, other studies (Laitkep & Stofkova, 2021) limit the scope of Generation Z to between 1994 and 2004. The first generation to have grown up in a world of digital communication is Generation Z, also known as "digital natives" (Djafarova, & Bowes, 2021). According to Djafarova, E., and Bowes, T. (2021) they are quite likely to be exposed to digital advertising on social media (SM) and check Instagram at least five times every day. As Generation Z (born between 1997 and 2012) has gradually become an important group in the consumer market, it is crucial to understand their buying behaviour and consumption preferences.

1.1.2 Impulse purchase

Impulse buying is when a person decides to purchase a product or service without giving it enough thought. The phrases "impulse buying" and "unplanned buy" are frequently used interchangeably (Stern, H., 1962). Research points out that 41% of consumers in Generation Z show a tendency to make impulse purchases, while the proportions of impulse shoppers among Millennials and Generation X are 34% and 32% respectively (Djafarova and Bowes, 2021). As the number of buy now, pay later (BNPL) transactions increases, the trend of online impulse buying is also on the rise (Dawson & Kim, 2009; FI, 2021). Early research on impulse buying mainly focused on the physical store environment. However, with the development of technology, research gradually turned to focus on the phenomenon of online impulse buying (Dawson & Kim, 2009; Rook & Fisher, 1995). These studies point out that impulse buying behaviour is often unplanned, so consumers often lack awareness of the consequences (Dawson & Kim, 2009).

1.1.3 BNPL

Buy now, pay later (BNPL) is a short-term loan method that allows customers to purchase goods and pay in installments (Alcazar & Bradford, 2021). Short-term BNPL products usually do not charge interest, but long-term BNPL products may charge certain interest fees (Alcazar & Bradford, 2021). Fook, L. and McNeil, L. (2020) studied the effect of the current buy now, pay later (BNPL) credit scheme but did not consider the purchasing goals of Generation Z in the online shopping environment. BNPL schemes are the latest expansion in the retail environment, competing directly with traditional loan advice (Susan Edmunds, 2018). In recent years, payment options such as PayPal's Pay in 4, Klarna, Afterpay, QuadPay, and Affirm have become increasingly popular among online stores, especially during the COVID-19 pandemic (Best, 2021). Due to the lack of detailed data on consumers' use of BNPL services, researchers are particularly interested in the user characteristics of the younger generation, or Generation Z.

1.1.4 Five-factor personality model

The five-factor model is constructed based on five empirical personality dimensions and represents the broadest abstract level of personality (Gosling et al., 2003). Each dimension contains multiple sub-traits, for example, agreeableness includes politeness, empathy, and trust. The five dimensions are extraversion (relating to subtraits such as enthusiasm, gregariousness, and confidence), agreeableness (e.g., politeness, empathy, and trust), conscientiousness (e.g., dependability, orderliness, and diligence), and emotional stability (e.g., anxiety , withdrawal, and mood swings) and openness to new experiences (e.g., imagination, intelligence, and aesthetic sensitivity) (Barrick & Mount, 1991). Research shows that personality traits of the five-factor model may have an impact on consumer purchasing behaviour (Farid, D. S., & Ali, M., 2018).

1.2 Problem statement

Research by Dawson and Kim (2009) pointed out that electronic shopping shows a continued growth trend, and about 40% of impulse purchases occur through online shopping channels. According to data provided by Fook & McNeill (2020), Western household consumers spend an average of approximately US$5,400 per year on impulse purchases of fashion and other retail goods, including food and household items. The study aims to explore the consumer behaviour patterns of Generation Z, with a particular focus on impulse purchases and the use of "buy now, pay later" services. Research shows that consumers often underestimate their actual impulse buying behaviour, which can lead to unplanned shopping behaviours with negative social consequences (Fook & McNeill, 2020). Understanding the behavioural tendencies and characteristics of Generation Z in shopping decisions is crucial to a deep understanding of the consumption patterns of contemporary consumer groups. Online and social media advertisements are more likely to be seen by Gen Z consumers (Hoang, C. C., & Khoa, B. T., 2022). This understanding helps companies formulate market strategies and design products more accurately to better meet the needs of Generation Z consumers.

The study by Lia & Natswa (2021) explored the relationship between Generation Z's impulse buying and over-consumption tendencies when using BNPL (buy now, pay later) services. The research by Fook & McNeill (2020) focuses on how BNPL tools trigger impulse

purchases in the online fashion shopping environment, especially among young adult female consumers. In addition, "buy now, pay later" services may increase the likelihood of impulse purchases among Generation Z. According to research by Arisandy et al. (2023), Generation Z is less fond of traditional payment methods, such as credit cards and loans. While these traditional payment methods may require full payment or credit card information, BNPL services provide a more convenient and attractive option. It removes payment barriers, making it easier for Gen Z to fall into impulse buying situations.

Although consumers are more educated, impulse buying is a common phenomenon in BNPL (buy now, pay later) transactions (Fook & McNeill, 2020). BNPL transactions pose risks when consumers borrow beyond their ability to repay (FI, 2021). Understanding Generation Z's impulsive consumption and use of BNPL services can help better meet the needs of this group while maintaining an advantage in market competition. For example, young people taking on debt early in life may limit their freedom in old age (FI, 2021). In addition, the impulse buying behaviour caused by BNPL leads to high consumption, which is also one of the reasons for causing damage to the environment. This illustrates the tension between mutually beneficial transactions between producers and consumers and excessive waste, with negative consequences for the environment (Fook & McNeill, 2020).

1.3 Research Objective

1.3.1 General objective

This research main objective is to study the impulsiveness of Gen Z buyers: A study of buy-now-pay-later services.

1.3.2 Specific Objective

The specific goal of this study is to explore the influence of the five-factor personality model on the impulse buying behaviour of Generation Z and the use of Buy-Now-Pay-Later services. Specifically, the research aims to:

RO1: What is the relationship between extraversion personality trait and impulse buying behaviour?

RO2: What is the relationship between conscientiousness personality trait and impulse buying behaviour?

RO3: What is the relationship between openness personality trait and impulse buying behaviour?

RO4: What is the relationship between agreeableness personality trait and impulse buying behaviour?

RO5: What is the relationship between neuroticism personality trait and impulse buying behaviour?

RO6: What is the relationship between impulse buying behaviour and BNPL usage?

1.4 Research question

1. What is the relationship between extraversion personality trait and impulse buying behaviour?

2. What is the relationship between conscientiousness personality trait and impulse buying behaviour?

3. What is the relationship between openness personality trait and impulse buying behaviour?

4. What is the relationship between agreeableness personality trait and impulse buying behaviour?

5. What is the relationship between neuroticism personality trait and impulse buying behaviour?

6. What is the relationship between impulse buying behaviour and BNPL usage?

1.5 significance of the study

The research of this subject is of great significance. First of all, the current research on the impulsive buying behaviour of Generation Z and the use of Buy-Now-Pay-Later services is relatively limited, and there are certain research gaps (Elsayed, A., Fung, C. M., & Wu, H., 2022). By using the five-factor personality model to explore its influence on Generation Z, we can fill in the gaps in this research field and provide a more comprehensive perspective for understanding the consumption behaviour of Generation Z. This has important implications for our in-depth understanding and prediction of Gen Z purchasing decisions (Davis, 1989).

Second, by examining how the five-factor personality model affects Generation Z's impulsive purchasing patterns and their usage of Buy-Now-Pay-Later services, we can learn more about how individual differences and personality traits affect shopper behaviour (Ajzen, I., 2005). This provides a theoretical basis for research and practice in related fields, and further promotes the development of consumer psychology (Polman et al., 2018).

Furthermore, the results of this study could offer valuable perspectives for creating financial planning and consumer education programs aimed at Generation Z (Al-sarraf et al., 2018). Understanding the individual differences and personality traits of Generation Z can help us design more effective educational strategies to cultivate their rational consumption concepts and financial management skills, thereby reducing the risk of impulsive buying behaviour (FI,

2021). This is of great significance for cultivating rational consumers and sustainable consumption habits (Fook & McNeill, 2020).

Finally, for businesses and brands, understanding Gen Z behaviour patterns in terms of impulse buying behaviour and use of Buy-Now-Pay-Later services is critical to developing marketing strategies (Kumar et al., 2016). The results of this study can provide companies with references on how to attract and guide Generation Z consumers, including how to design appropriate promotional strategies in Buy-Now-Pay-Later services to better meet their needs and purchase preferences (Nash, J., 2019). This has a positive impact on improving market competitiveness and achieving business goals.

Chapter 2: literature review

2.0 Introduction

In this section, historical empirical investigations will be evaluated together with a discussion of relevant theoretical theory and a brief synopsis of the dependent and independent variables.

2.1 Theoretical Framework

Many theories have been put forward to explain the impact of consumer five-factor personality model on impulse buying. Despite the unfavourable results of earlier research studies that attempted to predict consumer behaviour by examining personality variables (Kassarjian, 1971), there has been an increase in interest among academics in examining the role of personality in consumer research in recent years (Egan and Taylor, 2010; Lin, 2010; Ranjbarian and Kia, 2010). In a study by Gangai and Agarwal (2016), it was shown that both

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male and female participants' impulsive purchase behaviour was significantly correlated with common personality traits, particularly psychoticism.

It is essential to recognize the importance of a personality framework when examining the connection between personality and impulsive purchase behaviours. The traits-based method has been gaining popularity in this context since it provides a quantitative assessment of personality (Solomon, 2009), with the Big Five Model—also known as the five extensive characteristic factors—being the most well-known example (Feldman, Greeson, & Senville, 2010). It has been claimed that the Big Five Framework has attained the highest level of agreement among all personality trait nomenclatures because numerous research studies have consistently demonstrated the emergence of the Big Five variables in a variety of contexts (Liao & Chuang, 2004).

The Big-Five Personality Framework's five core personality traits have previously been studied in regard to their strong correlation with impulsive purchasing behaviour (Badgaiyan and Verma, 2014). According to Mathai and Haridas' study, personality traits and impulsive buying behaviour are significantly correlated, with the exception of variables like "products at discount induce me for impulsive buying" and "aroma inside the store influences me to make impulse purchase" (Mathai & Haridas, 2014). A further study found that impulsive buying serves as a mediator between agreeableness, neuroticism, and openness to experience as three personality qualities that are strongly associated to compulsive buying behaviour (Shehzadi, Ahmad-ur-Rehman, Cheema, & Ahkam, 2016).

2.2 Review of past empirical studies

2.2.1 Independent variable: Extraversion

Personality, as defined by Schiffman and Kanuk (2007), refers to the core psychological characteristics that shape and reflect an individual's responses to their environment. The Big Five is considered an empirical science-based phenomenon rather than a theory of personality (Srivasta, 1999). The Big Five model encompasses five dimensions of personality: extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience (Goldberg, 1990). Extraversion is

associated with characteristics such as energy, positive emotions, assertiveness, sociability, talkativeness, and a tendency to seek stimulation from others （Watson & Clark, 1991）. Many studies have explored the association between extraversion and impulsive buying behaviour. Extraversion, as one of the five fundamental dimensions in the Big Five personality model, represents individuals who are outgoing, sociable, and enjoy social interactions （John & Srivastava, 1999）. Researchers have hypothesized that extraverted individuals may be more likely to engage in impulsive buying due to their spontaneous and adventurous nature (Hendrawan, D., & Nugroho, D. A. 2018).

The extraversion trait in the Big Five personality model primarily encompasses characteristics related to socializing, confidence, assertiveness, anticipation, and enjoyment (Mooradian & Swan, 2006). Extraverted individuals tend to be talkative and display increased energy levels when interacting with others (John et al., 2008). Conversely, individuals with lower scores on extraversion may exhibit less social friendliness and prefer independence, being less reliant on others. Those with higher scores on extraversion are often characterized as positive-minded, confident, constructive, energetic, enthusiastic, and socially active, enjoying interactions not only with family and friends but also with sales staff and retailers (Watson & Clark, 1991; John & Srivastava, 1999).Highly extraverted individuals tend to seek out new experiences in life, which may lead them to engage in impulse purchases to satisfy their desire for novel experiences, as they may have lower self-control (Eysenck, Barrett, & Barnes, 1993; Leong et al., 2017; Judge, Simon, & Hurst, 2014).

2.2.2 Independent variable: Conscientiousness

Adherence to established laws, norms, and standards is a trait of conscientious people (Hogan & Hogan, 2007). They are methodical, cautious, and driven by a sense of competence, self-discipline, diligence, and achievement. This characteristic has an impact on how they shop, especially on their propensity for impulsive purchases and variety-seeking. According to research by Verplanken and Sato (2011), conscientious people meticulously plan their shopping visits and are less likely to make impulsive buys or buy things they don't need. They have a great propensity to plan ahead and

regulate their behaviour, which may prevent them from making impulsive purchases (Carver et al., 1998). Research by Leong et al. (2017), Russo et al. (2009), and Verplanken and Herabadi (2001) has revealed a negative relationship between scrupulousness and propensities for impulsive purchases. Conscientiousness and impulsive buying tendencies, however, were found to be unrelated when using hierarchical regression analysis using the Big Five personality characteristics as uncorrelated components (Bratko et al. 2013, reported different results). People with high conscientiousness typically organize their shopping visits wisely and cautiously, which lowers their propensity to buy pointless items (Verplanken & Sato, 2011). However, research by Mulyanegara et al. (2009) and Riza (2011) found that conscientious people might have a stronger attraction for purchasing goods that are meant to symbolize achievement and exclusivity.

Conscientiousness is a personality attribute that includes the impulse control that is socially expected for task- and goal-directed conduct in people. It illustrates how people vary from one another in terms of their self-control, feeling of responsibility, dependability, and assiduity (McCrae & Costa, 2008; Roberts et al. 2014). According to (Barrick et al. 2013), people with high conscientiousness are dynamic and active planners who organize and concentrate on their goals in order to complete activities successfully. On the other hand, people who score poorly on this feature could show a lack of worry, a lack of focus on their personal goals, and a greater propensity for diversions. According to research, people with high conscientiousness prioritize future planning and costs more, which reduces their propensity to make impulsive purchases (Leong et al. 2017; Donnelly et al. 2012; Verplanken & Herabadi, 2001).

2.2.3 Independent variable: openness

Personality traits refer to consistent patterns of behaviour and thinking displayed by a person. According to Farid, D. S., and Ali (2018), openness is positively correlated with the desire for novelty and variation in consumer behaviour. According to McCrae and Costa (2008), openness refers to a person's level of creativity and open-mindedness. According to Mondak (2010), being open means not being stiff for oneself or others and acting in a flexible manner. Hogan et al. (2007) found that

establish a connection between openness and creativity. In addition, according to John and Srivastava (1999), openness is the antithesis of conservatism and narrow-mindedness. According to John et al. (2008), open-minded people tend to be rapid learners, daring, and have a wide range of interests. They are open to new experiences and love to engage and entertain others. On the contrary, individuals with lower scores in this trait are seen as more conservative, displaying limited mental flexibility, and adhering to conventional behaviours. They may be reserved and less likely to share their emotions with others (Hirsh, 2010). Given their tendency to be receptive to new ideas and experiences, individuals high in openness are more likely to adopt or try out new products and innovations in the consumer context. This trait may influence their preferences for unique, creative, and novel products or experiences.

People with an open personality prone to impulse buying may display unreflective, emotional, and impulsive characteristics (Chen, 2015). There is a significant relationship between personality and impulsive buying behaviour (Sofi and Nika, 2017). Moreover, acroding to (Fitri, F. R. 2018) individuals with high levels of openness may be more receptive to creative advertising and marketing campaigns that appeal to their curiosity and desire for novel experiences. They may be more open to trying new products and services, especially those that align with their innovative and adventurous nature. Openness to experience is one of the domains used to describe human personality in the Five Factor Model. It encompasses six facets, including curiosity (ideas), imagination (fantasy), appreciation of art and beauty (aesthetics), wide-ranging interests (actions), emotional excitability (feelings), and unconventional beliefs (values) (Costa & McCrae, 1992). Openness to experience is a relevant factor to consider when examining the relationship between personality traits and impulsive buying tendencies. The facets of openness personality may play a role in consumers' susceptibility to impulsive buying behaviour.

2.2.4 Independent variable: Agreeableness

This personality trait is concerned with the motivations that lead people to uphold and maintain positive relationships with other people (McCrae and Costa, 2008). People who score highly on this characteristic are honourable, selfless, charitable, caring,

understanding, and sympathetic，　they want others to support them in the same manner they did, and they are always willing to lend a hand (Akram et al, 2016). High scorers in this attribute have a tendency to be reasonable and deliberate in their actions. According to Farid, D. S., and Ali (2018), there is a correlation between agreeableness and prosocial and cooperative consumer behaviour. Due to their desire to sustain harmonious relationships, people who score highly on the agreeableness scale may be more likely to choose products that are in line with their moral principles and sense of social duty（Lin & Lo，2016). They may also show greater brand loyalty.

