

Buy Now, Pay Later Services: Adoption Drivers among Digitally Fluent Generations in Sarawak

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Abstract

In the ever-evolving landscape of consumer finance, Buy Now Pay Later (BNPL) has emerged as a transformative payment solution. BNPL effectively bridges the gap between traditional credit and debit methods by offering a middle ground that combines both benefits. The study aims to identify the adoption factor of BNPL among Generation Y (Gen Y) and Z (Gen Z) in Sarawak. Sarawak is undergoing a rapid digital transformation through the Sarawak Digital Transformation Blueprint 2030. BNPL plays a significant role by supporting consumer spending and empowering local businesses to thrive in the digital economy. This paper adapts and expands the Unified Theory of Acceptance and Use of Technology (UTAUT) to address the adoption factors of BNPL among Gen Y and Z in Sarawak. The theoretical framework has been expanded to include other variables like perceived security and attitude to broaden the usage of UTAUT in the BNPL field. Data were collected from 384 respondents and examined using SmartPLS 4.0 software. The findings indicated that performance expectancy, effort expectancy, attitude, and perceived security were significant in adopting BNPL services among Gen Y and Z in Sarawak. This study contributes to the existing literature by offering an extended UTAUT model that future researchers and academics can adopt for further studies on financial technology, especially BNPL.

1. Introduction

The rise of Buy Now, Pay Later (BNPL) has transformed the payment landscape. BNPL has emerged as a disruptive force in the financial market, altering how consumers make purchases and challenging traditional payment and credit systems. According to Mukhtar et al. (2023), this innovative financial model allows buyers to make transactions immediately while deferring the payment in instalments. BNPL gives customers an alternative payment option that enables instant purchases with postponed payments in instalments. Globally, the BNPL transactions are estimated to surge by nearly 450 billion USD between the years 2021 and 2026 (de Best, 2024). The significant surge in BNPL transactions globally reflects the rapid transformation of payment ecosystems worldwide. BNPL caters to diverse budgetary needs and preferences, which fosters a more accessible shopping experience for individuals across various income brackets (Abdelbary, 2023). This service makes shopping more accessible for individuals across various income brackets.

In Malaysia, BNPL services are becoming increasingly common, with several local and international companies entering the market to provide such services. According to Khoo (2021), five key BNPL providers in Malaysia are Atome, myIOU, Hoolah, PayLater by Grab and PineLabs. Retail shopping, internet shopping, and even bill payment is just a few of the transactions that customers can make with BNPL. According to Statista (2024), the number of BNPL users in Malaysia increased by one million as compared to the previous year to more than five million in 2022. The significant surge in BNPL users in this country reflects the shifting consumer preference for flexible payment solutions. According to Lupsa-Tataru et al. (2023), the majority of BNPL users are under the age of 40 years old. BNPL services have gained popularity among Gen Y and Z consumers due to their convenience and flexibility.

In Sarawak, the state government is pushing for digital transformation. The state government took a major leap by introducing the global trend of the digital economy to ensure the continuous progress of the state (Ahmad et al., 2020). This shift allows for new growth opportunities in the state, which positions Sarawak as a competitive player in the region's digital market. Jugah et al. (2022) added that the state government of Sarawak introduced the Sarawak Digital Economy Strategy to achieve high-income status by 2030. BNPL plays a significant role by supporting consumer spending and empowering local businesses to thrive in the digital economy. According to Ashari and Farouk (2023), the Sarawak Digital Economy Blueprint calls for various stakeholders in the state to steer and facilitate digital transformation. BNPL, as part of the digital payment technology, complements the blueprint's objective. Sarawak's digital transformation efforts create a fertile ground for the growth of BNPL services. According to Lee and Voon (2022), Sarawak contributes 9.5%, which is the third biggest contributor to Malaysia's GDP. The size and significance of Sarawak's economy offer a substantial foundation for the growth and integration of BNPL.

The study aims to identify the adoption factor of BNPL among Gen Y and Z in Sarawak and sheds some light on this emerging payment solution. According to Granwal (2024), the largest percentage of BNPL users among the four-generation groups is Gen Y and Z. Hence, it is interesting to find out the adoption factors of BNPL among its biggest users. The lack of understanding among Gen Y and Z regarding BNPL adoption is a significant factor to take into account since it affects how these groups view and use these services. Addressing the knowledge gap on BNPL adoption among Gen Y and Z in Sarawak requires a concerted effort to bridge the gap and empower BNPL adoption. There are several studies conducted in the field of BNPL adoption in Malaysia (Nuraisyah et al., 2022; Lee & Tai, 2023; and Mukhtar et al., 2023). However, it is found that the study on the factors of BNPL adoption among Gen Y and Z in the Sarawak context is limited. Hence, this paper takes on the research gap to expand the knowledge and insight into the adoption factor of BNPL among Gen Y and Z in Sarawak.