Husnain, M., Qureshi, I., Fatima, T., & Akhtar, W. (2016) have found out agreeable individuals are more likely to engage in share their positive experiences with others, and respond favourably to social and cause-related marketing campaigns that promote benevolence and social good. On the other hand, agreeableness may also influence consumer behaviour in the context of assertiveness and price sensitivity（Yeo、Goh and Rezaei，2017）. Highly agreeable individuals may be less assertive in negotiating prices or asserting their preferences, leading to a higher willingness to pay premium prices and making them more susceptible to persuasive marketing tactics.

2.2.5 Independent variable: Neuroticism

The emotional instability and propensity for negative feelings are characteristics of people who score highly on the neuroticism trait. They might be quickly upset, irritable, and short-tempered (John et al., 2008). A typical personality feature called neuroticism predisposes people to the detrimental and destructive effects of worry, discomfort, grief, misery, shame, embarrassment, antagonism, guilt, and antipathy. High scores in this feature may be a sign of possible psychiatric problems since they may cause people to have irrational, unreasonable, and absurd views, which can have unfavourable effects.

Hough, Eaton, Dunnette, Kamp, and McCloy (1990) found that people with low neuroticism ratings exhibit emotional stability. They are resilient in the face of difficulties and do not easily crumble. Emotional stability, according to Dunn, Mount,

and Barrick (1995), is the antithesis of this personality attribute. According to McCrae and Costa (2008), people with high neuroticism tend to be extremely depressed, self-conscious, impulsive, and fragile.

Studies already published have repeatedly found a link between impulsivity and neuroticism. "Impulsiveness" is regarded as one of the characteristics of neuroticism in the NEO Personality Inventory-Revised (NEO PI-R) paradigm (Costa & McCrae, 1992). Similar to this, "impulse control" is recognized by the Big Five model (Goldberg, 1990) as a trait of emotional stability (DeYoung et al., 2002). According to the Big Five model developed by Whiteside and Lynam (2001), neuroticism and impulsivity are connected most closely. The term "neuroticism" refers to a set of traits that include negative affect, poor impulse control, sensitivity to stress, and an inability to postpone gratification. As a result, it is possible to interpret impulsive purchasing tendencies (IBT) as a sign of lack of control, a stress response, and a need for instant satisfaction.

2.2.6 Mediating Variable: Impulse purchase

Badgaiyan and Verma (2014) conducted a study exploring the association between the Big-Five personality dimensions and impulsive buying behaviour. They found significant relationships between certain personality traits and impulse buying behaviour, providing insights into the role of individual differences in impulsive purchase decisions. Notably, some specific variables, such as product discounts and store aromas, did not show significant associations with impulse purchase behaviour.

Mathai and Haridas (2014) also examined the relationship between personality traits and impulse buying behaviour. They found significant F values for most personality traits, suggesting that certain individual characteristics influence impulsive buying tendencies. However, their study also indicated that the impact of specific variables, like product discounts and store aromas, on impulse purchase might not be as strong as other factors.

Furthermore, Shehzadi et al. (2016) conducted a study that delved into the connection between personality traits and compulsive buying behaviour, with the mediating role

of impulsive buying. Their research highlighted the importance of agreeableness, neuroticism, and openness to experience in predicting compulsive buying behaviour, where impulsive buying served as a mediator in this relationship.

2.2.7 Dependent variable: BNPL (buy now pay later) usage

The emergence of digital payment options, such as e-commerce, digital wallet services, and Buy-Now-Pay-Later (BNPL) systems, has transformed the way consumers conduct transactions (Gerrans, Baur & Lavagna-Slater, 2021). BNPL (buy now, pay later) services may bring special benefits to low-income consumers and those Generation Z consumers who do not have a stable source of income (Elsayed, A., Fung, C. M., & Wu, H., 2022). It allows buyers to acquire desired goods without immediate consideration of the cost, creating a seemingly enticing but potentially detrimental situation（Relja, R., Ward, P., & Zhao, A. L，2023). The availability of BNPL has led to impulsive buying behaviour and overconsumption intentions, especially for non-essential products. This phenomenon aligns with the Generation Z stereotype of seeking instant gratification, as they can enjoy goods without having to save beforehand (Natswa, S. L. A., 2021).

Research conducted by R. Sari (2021) found that Generation Z comprises the largest user base of BNPL, accounting for 79% of the total respondents, with 57% of them being students. The study revealed a high incidence of impulsive buying behaviour among Generation Z users of BNPL, despite their lack of regular income. BNPL (buy now, pay later) is mainly used in online shopping platforms. This service covers a variety of product categories, including electronic products, fashion clothing, furniture, travel services, medical care supplies, and electrical appliances (Alcazar & Bradford, 2021). BNPL products can generally be divided into two main types: deferred payment and credit options (Pastravanu, 2019).

According to Ah Fook and McNeill's study (2020), the Buy-Now-Pay-Later (BNPL) mechanism has influenced apparel consumption, leading some customers to exhibit

impulsive buying behaviour. Participants in the study found the BNPL mechanism to be an easy and convenient payment provider compared to traditional payment systems (Nydén, 2021). Subsequently, the credit option allows consumers to pay in instalments and pay accrued interest at no additional cost to the merchant, similar to CreditClick (Pastravanu, 2019). Enterprises and consumers choose the most suitable products according to their own needs. Given that BNPL is a relatively new financial instrument, its model continues to evolve with market development (Elsayed, A., Fung, C. M., & Wu, H., 2022).

2.3 Proposed Conceptual Framework

Parallel to the specific goal of this study, the following conceptual framework was suggested to assess the relationship:

Figure 2.1: Conceptual Framework of the Impact of the Five-Factor Personality Model on Impulse Buying with Buy-Now-Pay-Later Services.
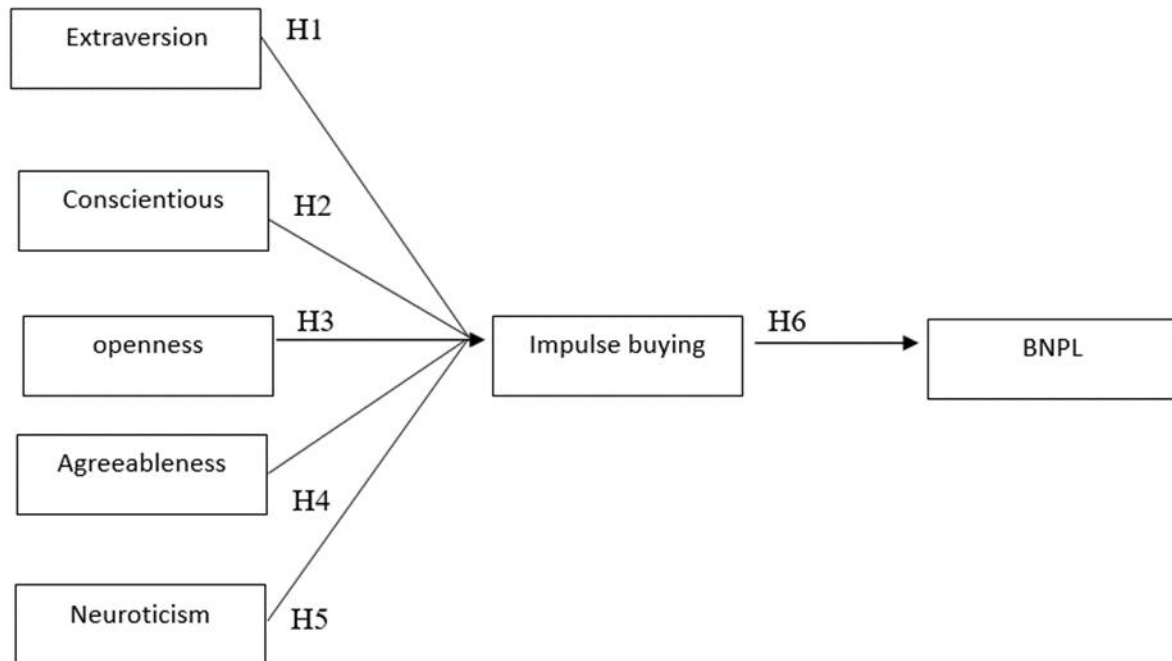
Figure 2.1 showed the proposed conceptual framework intends to investigate whether the availability of the Buy-Now-Pay-Later service modifies the association between the five personality traits and impulsive purchasing behaviour. In order to better understand the psychological aspects and payment choices that influence customers' impulsive purchase decisions, particularly among members of Generation Z, researchers are examining these linkages.

2.4 hypothesis development

2.4.1 Extraversion

Individuals with higher levels of extraversion are more likely to engage in impulsive buying behaviour (Brown and Taylor, 2014; Davey and George, 2011). The relationship between extraversion and impulse buying behaviour is mediated by the desire for social approval. Generation Z consumers with higher levels of extraversion may engage in impulse buying to conform to societal trends and gain approval from peers. Extraverted individuals are more likely to be influenced by external cues and

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social interactions, leading to higher levels of impulse buying behaviour (Furnham, 1981; McClure, 1984; McManus and Furnham, 2006; Davey and George, 2011). Because they lack self-control, people who score highly on this attribute have a strong desire to experience new things in life, which leads them to make impulsive purchases in order to do so (Farid, D. S., & Ali, 2018).

H1: There is a significant correlated between Extraversion and impulsive buying behaviour.

2.4.2 Conscientiousness

Individuals with higher levels of conscientiousness are less likely to engage in impulsive buying behaviour. Conscientious individuals are more likely to plan their purchases and exhibit self-discipline, leading to lower levels of impulse buying behaviour (Silvera, D. H., Lavack, A. M., & Kropp, F., 2008). The relationship between conscientiousness and impulse buying behaviour is mediated by the level of self-control. Generation Z consumers with higher levels of conscientiousness may have better self-control, which reduces their tendency for impulsive buying (Farid, D. S., & Ali, M., 2018). Conscientious individuals are more likely to prioritize long-term financial goals over short-term gratification, resulting in a reduced likelihood of engaging in impulsive buying (Donnelly, G., Iyer, R., & Howell, R. T., 2012).

H2: There is a significant correlated between Conscientiousness and impulsive buying behaviour.

2.4.3 Openness

Generation Z consumers with higher levels of openness are more likely to be curious about novel products and, therefore, are more prone to impulsive buying (Hirsh, 2010). Generation Z consumers with higher levels of openness are more likely to engage in impulse buying behaviour, especially when they encounter products that align with their desire for novelty and exploration. Openness to new experiences positively influences impulse buying behaviour, and this relationship is stronger for Generation Z consumers who have a greater inclination to try new products (Fitri, F.

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R., 2018). Generation Z consumers with higher levels of openness may be more attracted to unique and innovative products, leading to increased impulsive buying (Costa & McRae, 1992).

H3: There is a significant correlated between Openness and impulsive buying behaviour.

2.4.4 Agreeableness

Individuals with higher levels of agreeableness are less likely to engage in impulsive buying behaviour. Agreeable individuals are more likely to consider the needs and preferences of others, leading to a reduced tendency for impulsive buying (De Young, 2010). Generation Z consumers with higher levels of agreeableness may be more influenced by social norms and opinions, leading to decreased impulsive buying (Digman, 1997). According to McCrae and Costa (2008), Agreeable individuals are more likely to prioritize maintaining positive relationships over indulging in impulsive purchases, resulting in a reduced likelihood of engaging in such behaviour. Generation Z consumers with higher levels of agreeableness may be more sensitive to the potential negative impact of impulsive buying on their relationships, leading to decreased impulsive buying behaviour in socially relevant situations.

H4: There is a significant correlated between Agreeableness and impulsive buying behaviour.

2.4.5 Neuroticism

Individuals with higher levels of Neuroticism are more likely to engage in impulsive buying behaviour compared to those with lower levels of Neuroticism (Whiteside & Lynam, 2001). McCrae and Costa (2008) believe that individuals with higher levels of Neuroticism are more likely to experience emotional impulsivity, leading to impulsive buying behaviour. Neuroticism interacts with situational factors, such as time pressure or shopping environment, to influence impulse buying behaviour. Individuals high in

Neuroticism may be more susceptible to impulsive buying when facing time constraints or in stimulating shopping environments (Youn & Faber, 2000).

H5: There is a significant correlated between Neuroticism and impulsive buying behaviour.

2.4.6 BNPL usage

Impulsive buying behaviour is often accompanied by instant shopping decisions, and BNPL services provide individuals with greater shopping flexibility, allowing them to buy immediately and pay later in installments. Therefore, impulse buying behaviour may be related to more frequent use of BNPL services (Natswa, S. L. A., 2021). Fook, L. and McNeil, L. (2020) studied the Z age group and found that 30.3% of respondents used BNPL. Of these BNPL customers, 78.8% said they would not make an online purchase if they did not have access to BNPL. Individuals who engage in higher levels of impulse buying are more likely to use BNPL services for their purchases (Elsayed, A., Fung, C. M., & Wu, H., 2022).

H6: There is a significant correlated between impulsive buying behaviour and BNPL usage.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

Aspects including data collection strategies, sampling design, construction of research instruments, data processing, and analytical techniques are all included in research methodology. Quantitative research methods were used in this study to obtain comprehensive data. Data collection methods mainly include questionnaires, the questionnaire survey is used to collect a large amount of quantitative data to understand the five-factor personality traits,

impulse buying behaviour and attitude towards Buy-Now-Pay-Later service of the respondents. In the data processing and analysis stage, quantitative data will use statistical software (such as SmartPLS) for descriptive statistics, correlation analysis and regression analysis to verify the relationship between the five-factor personality characteristics and impulse buying behaviour and Buy-Now-Pay-Later service.

3.1 Research Design

Research design refers to the overall planning and arrangement adopted when conducting research, in order to achieve the research purpose and the best solution to the problem. It is a roadmap in the research process, including the overall framework of the research, data collection methods, data analysis techniques, and allocation of time and resources. The main goals of the study design are to ensure the scientificity, reliability and validity of the study (Saunders et al, 2019).

3.1.1 Quantitative Research

Quantitative research is a research method, mainly based on numerical data, to collect, analyze and explain research phenomena in a quantitative way. In quantitative research, the researcher employs rigorous, structured data collection methods such as questionnaires, experiments, observations, etc., in order to gather large amounts of numerical data. These data are often processed through statistical analysis methods to reveal relationships and trends among variables (Slevitch, 2011). One of the characteristics of quantitative research is the emphasis on quantification, that is, to measure the research phenomenon through numerical values. Researchers usually use statistical analysis tools in quantitative research, such as descriptive statistics, correlation analysis, regression analysis, etc., to process and analyze data to draw conclusions. This approach can help researchers test hypotheses, explore causal relationships, and make predictions (Leedy &Ormrod, 2013).

3.1.2 Descriptive research

Descriptive research is a research method that aims to describe, generalize and explain a particular phenomenon, group or situation in detail in order to better understand its characteristics, trends and relationships. Compared with other types of research, descriptive research does not try to explore causal relationships, but focuses on presenting the basic situation of facts and data (Nassaji, 2015). In descriptive research, the researcher collects various types of information, including quantitative data (eg, numbers, statistics) and qualitative data (eg, written descriptions, observation notes). These data can be collected through questionnaires, interviews, observations, and literature analysis (Gall, Gall, & Borg, 2007). The goal of descriptive research is to provide a detailed and accurate picture of the subject of study. Researchers can use statistical analysis, charts, graphics and other methods to organize the collected data into a visual form for readers to understand and analyze (Saunders, Lewis, & Thornhill, 2012). Under this approach, you can collect various data and information about the five-factor personality model, impulse buying behaviour, and Buy-Now-Pay-Later service in order to comprehensively describe their relationship and influence.

3.2 Sampling design

Sampling design is the plan and method used in research to determine how to select a portion of the sample from the overall population (Saunders, Lewis & Thornhill, 2009). In social science research, groups of people are often too large for researchers to survey or observe everyone. Therefore, by taking a sample from a population, researchers can obtain sufficient information within reasonable time and resources to infer the characteristics and behaviour of the population as a whole (Saunders et al, 2012).

3.2.1 Target population

According to Saunders et al. (2009), a target population is a particular group or individual from whom you hope to gather data and information for your study. The research focuses on consumers who use BNPL services, so your target population includes individuals who choose to use the BNPL option when shopping online. By understanding how the five-factor personality model influences impulse buying behaviour. This study's target audience consists of customers of all ages and genders who utilize BNPL services and exhibit various five-factor personality traits in their impulsive purchase behaviour. This will help to delve deeper into how personality traits affect purchasing behaviour and further analyse its relationship with BNPL usage.

3.2.2 Sampling Frame and Sampling Location

Before a sample can be taken from a population, it is required to have a "sampling frame"—that is, a method that identifies and places the sampling units within the population—on hand, as detailed by (Gregoire and Valentine, 2008) . This study conducted an online survey of Generation Z in Malaysia via Microsoft Forms. A microsoft form is a tool that allows researchers to collect data on respondents by answering specified surveys.

3.2.3 Sampling Elements

This study will use Generation Z as the underlying sampling element. By dividing on different demographic characteristics, such as age, gender, occupation, income level, etc. The reason why Generation Z is chosen is because Generation Z is a student or has just worked for a few years, and their financial capabilities are relatively weak. This was followed by survey respondents' shopping transaction records. In this way, we can understand that respondents are more likely to make impulsive purchases and use BNPL services in shopping malls or online shopping platforms. Finally, in order

to better understand the respondents' attitudes and behaviours, researchers can gather viewpoints, experiences, and perceptions about BNPL services from the respondents for the purposes of this study.

3.2.4 Sampling technique

In this particular study, the researchers opted for a combination of snowball and convenience sampling techniques. These sampling techniques serve as tools that offer diverse approaches to researchers, allowing them to focus on specific subsets of data instead of encompassing all potential elements. Consequently, this approach minimizes the volume of data that needs to be gathered (Saunders, Lewis, and Thornhill, 2012b). Snowball sampling, as indicated by Johnson (2014), is a type of non-probability survey method frequently employed to locate populations that are challenging to access through conventional means. It involves initiating with a small group of individuals who fit the study's criteria, and then these individuals subsequently refer additional participants who share similar characteristics. This approach can be particularly useful when studying populations that are marginalized or less visible within the broader context. On the other hand, as explained by Saunders et al. (2012), convenience sampling, also known as availability sampling, is characterized by selecting study participants based on their convenient availability in terms of geographic proximity, temporal availability during the study period, and willingness to participate. This method is often employed when the researchers seek ease and practicality in participant recruitment, especially when time and resource constraints are present.

3.2.5 Sampling size

The selection of sampling technique as stated above, the sampling size of this study was distributed 300 questionnaires among the targeted respondent. The majority of this research investigation was quantitative. Its explanatory design sought to establish a causal link between independent and dependent variables. Parker's sampling table was used to determine the sample size (Rea & Parker, 2014). A broad guideline for

sample size was presented by Manning and Munro (2007), which states that a sample size of greater than 300 is deemed "good," 200 is deemed "fair," and 100 is deemed "poor."

3.3 Data Collection Method

Data collection methods involve the systematic gathering and analysis of data to address research questions, test hypotheses, and evaluate outcomes (Walliman, 2011). For this study, the focus is on employing primary data collection methods to address research questions and test hypotheses.

3.3.1 Primary Data

As articulated by Jilcha Sileyew (2019), primary data refers to the original, firsthand information that is obtained directly. This type of data is known for its reliability, high degree of confidence in decision-making, and accurate analysis, as it remains untainted by external incidents or human alterations. As a result, primary data holds greater validity and relevance for a study compared to secondary data (Hox, J. J., & Boeije, H. R., 2005). Primary data collection methods can be broadly categorized into surveys, evaluations, interviews, and questionnaires (Lowry, 2015). In this particular study, the chosen approach involves the distribution of online questionnaires through Microsoft Forms to collect data from the targeted population. Subsequently, the collected data will be interpreted and statistically analyzed. The data collection process will be facilitated through self-administered online questionnaires, ultimately leading to the generation of a concise summary of the study's findings.

3.4 Research Instrument

This study adopts the method of issuing questionnaires, which is cost-effective and effective. Convenience sampling and snowball sampling were used to distribute questionnaires to a larger number of respondents, and the amount of data collected varied as well. We use fixed-choice questions in the questionnaire design to make it simple and quick for respondents to

respond. There are three sections to the questionnaire: Parts A, B, and C. The questions indicated in Part A are connected to the demographic information of the target respondents, such as age, gender, income level, etc., to ensure that they can answer the questionnaire with more emphasis on the objectives of this study. The perceptions and experiences of the respondents with BNPL services are then covered in Section B. The respondents' level of agreement was gauged in Section C using a six-point Likert scale rating. The study's dependent and independent variables are described in detail at the conclusion.

3.5 Construct Measurement

Measurement is the process of giving an object or event a characteristic that allows it to be compared to other similar objects or events. We created our measurement by analyzing the measurements of various other research in order to establish a reliability measurement. The variables of this study were measured, and the sources utilized to create the questionnaire were displayed in the table below. The goal is to guarantee the accuracy of the outcome.

3.5.1 Scale of Measurement

The questionnaire for this study uses three of the four commonly used scale types for measurement: nominal, interval, and ordinal scales (Stevens, 1946).

3.5.1.1 Nominal scale

The nominal scale, which is divided into categories to identify gender, ethnicity, education level, occupation, and state of living that may be compared with one another, is utilized in section A of the questionnaire survey (Walliman, 2011).

3.5.1.2 Interval Scale

Age group, monthly income, experience using BNPL and through which platform BNPL services are used are scaled using intervals in Parts A and B (Saunders, Lewis, and Thornhill, 2009).

3.5.1.3 Ordinal Scale

Using the ordinal scale demanded by the respondents to express their level of agreement on the five-point Likert scale variables, the relative ranks for section C are shown (Sullivan & Artino, 2013).

Table 3.1: Likert Scale

Level of agreement point Numerical	point Numerical
Strongly Disagree (DS)	1
Disagree (D)	2
Neutral (N)	3
Agree (A)	4
Strongly Agree (SA)	5

3.5.2 Origin of Construct

Table 3.2. Construct Measurement

Variable	Measurements	Cronbach's Alpha	Sources
Extraversion	1. I could express myself easily. 2. I have the talent for influencing people. 3. It is easy for me to make new friends. 4. I talk to different people at	0.913	(Abou-Shouk, M., Zoair, N., Aburumman, A., & Abdel-Jalil, M., 2022)

	social events. 5. I feel at ease with people.		
Conscientiousness	1. I am a multiskilled person. 2. I stick always to plans that I make. 3. I like order and regularity. 4. I keep continuing to get perfection in my work. 5. I follow a schedule. 6. I used to finish what I started.	0.924	(Abou-Shouk, M., Zoair, N., Aburumman, A., & Abdel-Jalil, M., 2022)
Openness	1. I enjoy hearing other's idea. 2. I am open to change. 3. I prefer variety to routine work. 4. I quickly understand things. 5. I can easily manage a lot of information. 6. I like to solve complicated problems.	0.935	(Abou-Shouk, M., Zoair, N., Aburumman, A., & Abdel-Jalil, M., 2022)
Agreeableness	1. I am inclined to forgive the others. 2. I accept the others. 3. I show concern with the other's feelings. 4. I care about other people's problems. 5. I am always ready to help others. 6. I trust in other's good intention.	0.927	(Abou-Shouk, M., Zoair, N., Aburumman, A., & Abdel-Jalil, M., 2022)
Neuroticism	1. It is easy for me to get angry. 2. My mood goes up and down easily.	0.842	(Abou-Shouk, M., Zoair, N., Aburumman,

	3. I worry about things. 4. I am easily discouraged. 5. My emotions are mostly uncontrolled. 6. I feel threatened easily.		A., & Abdel-Jalil, M., 2022)
Impulse Buying behaviour	1. I often buy things spontaneously. 2. I often buy things without thinking. 3. "I see it, I buy it" describes me. 4. Sometimes I feel like buying things on the spur-of-the-moment. 5. I buy things according to how I feel at the moment. 6. Sometimes I am a bit reckless about what I buy.	0.927	(Farid, D. S., & Ali, M., 2018).
BNPL	1. When shopping online I tend to choose a 'buy now, pay later' option if I can. 2. I frequently use BNPL service to make a payment for my purchases. 3. I am less concerned with the price of a product when I can pay for it later. 4. I spend more when I use a BNPL service. 5. I seldom regret buying a product and paying for it late. 6. I am more impulsive when I shop and pay later.	0.922	(Nydén, V., 2021)

3.6 Data processing

In order to organize the obtained data into useful and meaningful information, it is typically essential to carry out a number of operations on it. This procedure, which is also known as data preparation, is essential before data analysis. The process of examining, editing, coding, transcribing, and processing data in order to assure its accuracy and quality is known as data preparation. Before beginning the data processing process, the researcher must confirm that all survey forms have been completed accurately and without any mistakes or omissions. This ensures the authenticity and trustworthiness of the research and assists in avoiding issues during the analysis phase.

3.6.1 Questionnaire Checking

Researchers should conduct ongoing checks on the questionnaire from the beginning of the study to ensure its quality. This is a critical step in ensuring the credibility and validity of the study. During the research process, each questionnaire should be carefully scrutinized to prevent or detect errors in wording, order, form, and layout of questions. Only when the quality of the questionnaire is ensured can it be distributed to the target respondents. This approach is very important because the quality of the questionnaire has a direct impact on the results of the study. If a questionnaire contains errors or unclear questions, it may lead to misunderstandings by respondents, resulting in inaccurate data. Therefore, it is crucial to ensure the clarity, consistency and accuracy of the questionnaire, which requires repeated review and revision of the questionnaire to improve its quality.

3.6.2 Data Editing

Data editing is a critical step in ensuring data quality and involves checking, revising and manipulating collected data to ensure its accuracy and completeness. The purpose of editing is to transform raw data into meaningful information to meet the needs of

research or analysis while ensuring the usability of the data. This process includes correcting erroneous data, dealing with missing data, maintaining data consistency, improving data readability, and finally preparing the data for analysis.

3.6.3 Data Coding and Transcribing

In research, it is often necessary to code each question or answer, transcribing textual data into numerical form for subsequent data analysis. This process helps normalize the data, making it suitable for analysis using statistical software such as SPSS or Microsoft Excel. For example, a numerical code from 1 to 5 could be used for respondent responses in a questionnaire, where 1 strongly disagrees and 5 strongly agrees. This helps ensure data consistency and produces consistent results that can be used for further research.

3.6.4 Uncommon Data Specifying

SPSS is a software tool used for complex and large-scale data analysis. Through SPSS, users can effectively process large amounts of data and perform a variety of statistical analyses. The software features powerful data cleaning and transformation tools that help users detect and correct unreliable, ambiguous and erroneous parts of the data. These functions include data cleaning, missing value handling, outlier detection, and data transformation. The analytical capabilities of SPSS allow researchers to dig deep into data to identify patterns and trends, thereby drawing meaningful conclusions, while also helping to eliminate potential data problems. Using SPSS can help ensure the quality and reliability of data and provide a solid foundation for subsequent research and analysis.

3.7 Data Analysis

Through a series of processing processes, raw data gathered from respondents is converted into meaningful information through the process of data analysis. Its main objective is to help researchers communicate their findings and make judgments. Lincoln and Guba (1985) claim

that the continuous comparison method developed by Glaser and Strauss (1967) is the source of the description of data analysis. A valuable source of information that clarifies the nature of social science research is data analysis. By categorizing, contrasting, and comparing raw data, researchers create an orderly data matrix (Miles and Huberman, 1984). The process of data analysis, which includes analysis during data collection, analysis within sites, and comparative analysis across sites (Miles and Huberman, 1984), steadily advances from simple to complicated.

3.7.1 Descriptive Analysis

Descriptive statistics are primarily used to present data in an appropriate, comprehensible, and visually appealing manner. As per Ho (2006), the initial responsibility of descriptive analysis is to arrange and arrange the gathered data in a suitable manner. Upon gathering the necessary research data, the researcher typically computes the frequency of each variable before visualizing the data on an appropriate graph. Additionally, researchers use various statistical measures to measure the central tendency of data, such as the mean, mode, and median. The standard deviation and variance, two metrics of dispersion, are also significant in identifying outliers in a data set. However, it should be noted that outlier detection methods based on mean and standard deviation usually have some limitations. This approach may not accurately determine and identify outliers. Furthermore, when extreme values are removed, the statistical properties of the sample may be affected because the results no longer meet the assumptions of independent and random sampling (Hogg & Craig, 1970).

3.7.2 Inferential Analysis

This study characterized the data and examined the coefficients among the various variables by adopting the method of carrying out the analysis. The study uses analytical data to make inferences to provide predictive results, this approach is reflected in the study of Walliman (2011), and multiple regression analysis was used in this study.

3.7.2.1 Multiple Regression

A static predictive analysis technique called multiple linear regression is frequently employed in studies to investigate the relationship between a dependent variable and several independent variables (Saunders, Lewis, & Thornhill, 2012b). The prediction of multiple linear regression takes into account a variety of factors, including nominal values, linear relationships, no extreme values, and missing values (Uyanık & Güler, 2013).

The mathematical formula for multiple regression analysis is as follows:

The formula for multiple regression analysis:

$y = \beta_0 + \beta_1\chi_1 + \beta_2\chi_2 + \ldots + \beta_m\chi_m + \varepsilon$

y= Dependent variable

β_0= Intercept

$\beta_1, \beta_2\ldots, \beta_m$= Regression Coefficient of the independent variables

$\chi_1, \chi_2\ldots, \chi_m$= Independent variables

ε = Random error

3.8 Conclusion

In conclusion, this chapter offers a thorough introduction to the methodology of this study, including the research design, sampling techniques, methods for gathering data, and tools for data analysis to evaluate the reliability and validity of the findings. This survey method was utilized to examine the association between various factors, and a total of 400 online questionnaires were disseminated. The data was analyzed using the proper methods in this chapter, and the outcomes of the study will be thoroughly covered in the following chapter.

This chapter's material aims to give the reader a thorough understanding of the data analysis and research process.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

In this chapter, we conducted an in-depth analysis and verification of the 309 questionnaire data collected. We used Smart PLS 4 software and Microsoft Excel to examine all collected data and summarize all results. We used multiple regression analysis to evaluate the internal accuracy of the multi-item scale, a Cronbach Alpha test to determine the scale's reliability, and an explanation of the significance of the independent, mediating, and dependent variables.

4.1 Descriptive Analysis

This section describes the data collected in the questionnaires under Parts A and B, primarily including demographic data and other details about customers' use of BNPL services.

4.1.1 Respondent Demographics

This part of the questionnaire was designed to collect demographic information from the respondents, namely year of birth, gender, ethnicity, nationality and occupation.

Table 4.1.1: Demographic analysis

Demographic	n	%	Demographic	n	%
Year of Birth:			Nationality:		
1946-1964	2	0.5	Malaysia	309	100
1965-1980	21	5.4	Other	0	0
1981-1996	57	14.6			
1997-2005	309	79			
After 2005	2	0.5			
Gender:			Occupation:		

Male	154	49.8	Employed	173	56%
Female	155	50.2	Self-employed	1	0.3%
			Unemployed	24	7.8%
			Freelancer or Gig workers (example: Grab driver)	2	0.6%
			Housewife	12	3.9%
			Student	97	31.4%
Ethnicity: Malay	62	20.1%			
Chinese	140	45.3%			
Indian	107	34.6%			

Figure 4.1: Percentage of Respondent's Age

This questionnaire survey is divided into five age groups, as shown in Figure 4.1. As can be seen from Figure 4.1, the age of the respondents to the questionnaire survey is mainly concentrated in the group born in 1997-2005. There are 313 respondents, of which 78.4% were completed. It can be seen that there are 61 respondents, 15.3% of whom were born in 1981-1996, 21 of whom were born in 1965-1980, accounting for 5.3%, and those born earlier than 1964 and later than 2005 2 respondents accounted for 0.5%. My survey only focused on Generation Z respondents born between 1997-2005, so the rest are for reference only.

Figure 4.2 : Percentage of Respondent's Gender
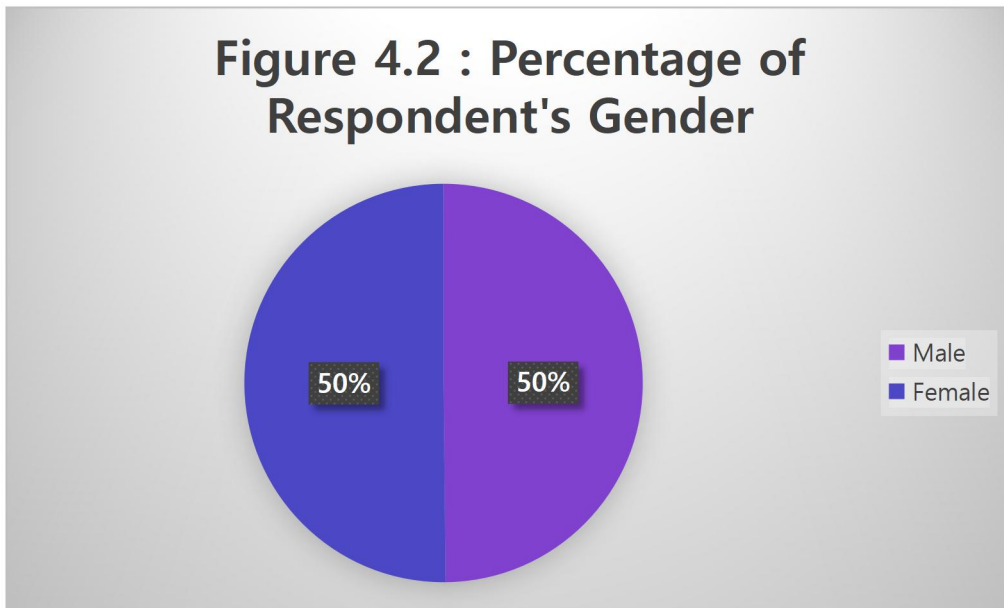
Among the 309 respondents from Generation Z who have used any BNPL payment method, it can be analyzed that there are slightly more female users than males. Figure 4.2 shows the gender distribution of the respondents, with 50.2% of the respondents being female and 49.8% of the respondents being male, accounting for 155 and 154 of the total respondents respectively.

Figure 4.3: Percentage of Respondent's Ethnicity
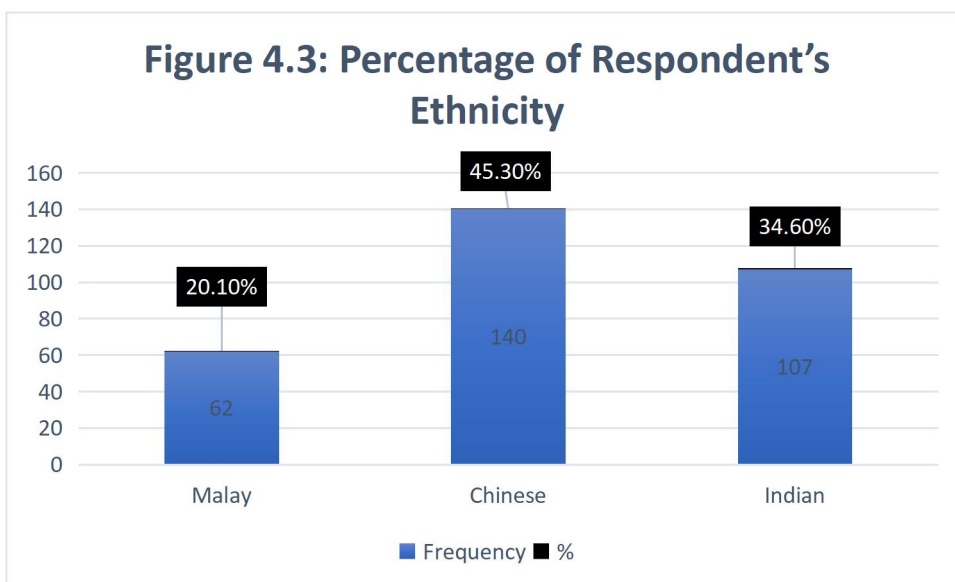
This study targets the participation of people with different ethnicity values living in Malaysia. Figure 4.3 shows the ethnicity of a group of respondents. The survey results showed that 140 (45.3%) respondents were Chinese living in Malaysia and had used any cashless payment method during COVID-19. This was followed by the ethics

group with 107 (34.6%) respondents being Malay and 62 (20.1%) respondents being Indian.

Figure 4.4: Respondent's Nationality
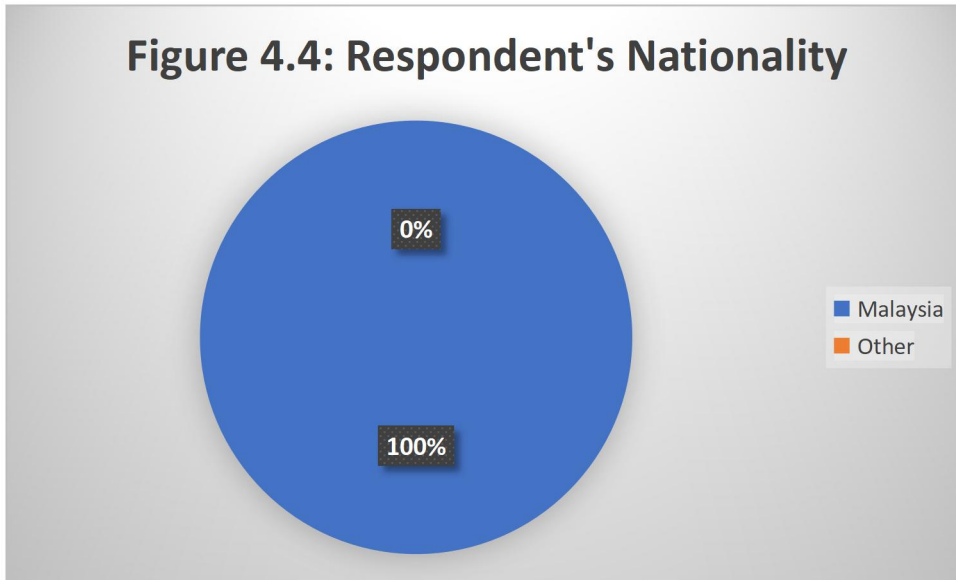
All respondents are from Malaysia.

Figure 4.5: Percentage of Respondent's Occupation
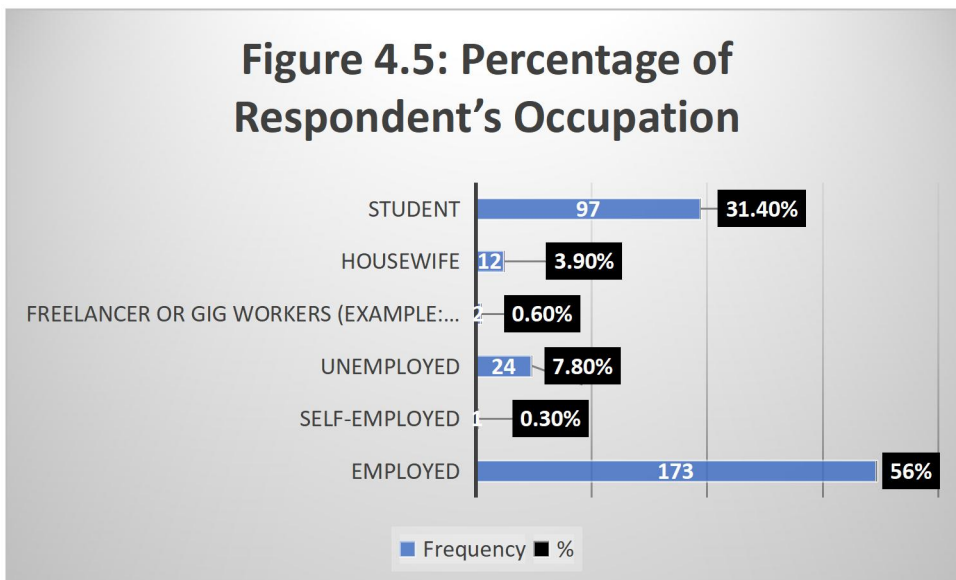
The survey showed that the majority of respondents were employed. Figure 4.5 shows that 56% of the respondents, numbering 173, are employed. Likewise, the second and third positions of the respondents' occupation fall under the categories of students and unemployed with 97 (34.4%) and 24 (7.8%) of the respondents. Next, in this survey it was recorded that 12 (4%) respondents were housewives, 2 (0.6%) respondents were freelancers or temporary workers, 1 (0.3%) respondents The visitor is self-employed.

4.1.2: Customers' use of BNPL services

The purpose of this section of the questionnaire is to gather data regarding the respondents' utilization of BNPL services, how and when they use it, how often they use it, when they start using it, which BNPL service they use, where they use the BNPL service, and what kind of products they use the BNPL service to purchase. What are the reasons for using BNPL services, etc.

Figure 4.6: Descriptive when respondents use BNPL service
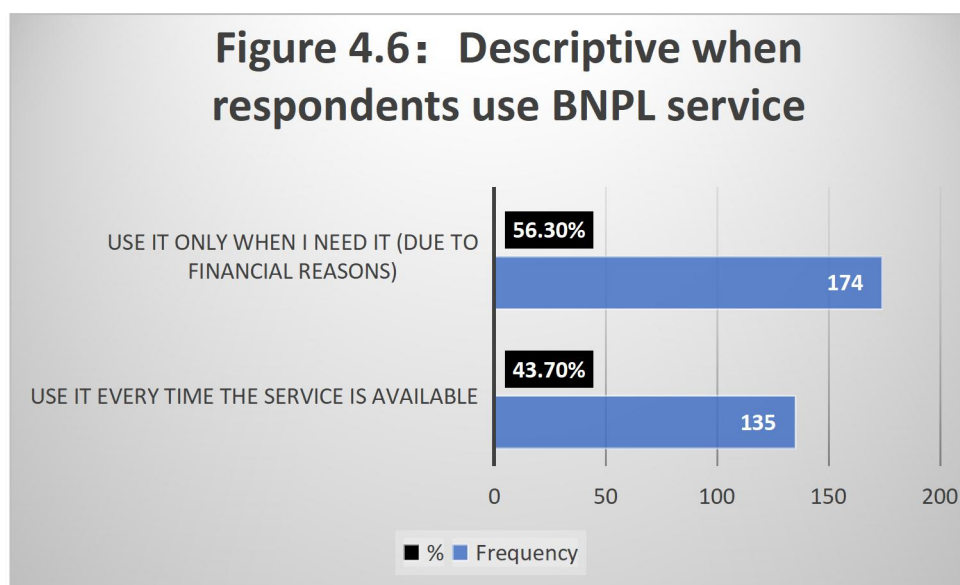
Table4.1.2: Descriptive when respondents use BNPL service

When to use BNPL service	Frequency	%
Use it every time the service is available	135	43.70%
Use it only when I need it (due to financial reasons)	174	56.3%
Total	309	100%

This survey shows that 309 respondents have used BNPL services. Figure 4.6 illustrates that 135 respondents, or 43.7%, use the service every time it is available.

There are 174 respondents who only use it when needed (due to economic reasons), accounting for 56.3%.

Figure 4.7: How often to use BNPL
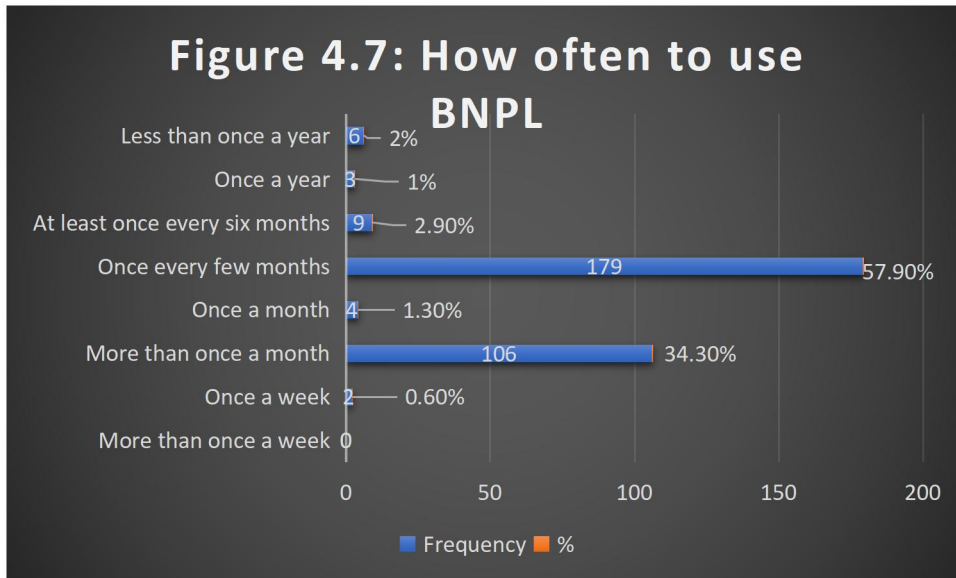
Table4.1.3: How often to use BNPL

How often to use BNPL services	Frequency	%
More than once a week	0	0
Once a week	2	0.6%
More than once a month	106	34.3%
Once a month	4	1.3%
Once every few months	179	57.9%
At least once every six months	9	2.9%
Once a year	3	1%
Less than once a year	6	2%
Total	309	100%

Figure 4.7 shows that 57.9% of 179 out of 309 respondents stated that they use BNPL payment method once every few months. 106 respondents used the BNPL payment method more than once a month on average, ranking second, accounting for 34.3% of the survey. At the same time, 9 respondents (2.9%) responded that they use BNPL payment methods at least once every 6 months, but on further investigation, the withdrawal rate of respondents was higher, which was unexpected. The results show

that the frequency of respondents using any non-cash payment method further dropped to 2%, 1% and 0.6%, with respondents using it once a year and once a week on average.

Figure 4.8: when respondents start using BNPL
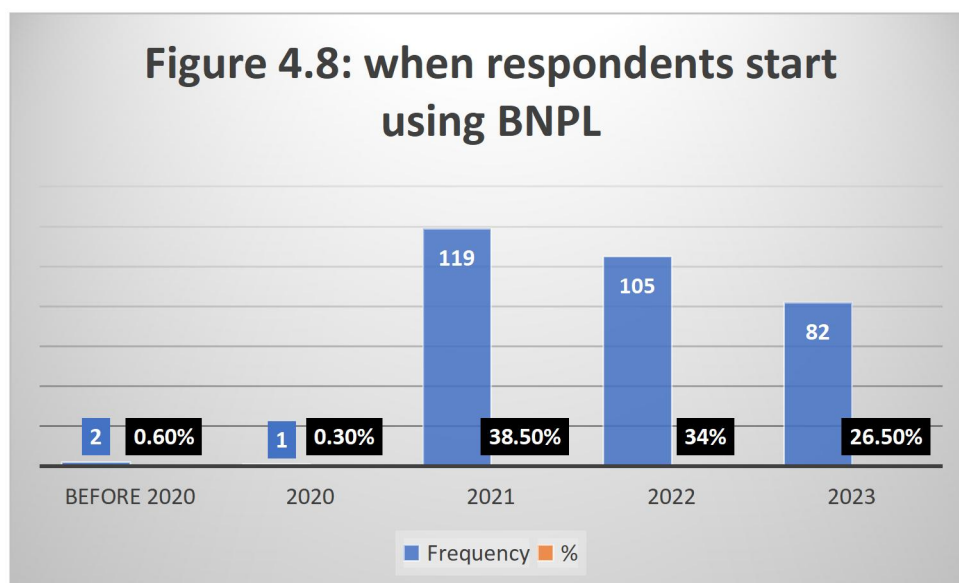
Table 4.1.4: when respondents start using BNPL

when respondents start using BNPL	Frequency	%
Before 2020	2	0.6%
2020	1	0.3%
2021	119	38.5%
2022	105	34%
2023	82	26.5%
Total	309	100%

From Figure 4.8, we can see that 2 respondents started using BNPL services before 2020, accounting for 0.6%. In 2020, 0.3% of respondents had access to BNPL services. Then comes 2021, which is the year when the most respondents started using BNPL services, with 119 people accounting for 38.5%. 2022 ranks second, with 105 respondents starting to use BNPL services this year, accounting for 34%, and 2023 ranking third, with 82 respondents starting to use BNPL services, accounting for 26.5%. It can be seen that BNPL services will become popular from 2021.

Figure 4.9: Type of BNPL service
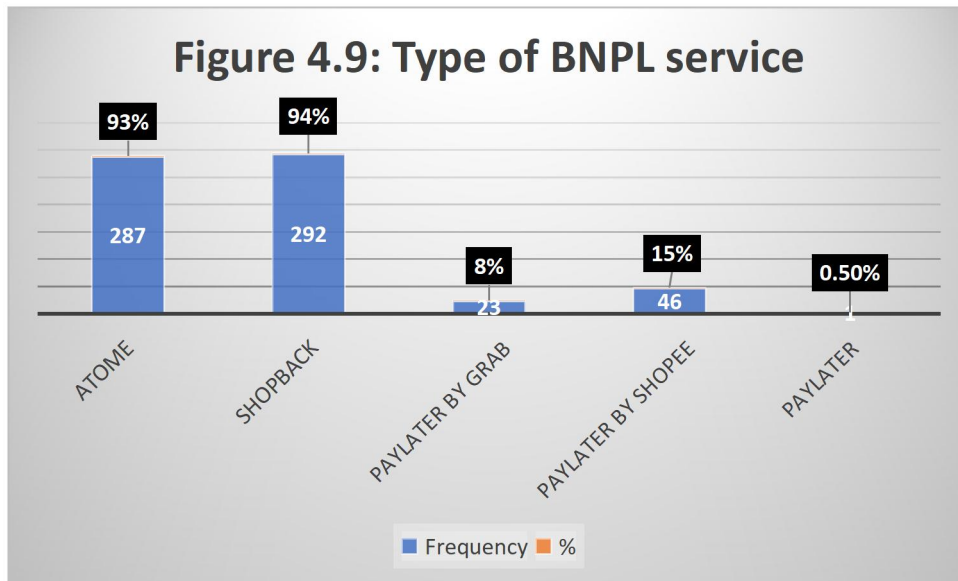
Table 4.1.5: Type of BNPL service

Type of BNPL service	Frequency	%
Atome	287	93%
Shopback	292	94%
Paylater by Grab	23	8%
Paylater by Shopee	46	15%
PAYLATER	1	0.5%
Total	309	100%

As can be seen from Figure 4.9, SHOPBACK is the most commonly used by the respondents, with 292 respondents accounting for 94%, followed by Atome with 287 respondents accounting for 93%. In addition, among the respondents who use BNPL services, the proportion of respondents who use Paylater by shopee is similar, with 15% and 46 respondents respectively, and those who use Paylater by Grab account for 8% and 23 respondents respectively. , using PAYLATER services accounted for 0.5%, a total of 1 respondent. ShopBack and Atome are the most used among these five BNPL services.

Figure 4.10: Place respondents use BNPL service

Place	Frequency	%
IN PHYSICAL SHOPS	299	97%
THROUGH ONLINE SHOPPING PLATFORM.	305	99%
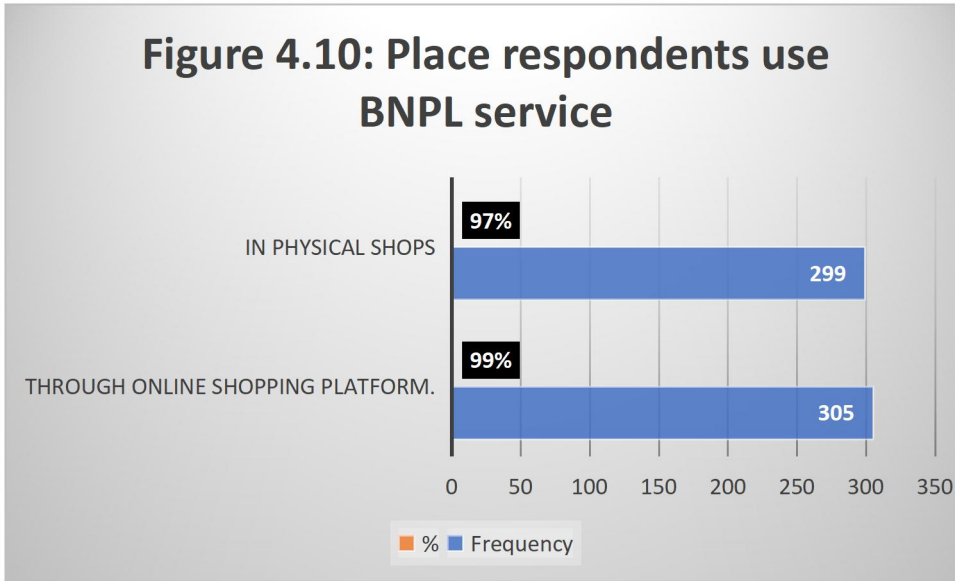
The number of respondents who shop online is 306, accounting for 99%, and the number of respondents who shop in physical stores is 299, accounting for 97%.

Figure 4.11: Type of product responsent purchase using BNPL service.

Product	Frequency	%
PET EXPENSES		0.30%
HOLIDAY PACKAGES	40	13%
FOOD AND DRINK	169	55%
MOBILE PHONE	41	13%
ENTERTAINMENT	113	37%
PERSONAL CARE	26	8%
HOUSEHOLD APPLIANCES (EG: WASHING...)	57	18%
APPARELS (CLOTHING, SHOES, BAGS)	299	97%
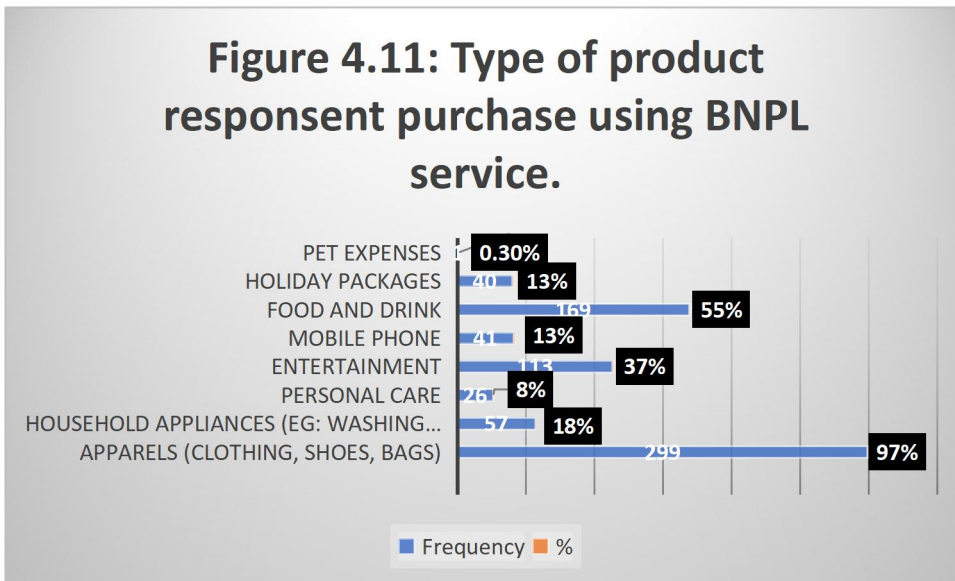
As can be seen from Figure 4.11, the main purpose of respondents using BNPL services is to purchase clothing (clothes, shoes, bags), accounting for 97% of the total (299 respondents). The second most popular choice among respondents for using BNPL services is online shopping, accounting for 55% (169 respondents). This is followed by entertainment consumption at 37% (113 respondents) and household appliances (e.g. washing machines) at 18% (57 respondents). Followed by 13%, with 41 and 40 respondents buying mobile phones and vacation packages respectively.

This is closely followed by purchasing personal care at 8% with 26. Finally, this study found that 0.3% (1 respondent) of the respondents used BNPL services to pay for their pets expenses.

Figure4.12: Reasons for using BNPL services
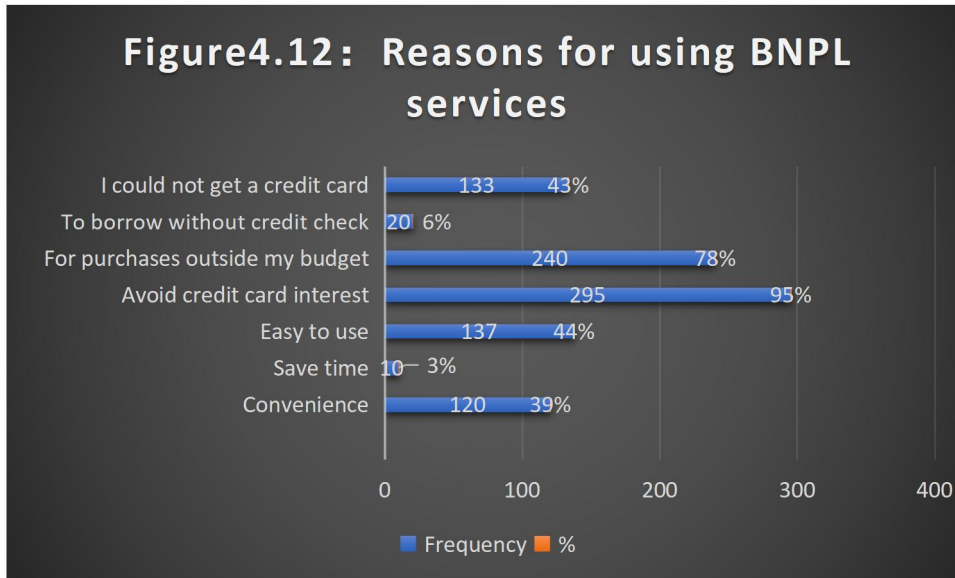
According to the data, there are various reasons for using the Buy Now, Pay Later (BNPL) service. Among them, convenience is one of the main factors, with 39% of people (120 respondents) choosing BNPL because it provides a convenient shopping method that allows easy installment payment for goods or services. While only 3% (10 respondents) cited time savings as the main reason, BNPL services generally offer fast application and payment processes that reduce the time required for the shopping process. Ease of use is also popular, with 44% (137 respondents) finding this payment method easy to understand and operate. However, avoiding credit card interest is one of the top reasons, with up to 95% of people (295 respondents) choosing BNPL to avoid the high interest rates associated with credit cards, as BNPL often offers interest-free installment options. At the same time, 78% of people (240 respondents) use BNPL to be able to shop beyond their budget. This flexibility allows them to expand their purchasing capabilities. While only 6% of people (20 respondents) value being able to borrow money without a credit check, it is an attraction for people who don't have access to traditional credit cards or have poor credit histories. 43% of people (133 respondents) chose BNPL as an alternative to make installment payments due to inability to obtain a credit card.

4.2 Reflective measurement models

4.2.1 Reliability analysis

Table 4.2.1: Result of reflective measurement model

	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
EX	0.913	0.935	0.742
CON	0.924	0.941	0.726
OP	0.935	0.949	0.756
AGR	0.927	0.943	0.733
NER	0.842	0.884	0.564
IM	0.935	0.943	0.734
BNPL	0.922	0.939	0.719

From table 4.2.1, the reliability and validity of each variable (AGR, BNPL, CON, EX, IM, NER, OP) appear to be "satisfactory to good." The values of Cronbach's Alpha and Composite Reliability are both around 0.9, indicating high internal consistency, while the value of Average Variance Extracted is above 0.5, indicating that the measurement tool's ability to explain latent variables is also good. When assessing the reliability of internal consistency, researchers usually use the composite reliability proposed by Jöreskog (1971) as an assessment tool. It is generally believed that the higher the reliability value, the higher the level of internal consistency. For example, reliability values between 0.60 and 0.70 are considered an acceptable range in exploratory studies, while values between 0.70 and 0.90 are considered satisfactory to good levels. However, values above 0.95 may indicate potential problems. In this case, there may be redundant items in the construct, reducing the validity of the measurement instrument (Diamantopoulos et al., 2012; Drolet and Morrison, 2001).

Table 4.2.2: Result of the HTMT ratio.

	EX	CON	OP	AGR	NER	IM	BNPL
EX							

CON	0.234					
OP	0.408	0.246				
AGR	0.323	0.236	0.295			
NER	0.103	0.333	0.071	0.468		
IM	0.454	0.646	0.508	0.587	0.510	
BNPL	0.408	0.652	0.459	0.598	0.514	0.947

In Table 4.2.2, the results based on the Heterotrait-Monotrait Ratio (HTMT) ratio, the values are all below 0.90, indicating the existence of discriminant validity (Hair et al., 2019). HTMT values close to 1 indicate increased correlation between the underlying signals, and values above 0.85 may indicate homogeneity rather than dissimilarity. All value are below 0.90, except for IM<->BNPL(0.947) which mean may indicate homogeneity rather than dissimilarity.

Table 4.2.3: R-square

	R-square	R-square adjusted
BNPL	0.768	0.767
IM	0.674	0.669

R2, also known as in-sample predictive ability, is an indicator used to measure how well a regression model fits the data (Rigdon, 2012). When the R-square value is approximately 0.75, it is generally considered to be a well-fitted and significant model, indicating that the model can well explain the variation in the dependent variable. When the R2 value is approximately 0.50, it indicates that the model has moderate explanatory power and the degree of fit to the data is average. When the R2 value is approximately 0.25, it indicates that the explanatory power of the model is relatively weak and the degree of explanation of the variability of the dependent variable is low (Henseler et al., 2009; Hair et al., 2011).

This means that the regression model successfully explains approximately 76.8% (for BNPL) of the variability in the dependent variable and 67.4% (for IM) of the variability in the mediating variable. The adjusted R-squared is slightly lower at 0.767 and 0.669, respectively, because it takes into account the effect of the number of independent variables in the model.

Table 4.2.4: Result of hypotheses testing through structural model

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-statistics (|O/STDEV|)	P values
EX -> IM	0.183	0.181	0.038	4.774	0.000
CON -> IM	-0.366	-0.367	0.038	9.735	0.000
OP -> IM	0.271	0.270	0.040	6.791	0.000
AGR -> IM	-0.219	-0.221	0.042	5.175	0.000
NER -> IM	0.279	0.279	0.047	5.986	0.000
IM -> BNPL	0.876	0.270	0.015	57.178	0.000

These values represent the degree of influence of each variable path on the other variable. (AGR -> IM) path coefficient is -0.219. Indicates the impact of the independent variable AGR on the dependent variable IM. This value is negative, which means that when AGR increases by one unit, IM will decrease by 0.219 units. (CON -> IM) path coefficient is -0.366. This means that the independent variable CON has a greater impact on the dependent variable IM. When CON increases by one unit, IM will decrease by 0.366 units. (EX -> IM) path coefficient is 0.183. Indicates the impact of the independent variable EX on the dependent variable IM. This is a positive value, indicating that when EX increases by one unit, IM will increase by 0.183 units. (IM -> BNPL) path coefficient is 0.876. This indicates the degree of influence of the dependent variable IM on BNPL. The value is 0.876, which is a high positive value, indicating that when IM increases by one unit, BNPL will increase by 0.876 units. (NER -> IM) and (OP -> IM) are 0.279 and 0.271 respectively. This means that the independent variables NER and OP have a positive influence on the dependent variable IM. When NER or OP increases by one unit, IM increases by 0.279 or 0.271 units respectively.

The multiple regression equation is formed as follows:

BNPL = 0.876(IM) + 0.271 (OP) + 0.279 (NER) + 0.183 (EX) + （-0.366）(CON)+(-0.219)(AGR)

BNPL = Buy Now Pay Later

IM   = Impulsive buying

OP   = Openness

NER   = Neuroticism

EX   = Extraversion

CON   = Conscientiousness

AGR   = Agreeableness

4.3 Test of Significant

Table 4.3: Hypothesis testing

	P values	Hypothesis testing
EXTRAVERSION ⟶ IMPULSIVE BUYING	0.000	Supported
CONSCIENTIOUSNESS ⟶ IMPULSIVE BUYING	0.000	Supported
OPENNESS ⟶ IMPULSIVE BUYING	0.000	Supported
AGREEABLENESS ⟶ IMPULSIVE BUYING	0.000	Supported
NEUROTICISM ⟶ IMPULSIVE BUYING	0.000	Supported
IMPULSIVE BUYING ⟶ BNPL USAGE	0.000	Supported

The P values are all 0.000, which means that the coefficients of these paths are highly significant. In hypothesis testing, if the P value is less than a preset significance level (usually 0.05), we can reject the null hypothesis and accept the alternative hypothesis. Based on the significant level shown in the data, we accepted five independent variables (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) and also accepted one mediating variable. Therefore, we arrive at the following hypothetical results:

H1: There is a significant correlated between Extraversion and impulsive buying behaviour.

H2: There is a significant correlated between Conscientiousness and impulsive buying behaviour.

H3: There is a significant correlated between Openness and impulsive buying behaviour.

H4: There is a significant correlated between Agreeableness and impulsive buying behaviour.

H5: There is a significant correlated between Neuroticism and impulsive buying behaviour.

H6: There is a significant correlated between impulsive buying behaviour and BNPL usage.

4.4 Conclusion

In this study, a total of 309 respondents participated in the questionnaire survey. The study used SmartPLS 4 software and Microsoft Excel to conduct a comprehensive analysis of the collected questionnaire data as well as the demographic information of the respondents. To ensure the reliability of the construct and the significance of each indicator, we conducted reliability testing (Cronbach's Alpha) and multiple linear regression analysis. Therefore, all observations and data analysis results are obtained through SmartPLS 4 software and Microsoft Excel, and these results will be discussed and explained in detail in Chapter Five.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0 Introduction

The detailed findings of descriptive analysis, central tendency, Cronbach's Alpha test, and multiple regression analysis are used in this section to examine the relationship between the five independent variables, the mediating variable, and the dependent variable in the study. Furthermore examined and analyzed are the study's limitations, implications, and recommendations for future research.

5.1 Summary of Statistical Analysis

5.1.1 Descriptive Analysis

The study included a questionnaire survey with 309 respondents in total, of which 50% were male and 50% were female. The geographical object of the study is Malaysia, a country where multi-ethnic and multi-cultural people live in harmony. The study received positive feedback from people in Malaysia and those living in the country, with Chinese accounting for the highest proportion at 45.3%, followed by Indians at 34.6%.

In this study, the respondents all belong to Generation Z, that is, born between 1997 and 2005. Most people who use the "interest-free installment payment" (BNPL) service choose to use it when their budget is tight, which shows that the financial ability of Generation Z is generally not strong. Most of the respondents are employed, with the highest proportion at 56% being employed.

Overall, the study found that the majority of respondents were exposed to BNPL services in 2021 (accounting for 38.5%), and 57.9% of people will use the service once every few months, mainly for purchasing clothing (clothes, shoes) , bags) and diet. Two BNPL services frequently used and favoured by respondents are Atome and Shopback. The majority of respondents use these two apps because they can avoid credit card interest and stay within their budget, indicating that respondents generally support BNPL services.

5.1.2. Scale Measurement

Scale measurement is a technique for figuring out a variable's reliability. All of the variables in each category fell within the acceptable range, according to reliability analysis we conducted using Cronbach's Alpha values and SmartPLS 4 software.

5.1.3 Multiple Regression Matrix

The adjusted R2 values of the multiple regression between the independent variables, mediating variables, and dependent variables are 0.669 and 0.767, respectively, based on the findings in Chapter 4's Table 4.2.3. These two values explain respectively 66.9% and 76.7% of consumers' impulsive consumption behaviour (as a mediating variable), how they are affected by personal traits (such as openness, conscientiousness, extraversion, agreeableness and neuroticism, etc.), thus Influence their use of BNPL services (as dependent variable).

Nonetheless, Table 4.2.4 also shows the Beta values of the independent variables, among which subjective norms have the highest Beta value, reaching 0.279, and have the most significant impact on impulsive consumption behaviour (mediating variable). The Beta value of the mediating variable is 0.876, which has a significant impact on the use of BNPL (dependent variable). On the contrary, the Beta value of the independent variable conscientiousness is -0.336, which has the most significant negative impact on impulsive consumption behaviour.

5.2 Discussion of Major Findings

Table 5.1. Summary of Hypotheses and Results

Hypotheses	Coefficient	T-value	Significant Level	Result
Hypothesis 1: There is a significant between Extraversion and impulsive buying behaviour.	0.183	4.774	0.000	Supported
Hypothesis 2: There is a significant between Conscientiousness and impulsive buying behaviour.	-0.366	9.735	0.000	Supported

Hypothesis 3: There is a significant between Openness and impulsive buying behaviour.	0.271	6.791	0.000	Supported
Hypothesis 4: There is a significant between Agreeableness and impulsive buying behaviour.	-0.219	5.175	0.000	Supported
Hypothesis 5: There is a significant between Neuroticism and impulsive buying behaviour.	0.279	5.986	0.000	Supported
Hypothesis 6: There is a significant between impulsive buying behaviour and BNPL usage.	0.876	57.178	0.000	Supported

These results briefly show that at the 5% significance level, the independent variables of openness, extraversion, conscientiousness, agreeableness and neuroticism have significant correlations with the mediating variables of impulsive consumption behaviour, with p values of 0.000 respectively. 0.000, 0.000, 0.000 and 0.000. Therefore, the findings indicate a consistent association between variables related to the adoption of BNPL services.

5.2.1: There is a significant between Extraversion and impulsive buying behaviour.

The coefficient results show that the p-value for extraversion is 0.000, which is less than alpha 0.05 and beta 0.183. As suggested by Hair et al. (2019), p-values smaller than the alpha value are considered supportive and have a strong correlation. Therefore, this study rejects H0 and supports H1. Therefore, H1 is not rejected at this level of significance and it is concluded that extraversion is significantly related to impulsive buying behaviour. The link between this personality trait and impulsive shopping behaviour is supported by some research, as people high in extraversion are more likely to experience excitement and have a more relaxed attitude toward life. Research (, Leong et al., 2017; Badgaiyan and Verma, 2014) points out that people with high extraversion may be more likely to exhibit impulsive behaviour when shopping. In addition, Judge et al. (2014) concluded that people with high extraversion are motivated, which makes them more willing to try new things and more open.

This positivity may make them more likely to fall into impulsive shopping behaviour. Because of their enthusiasm for novelty, this may reduce their ability to control themselves, making them more likely to be driven by impulse.

5.2.2: There is a significant between Conscientiousness and impulsive buying behaviour.

The coefficient results show that the beta value (-0.366) represents the strength and direction of the correlation between conscientiousness and impulse buying behaviour. Usually, the beta coefficient indicates the degree of impact of a unit change in the independent variable on the dependent variable. In this description, the beta value is negative (-0.366), indicating a negative correlation between conscientiousness and impulse buying behaviour. This means that as conscientiousness increases, impulse buying behaviour is likely to decrease, or in other words, individuals with higher conscientiousness may be less likely to fall into impulsive buying behaviour. Therefore, the results show a significant p-value (0.000, which is less than the generally accepted alpha value of 0.05). As suggested by Hair et al. (2019), a p-value smaller than the alpha value is considered supportive and has a strong correlation. Therefore, this study rejects H0 and supports H2. This trait involves people who are focused, goal-oriented, and always work according to a plan to achieve their goals. Therefore, people who score low on this trait tend to be more impulsive than people who score high. Research has found some interesting connections when it comes to the relationship between conscientiousness and different behaviours. For example, research by Brown and Taylor (2014) shows that conscientiousness is negatively related to impulsive consumption, which means that higher levels of conscientiousness may be associated with less impulsive consumption. In addition, Donelly et al.'s (2012) study found that conscientiousness is positively related to money management, which means that a higher degree of conscientiousness may be related to more effective money management. In addition, research by Mowen and Spears (1999) pointed out that people with higher conscientiousness tend to show less impulsive consumption behaviour.

5.2.3: There is a significant between Openness and impulsive buying behaviour.

A p-value of 0.000 for Openness indicates a highly significant statistical correlation, supporting the hypothesis that there exists a notable correlation between Openness and the phenomenon being examined. The beta value of 0.271 indicates the degree of correlation between extraversion and the research phenomenon, specifically a positive correlation, and its numerical value also shows the strength of this correlation. Following the recommendations of Hair et al. (2019), a p-value smaller than the alpha value is considered supportive and indicates a strong statistical correlation. Therefore, this study rejected the null hypothesis (H0) and supported the alternative hypothesis (H1). At this significance level, the findings did not reject the alternative hypothesis, indicating that there is a significant correlation between openness and impulse buying behaviour. Leong et al.'s (2017) study also supports the role of openness in promoting individual impulsive shopping. This trait is often the opposite of conservatism. According to research by McCrae and Costa (2008), people with higher scores show considerable impulsivity on this trait and are more likely to make impulsive purchases. This is because they are more creative, open-minded and more willing to try new things than those who tend to try and experience new things.

5.2.4: There is a significant between Agreeableness and impulsive buying behaviour.

This description states that the p-value for Agreeableness is 0.000, which means that the study results are highly statistically significant, which is less than the generally accepted alpha value of 0.05 according to Hair et al. (2019). As for the beta value of -0.219, this indicates a negative correlation between agreeableness and the research phenomenon. Its numerical size also shows the degree of this negative correlation. At a statistically significant level, the results indicate a clear correlation between agreeableness and impulse buying behaviour. The study by Badgaiyan and Verma (2014) did not provide significant support for this hypothesis. According to study Rehman & Manjur (2018) agreeableness are negatively correlated with online impulse buying. This trait describes people who are focused, goal-oriented, and work hard to achieve their goals. They usually think deeply and don't like to make decisions without fully considering the pros and cons. According to Verplanken and Herabadi (2001), the results of this study do not support their position. Verplanken and Herabadi believe that people who score high on this trait are more intelligent, able to make informed decisions, and are less likely to fall into impulse buying behaviour. However,

Badgaiyan and Verma's study did not find a significant relationship between this trait and the avoidance of impulse purchases.

5.2.5: There is a significant between Neuroticism and impulsive buying behaviour.

The p-value for neuroticism is 0.000, indicating a high degree of statistical significance, meeting Hair et al.'s (2019) criterion of a p-value less than the commonly accepted alpha value of 0.05. In addition, the beta value of neuroticism is 0.279, indicating that there is a positive correlation between neuroticism and the phenomenon studied. This value also indicates the strength of this positive correlation. Although it is a positive correlation, it is important to note that its strength may not be very strong. The results of this study are consistent with those of Thompson and Prendergast (2015) but contradictory to those of Badgaiyan and Verma (2014). Neuroticism is a personality trait that often describes people who are highly depressed, experience high levels of stress, and experience negative and destructive emotions. This trait is the opposite of emotional stability. Those who score higher on this trait may be more prone to emotional or mental instability, which may prompt them to seek sensory relief through impulse purchases. Often, anxiety and emotional breakdown also make individuals more susceptible to impulsive buying behaviours. The findings support those of Shahjehan et al. (2012) and Silvera et al. (2008), who found that people with high levels of depression and strong self-consciousness were more prone to impulse shopping.

5.2.6: There is a significant between impulsive buying behaviour and BNPL usage.

For impulse buying, the p-value is 0.000, which indicates a high degree of statistical significance, meeting the criteria proposed by Hair et al. (2019), that is, the p-value is smaller than the commonly accepted alpha value of 0.05. In addition, the beta value for impulse buying is 0.876, indicating the correlation between this behaviour and other factors. This higher beta value shows a strong correlation between impulse buying and other factors, while its positive value indicates that the correlation is positive. This means there is a positive relationship between these factors and more frequent or stronger impulse purchases. According to Azmi et al. (2022) study reveal that impulsive buying and BNPL usage have

positive relationship. When it comes to impulse consumption, intention can be defined as the course of purchasing behaviour that an individual plans to take (Zhao et al., 2010). Behavioural intention in this context refers to the subjective probability of an impulse purchase that an individual would like to make over a period of time (Ajzen, 1988). Fishbein and Ajzen (1975) describe behavioural intentions as the way an individual is likely to behave in the future. In addition, the BNPL system is a new payment method in Malaysia. Previous studies found a positive and significant relationship between behavioural intentions and new technology usage (Barry & Jan, 2018; Faqih & Jaradat, 2015; Jaradat, 2013). According to Mun and Hwang (2003), behavioural intention has a positive and significant impact on actual impulsive consumption behaviour.

5.3 Implications of the Study

5.3.1 Theoretical Implication

Despite its theoretical significance, this study re-examines the factors that influence consumers' impulsive spending behaviour and use of buy now, pay later (BNPL) services based on the five-factor personality theory. This model comprehensively considers the influencing factors on respondents' impulse consumption and BNPL service application. Therefore, this research has guiding significance for companies on how to attract and guide Generation Z consumers. These include how to design appropriate promotional strategies in "buy now, pay later" services to better meet their needs and purchasing preferences.

5.3.2 Managerial Implications

Although BNPL services have been in use for some time, this study aims to find out how the five-factor personality affects impulsive consumption behaviour, which will affect consumers' adoption of BNPL services. The research results have important management significance for enterprises. First, understanding consumers' five-factor personality traits and their impact on impulsive consumption and BNPL service usage can help develop more targeted and effective marketing strategies. This kind of understanding can design corresponding marketing strategies for different consumer groups, thereby improving market competitiveness. Secondly, combined with the research results, companies can adjust product design and positioning according to the characteristics and preferences of Generation Z

consumers, optimize product features, service methods or innovative products to better cater to their consumption habits and needs. In addition, understanding consumers' impulsive behaviours and spending habits when using BNPL services can help companies better manage risks and take steps to reduce potential bad bills and risks. Finally, in view of the characteristics of Generation Z consumers, we should optimize the user experience of the "buy now, pay later" service and improve its convenience and attractiveness, such as simplifying the payment process, providing personalized services, and enhancing security. It can help companies better attract and meet the needs of this consumer group and improve user experience.

5.4 Limitation

There are several limitations to the study, including sample limitations, self-reporting bias, and external environmental influences. First, the sample may be limited to respondents from a specific region or a specific age group, which may limit the generalizability of the research results. The lack of a sufficiently representative sample may limit the generalization of the findings to the broader population.

Second, the study relied solely on respondents' self-reports, leaving the possibility of memory bias or influence from social desirability. This may lead to subjectivity and memory distortion in the results, and some results may be affected by the subjective attitudes and memory of the respondents.

Finally, research results may also be affected by external environmental or market changes. Particularly in areas involving consumer behaviour and payment method choices, changes in market trends and competitive strategies may have an impact on the research results. Changes in this external environment may cause changes in the applicability of research results at different times or in different settings.

5.5 Recommendation

Future research can adopt multiple strategies to deeply explore more factors of consumer behaviour and BNPL service usage. First, expanding the sample scope to include respondents

from different regions, ages, occupations, and income levels can provide broader and more diverse data for the study, allowing for a more comprehensive understanding of the consumer behaviour and attitudes of these groups. Secondly, combining quantitative and qualitative research methods is also an effective way. Qualitative methods such as in-depth interviews and focus groups can provide deeper and more comprehensive consumer insights, while combined with quantitative data analysis methods, these insights can be better quantified and understood, providing richer data for research. In addition to this, research can also explore other factors that may influence consumer decision-making, such as trust, product availability, brand image, etc. These factors may play an important role in determining impulsive spending and BNPL service usage, so a deeper exploration of these factors can enrich the understanding of factors influencing consumer behaviour.

5.6 Conclusion

Five-factor personality has a certain impact on individual impulsive consumption behaviour and BNPL service application. Higher extraversion and openness may be associated with a greater tendency to make impulsive purchases and try new payment methods. However, people who are more cautious and neurotic may be more inclined to consider purchasing decisions carefully and may be conservative about using BNPL services. These personality traits may influence individuals' purchasing preferences and payment choices to a certain extent. Therefore, companies can develop more targeted and effective marketing strategies and adjust product design and positioning according to the characteristics and preferences of Generation Z consumers.

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Appendix

Figure 2.1: Conceptual Framework of the Impact of the Five-Factor Personality Model on Impulse Buying with Buy-Now-Pay-Later Services.
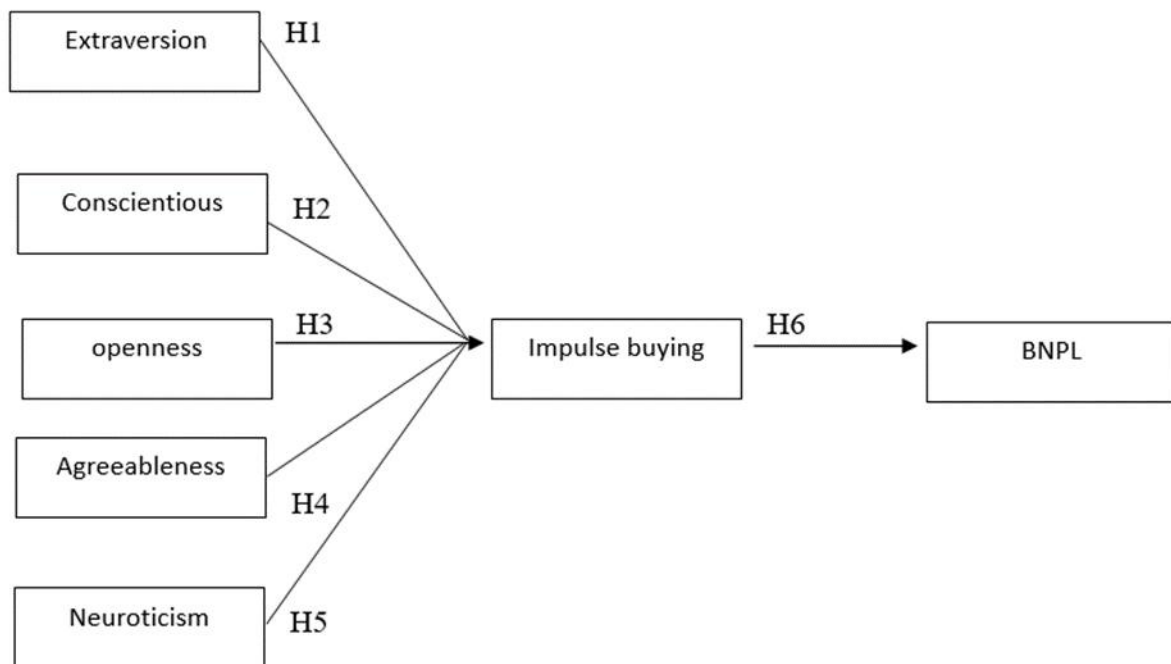
The impulsiveness of Gen Z buyers. A study of personality and buy-nowpay-later services.

Dear respondents,

I am Chan Khai Yee, a final year undergraduate student from the Faculty of Accountancy and Management (FAM) pursuing Bachelor of International Business (HONS) in Universiti Tunku Abdul Rahman (UTAR).

I would appreciate if you are able to respond to this survey. The title of this research is "The impulsiveness of Gen Z buyers. A study of personality and buy-now-pay-later services".

Buy-now-pay-later (BNPL) is a type of short-term financing that allows consumers to make purchases and pay for them over time, usually with no interest.

The purpose of this research is to examine the factors that lead to the impulsiveness and BNPL service of Gen Z buyers. The factors studies are the personality of buyers which includes openness, conscientiousness, extraversion, agreeableness and neuroticism.

Note that all the responses will be kept confidential and also all the data received will be only used for this research only.

If you agree and consent to participate in this survey and data collection, you may proceed to answer.

If you do not consent, then you may withdraw from the survey at any point of time.

Thank you for your participation in this survey.

If you have any inquiries or need further clarification, please feel free to contact me through email cky0109@1utar.my.

Thank you.

Yours sincerely,
Chan Khai Yee

Undergraduate Student
Faculty of Accountancy and Management (FAM)
Universiti Tunku Abdul Rahman (UTAR)

PERSONAL DATA PROTECTION NOTICE

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

1. Personal data refers to any information which may directly or indirectly identify a person which could include sensitive personal data and expression of opinion. Among others it includes:

a) Name
b) Identity card
c) Place of Birth
d) Address
e) Education History
f) Employment History
g) Medical History
h) Blood type
i) Race
j) Religion
k) Photo
l) Personal Information and Associated Research Data

2. The purposes for which your personal data may be used are inclusive but not limited to:

a) For assessment of any application to UTAR
b) For processing any benefits and services
c) For communication purposes
d) For advertorial and news
e) For general administration and record purposes
f) For enhancing the value of education
g) For educational and related purposes consequential to UTAR
h) For replying any responds to complaints and enquiries
i) For the purpose of our corporate governance
j) For the purposes of conducting research/ collaboration

3. Your personal data may be transferred and/or disclosed to third party and/or UTAR collabora- tive partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such

other pur- poses that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is neces- sary to comply with applicable laws.

4. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

5. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes

Consent:

6. By submitting or providing your personal data to UTAR, you had consented and agreed for your personal data to be used in accordance to the terms and conditions in the Notice and our relevant policy.

7. If you do not consent or subsequently withdraw your consent to the processing and disclo- sure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

8. You may access and update your personal data by writing to us at isabelchu118@1utar.my.

1. Acknowledgement of Notice

Please note that we are not collecting your name, identity card, address and other similar sensitive information.

    I have been notified and that I hereby understood, consented and agreed per UTAR above notice

    I disagree, my personal data will not be processed.

Demographics Information

Original	Change	Citation
Year of birth	Year of birth	Elsayed, A., Fung, C. M., & Wu, H. (2022). Impulsive Buying Behaviour on BNPL Services.
Occupation	Occupation	
Gender	Gender	
Ethnicity	Ethnicity	
Nationality	Nationality	

Section A: Demographic

Please select ONE the most relevant option.

1. Gender
    Male
    Female

2. Year of birth
    Before 1945
    1946 - 1964
    1965 - 1980
    1981 - 1996
    1997 - 2005
    After 2005

3. Ethnicity
    Malay
    Chinese
    Indian
    Other
4. Occupation
    Employed
    Self-employed
    Unemployed
    Housewife
    Retired
    Student
    Freelancer or Gig workers (example: Grab driver)
5. Nationality
    Malaysian
    Other

Section B: Experience using Buy Now Pay Later

6. When do you use buy-now-pay-later (BNPL) service?
    Example of BNPL functions include: Atome, Shopback, PAYLATER, Paylater by Grab, Paylater by Shopee
    I have never used the service
    I use it every time the service is available
    I use it only when I need it (due to financial reasons)

7. How often have you been using BNPL?
    More than once a week
    Once a week

More than once a month
Once a month
Once every few months
At least once every six months
Once a year
Less than once a year

8. When did you start using BNPL?
Before 2020
2020
2021
2022
2023

9. Which of the following BNPL service(s) have you used?
   You may choose more than one
Atome
Shopback
Paylater by Grab
Paylater by Shopee
PAYLATER
Other

10. Where do you use BNPL service
    You may choose more than one

Through online shopping platforms
In physical shops

11. Which of the following product have you purchased using BNPL?
    You may choose more than one
Apparels (clothing, shoes, bags)
Household appliances (eg: washing machine)
Personal care
Entertainment
Mobile phone
Food and drink
Holiday packages
Medical and health expenses
Pet expenses
Child care
Other

12. Why do you use BNPL service(s)?
Convenience
Save time
Easy to use

Avoid credit card interest
For purchases outside my budget
To borrow without credit check
I could not get a credit card
Other

Section C

Please indicate the degree of agreement or disagreement for each of the following statement based on the scale. (1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree)

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strong Agree
BNPL						
1.	When shopping online I tend to choose a 'buy now, pay later' option if I can	1	2	3	4	5
2.	I frequently use BNPL service to make a payment for my purchases	1	2	3	4	5
3.	I am less concerned with the price of a product when I can pay for it later	1	2	3	4	5
4.	I spend more when I use a BNPL service	1	2	3	4	5
5.	I seldom regret buying a product and paying for it late	1	2	3	4	5
6.	I am more impulsive when I shop and pay later	1	2	3	4	5

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strong Agree
Openness						
1.	I enjoy hearing other's idea.	1	2	3	4	5
2.	I am open to change.	1	2	3	4	5
3.	I prefer variety to routine work.	1	2	3	4	5

No.	Statement					
4.	I quickly understand things.	1	2	3	4	5
5.	I can easily manage a lot of information.	1	2	3	4	5
6.	I like to solve complicated problems.	1	2	3	4	5

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Conscientiousness						
1.	I am a multiskilled person.	1	2	3	4	5
2.	I stick always to plans that I make.	1	2	3	4	5
3.	I like order and regularity.	1	2	3	4	5
4.	I keep continuing to get perfection in my work .	1	2	3	4	5
5.	I follow a schedule.	1	2	3	4	5
6.	I used to finish what I started.	1	2	3	4	5
No.	**Statement**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Extraversion						
1.	I could express myself easily	1	2	3	4	5
2.	I have the talent for influencing people	1	2	3	4	5
3.	It is easy for me to make new friends	1	2	3	4	5

No.	Statement					
4.	It is easy for me to make new friends	1	2	3	4	5
5.	I talk to different people at social events	1	2	3	4	5
6.	I feel at ease with people	1	2	3	4	5

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Agreeableness						
1.	I am inclined to forgive the others	1	2	3	4	5
2.	I accept the others	1	2	3	4	5
3.	I show concern with the other's feelings	1	2	3	4	5
4.	I care about other people's problems	1	2	3	4	5
5.	I am always ready to help others	1	2	3	4	5
6.	I trust in other's good intention	1	2	3	4	5

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Neuroticism						
1.	It is easy for me to get angry	1	2	3	4	5
2.	My mood goes up and down easily	1	2	3	4	5

No.	Statement					
3.	I worry about things	1	2	3	4	5
4.	I am easily discouraged	1	2	3	4	5
5.	My emotions are mostly uncontrolled	1	2	3	4	5
6.	I feel threatened easily	1	2	3	4	5

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Impulse Buying behaviour						
1.	I often buy things spontaneously	1	2	3	4	5
2.	I often buy things without thinking	1	2	3	4	5
3.	"I see it, I buy it" describes me	1	2	3	4	5
4.	Sometimes I feel like buying things on the spur-of-the-moment	1	2	3	4	5
5.	I buy things according to how I feel at the moment	1	2	3	4	5
6.	Sometimes I am a bit reckless about what I buy	1	2	3	4	5

Appendix 3.2: Likert Scale

Level of agreement point Numerical	point Numerical
Strongly Disagree (DS)	1
Disagree (D)	2
Neutral (N)	3

Agree (A)	4
Strongly Agree (SA)	5

Appendix 3.3: Origin of construct

Variable	Measurements	Cronbach's Alpha	Sources
Openness	1. I enjoy hearing other's idea. 2. I am open to change. 3. I prefer variety to routine work. 4. I quickly understand things. 5. I can easily manage a lot of information. 6. I like to solve complicated problems.	0.956	(Abou-Shouk, M., Zoair, N., Aburumman, A., & Abdel-Jalil, M., 2022)
Conscientiousness	1. I am a multiskilled person. 2. I stick always to plans that I make. 3. I like order and regularity. 4. I keep continuing to get perfection in my work. 5. I follow a schedule. 6. I used to finish what I started.	0.941	(Abou-Shouk, M., Zoair, N., Aburumman, A., & Abdel-Jalil, M., 2022)
Extraversion	1. I could express myself easily 2. I have the talent for influencing people 3. It is easy for me to make new friends 4. It is easy for me to make new friends 5. I talk to different people at social events 6. I feel at ease with people	0.890	(Abou-Shouk, M., Zoair, N., Aburumman, A., & Abdel-Jalil, M., 2022)
Agreeableness	1. I am inclined to forgive the	0.861	(Abou-Shouk,

77

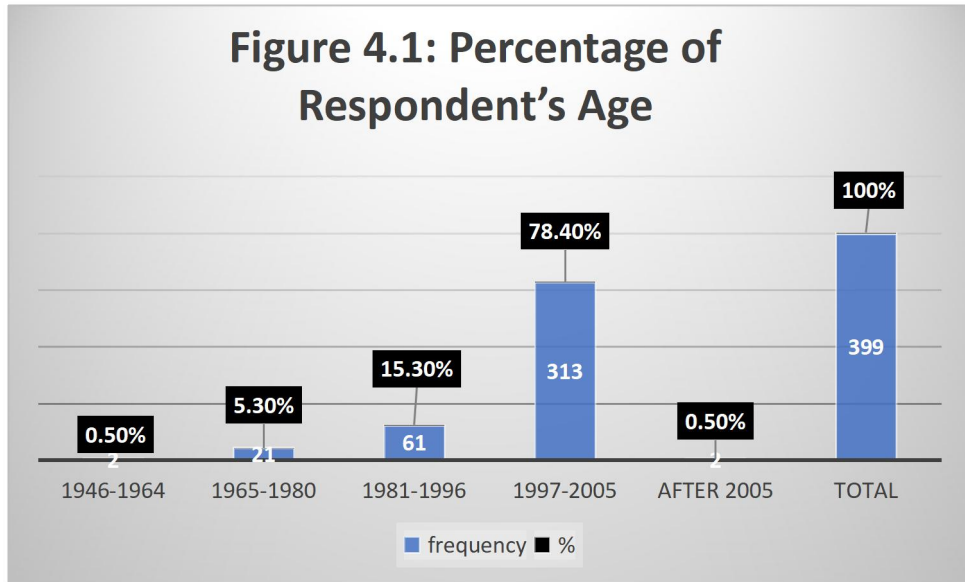|			
	others		M., Zoair, N., Aburumman, A., & Abdel-Jalil, M., 2022)
	2. I accept the others		
	3. I show concern with the other's feelings		
	4. I care about other people's problems		
	5. I am always ready to help others		
	6. I trust in other's good intention		
Neuroticism	1. It is easy for me to get angry	0.876	(Abou-Shouk, M., Zoair, N., Aburumman, A., & Abdel-Jalil, M., 2022)
	2. My mood goes up and down easily		
	3. I worry about things		
	4. I am easily discouraged		
	5. My emotions are mostly uncontrolled		
	6. I feel threatened easily		
Impulse Buying behaviour	1. I often buy things spontaneously	0.826	(Farid, D. S., & Ali, M., 2018).
	2. I often buy things without thinking		
	3. "I see it, I buy it" describes me.		
	4. Sometimes I feel like buying things on the spur-of-the-moment.		
	5. I buy things according to how I feel at the moment.		
	6. Sometimes I am a bit reckless about what I buy.		
BNPL	1. When shopping online I tend to choose a 'buy now, pay later' option if I can	0.867	(Nydén, V., 2021)
	2. I frequently use BNPL service		

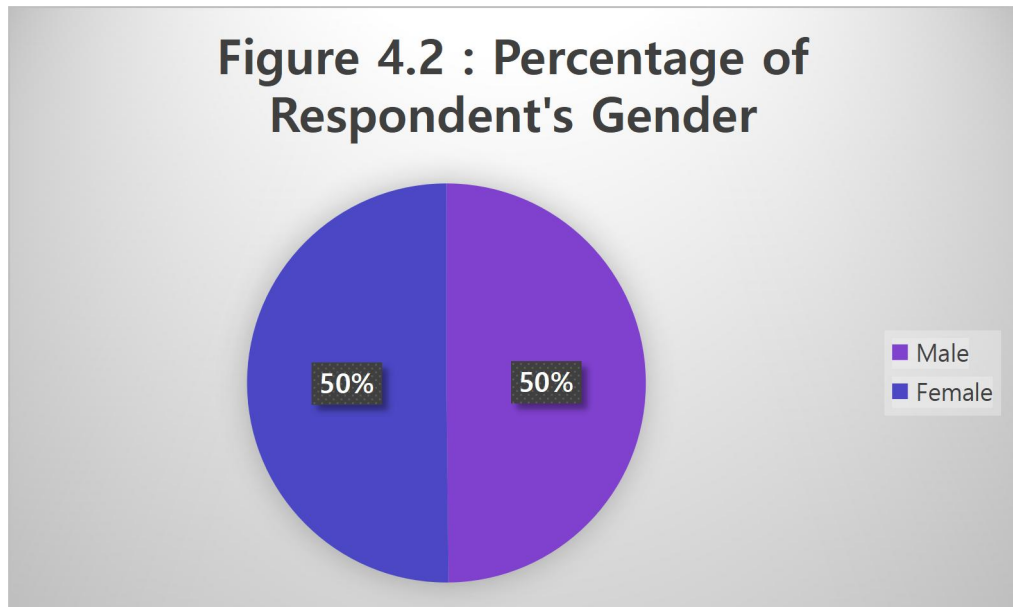| | to make a payment for my purchases | | |
	3. I am less concerned with the price of a product when I can pay for it later		
	4. I spend more when I use a BNPL service		
	5. I seldom regret buying a product and paying for it late		
	6. I am more impulsive when I shop and pay later		

Appendix 4.1: Demographic analysis

Demographic	n	%	Demographic	n	%
Year of Birth:			Nationality:		
1946-1964	2	0.5	Malaysia	309	100
1965-1980	21	5.4	Other	0	0
1981-1996	57	14.6			
1997-2005	309	79			
After 2005	2	0.5			
Gender:			Occupation:		
Male	154	49.8	Employed	173	56%
Female	155	50.2	Self-employed	1	0.3%
			Unemployed	24	7.8%
			Freelancer or Gig workers (example: Grab driver)	2	0.6%
			Housewife	12	3.9%
			Student	97	31.4%
Ethnicity:					
Malay	62	20.1%			
Chinese	140	45.3%			

Indian	107	34.6%			

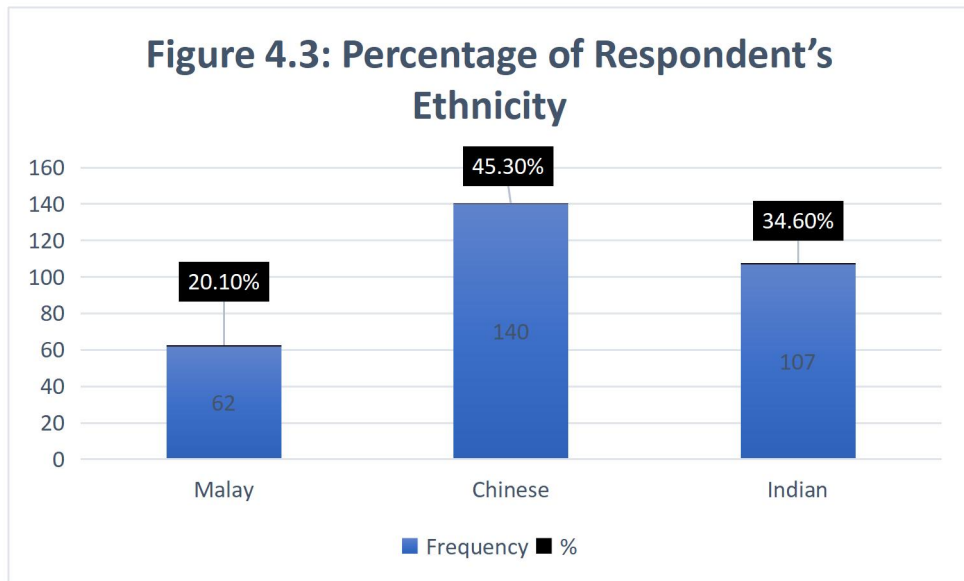Figure 4.1: Percentage of Respondent's Age

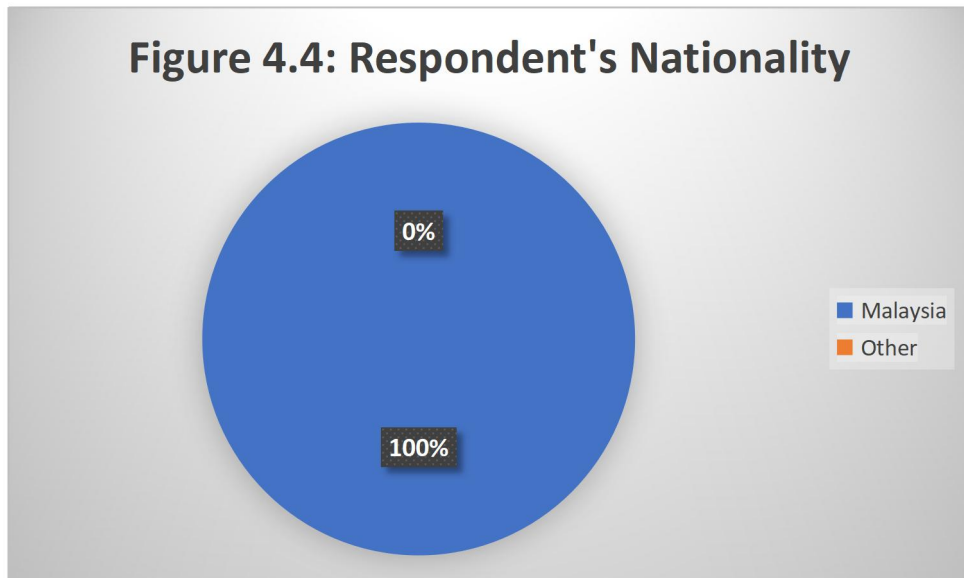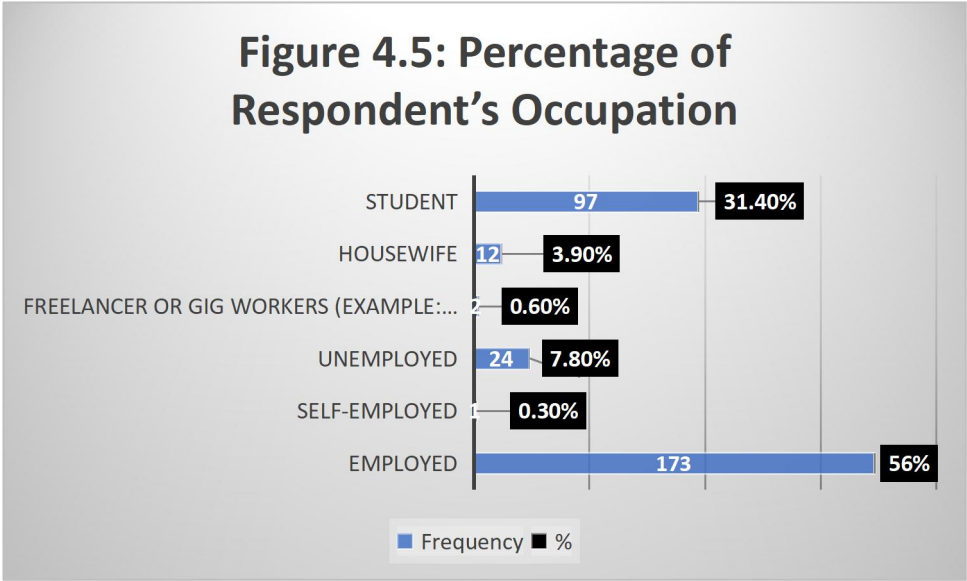Figure 4.2 : Percentage of Respondent's Gender
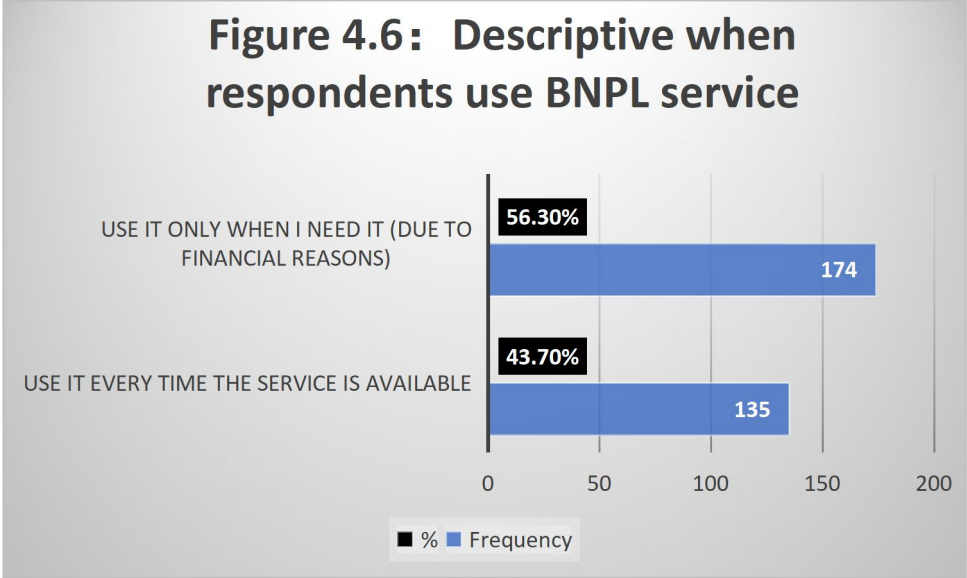
Figure 4.3: Percentage of Respondent's Ethnicity

Figure 4.4: Respondent's Nationality

Figure 4.5: Percentage of Respondent's Occupation

Appendix 4.7: Descriptive when respondents use BNPL service

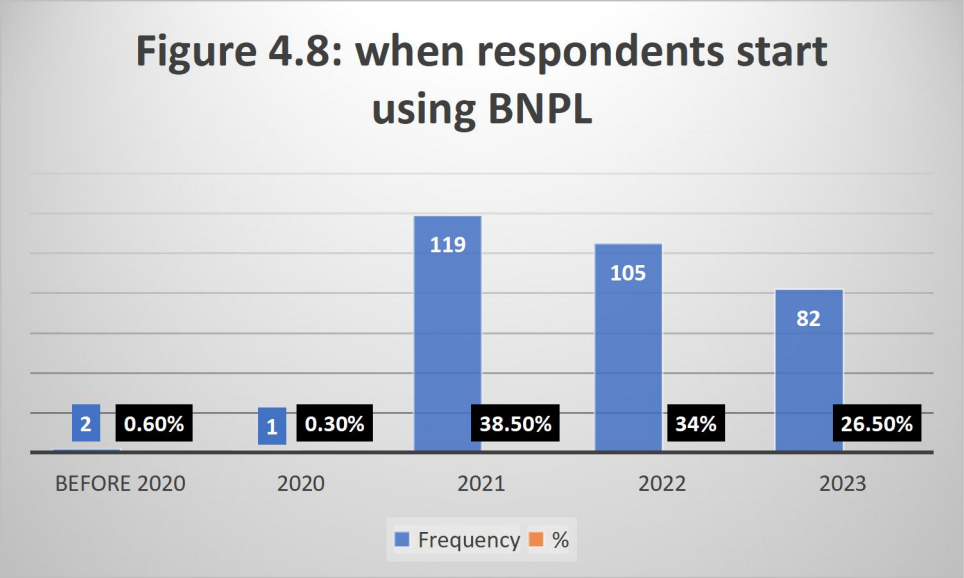Figure 4.6: Descriptive when respondents use BNPL service

Appendix 4.8: How often to use BNPL

82
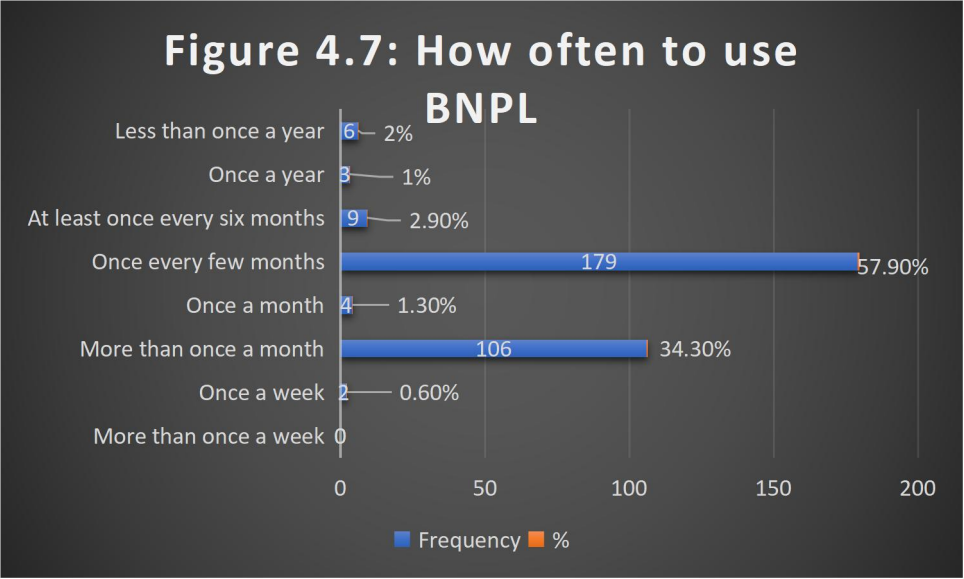
Appendix 4.9: when respondents start using BNPL

Appendix 4.10: Type of BNPL service

Figure 4.9: Type of BNPL service
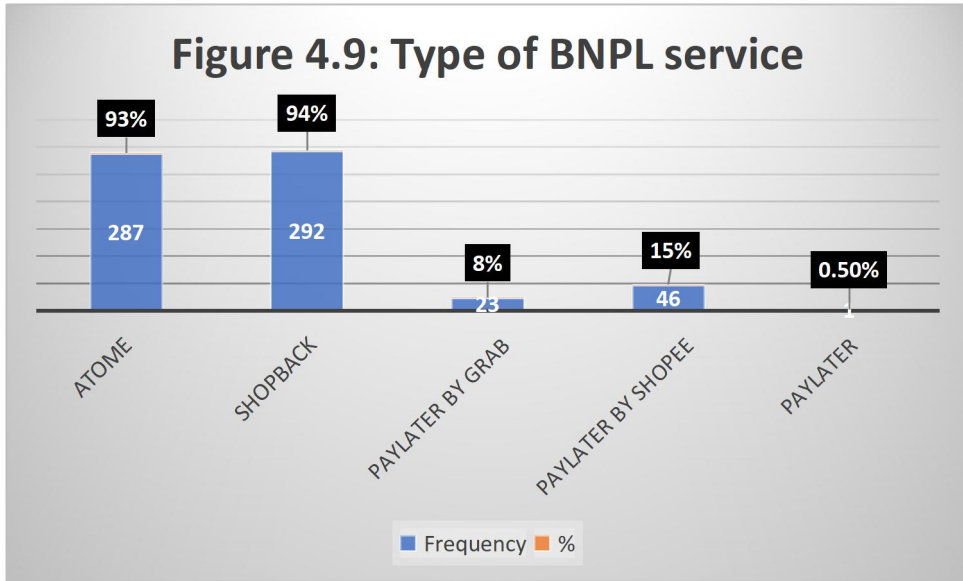
Appendix 4.11: Place respondents use BNPL service

Figure 4.10: Place respondents use BNPL service
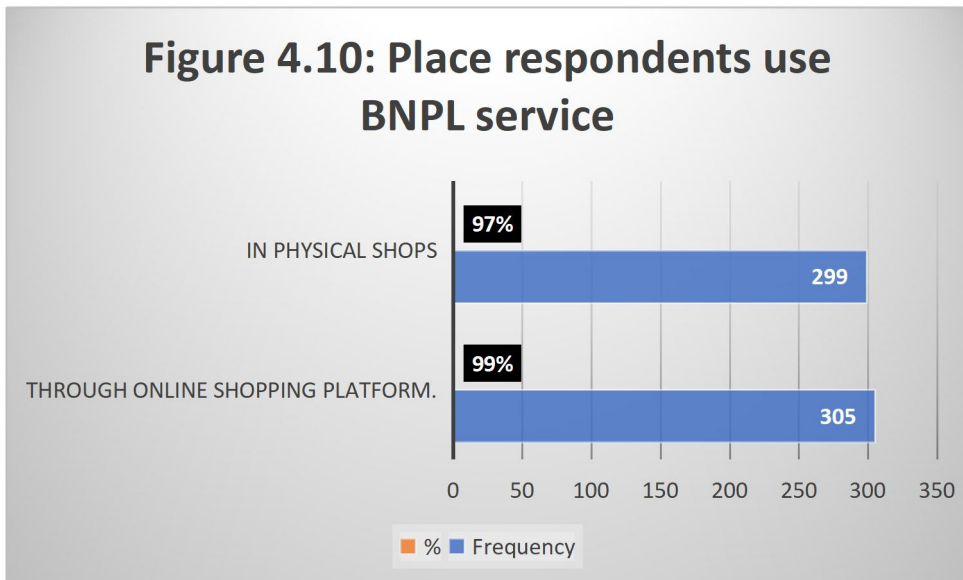
Appendix 4.12: Type of product respondent purchase using BNPL service.

Figure 4.11: Type of product respondent purchase using BNPL service.
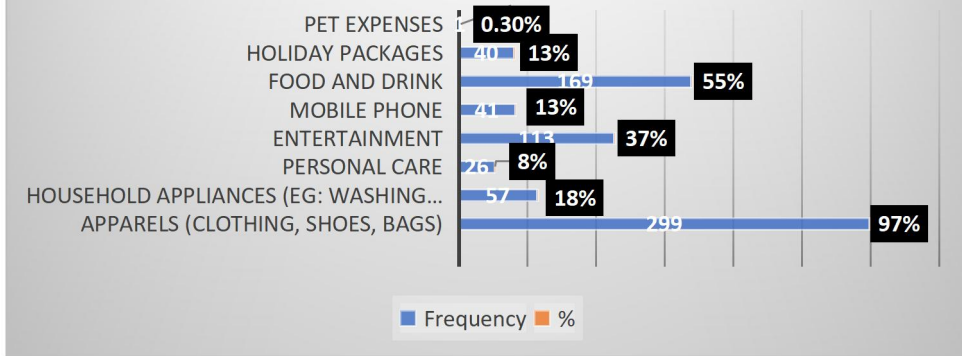
Appendix 4.13: Reasons for using BNPL services

Figure4.12: Reasons for using BNPL services
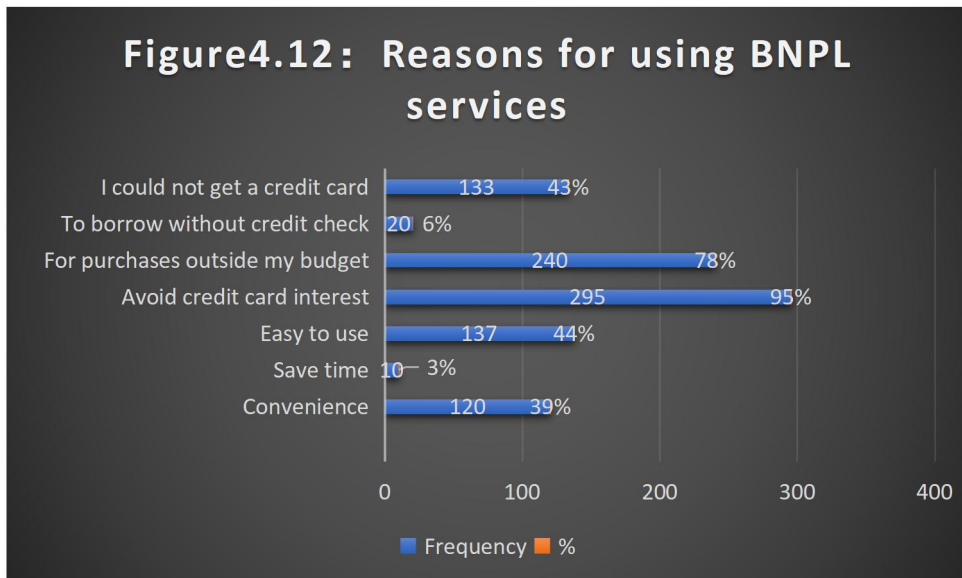
Appendix 4.14: Result of reflective measurement model

	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
EX	0.913	0.935	0.742
CON	0.924	0.941	0.726
OP	0.935	0.949	0.756
AGR	0.927	0.943	0.733

NER	0.842	0.884	0.564
IM	0.935	0.943	0.734
BNPL	0.922	0.939	0.719

Appendix 4.15: Result of the HTMT ratio

	EX	CON	OP	AGR	NER	IM	BNPL
EX							
CON	0.234						
OP	0.408	0.246					
AGR	0.323	0.236	0.295				
NER	0.103	0.333	0.071	0.468			
IM	0.454	0.646	0.508	0.587	0.510		
BNPL	0.408	0.652	0.459	0.598	0.514	0.947	

Appendix 4.16: R-square

	R-square	R-square adjusted
BNPL	0.768	0.767
IM	0.674	0.669

Appendix 4.17: Result of hypotheses testing through structural model

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-statistics ($|O/STDEV|$)	P values
EX -> IM	0.183	0.181	0.038	4.774	0.000
CON -> IM	-0.366	-0.367	0.038	9.735	0.000
OP -> IM	0.271	0.270	0.040	6.791	0.000
AGR -> IM	-0.219	-0.221	0.042	5.175	0.000
NER -> IM	0.279	0.279	0.047	5.986	0.000
IM -> BNPL	0.876	0.270	0.015	57.178	0.000

Appendix 4.18: Hypothesis testing

	P values	Hypothesis testing
EXTRAVERSION ⟶ IMPULSIVE BUYING	0.000	Supported
CONSCIENTIOUSNESS ⟶ IMPULSIVE BUYING	0.000	Supported
OPENNESS ⟶ IMPULSIVE BUYING	0.000	Supported
AGREEABLENESS ⟶ IMPULSIVE BUYING	0.000	Supported
NEUROTICISM ⟶ IMPULSIVE BUYING	0.000	Supported
IMPULSIVE BUYING ⟶ BNPL USAGE	0.000	Supported

Appendix 5.1. Summary of Hypotheses and Results

Hypotheses	Coefficient	T-value	Significant Level	Result
Hypothesis 1: There is a significant between Extraversion and impulsive buying behaviour.	0.183	4.774	0.000	Supported
Hypothesis 2: There is a significant between Conscientiousness and impulsive buying behaviour.	-0.366	9.735	0.000	Supported
Hypothesis 3: There is a significant between Openness and impulsive buying behaviour.	0.271	6.791	0.000	Supported
Hypothesis 4: There is a significant between Agreeableness and impulsive buying behaviour.	-0.219	5.175	0.000	Supported
Hypothesis 5: There is a significant between Neuroticism and impulsive buying behaviour.	0.279	5.986	0.000	Supported
Hypothesis 6: There is a significant between impulsive buying behaviour and BNPL usage.	0.876	57.178	0.000	Supported

Appendix: 6.0

FYP- report

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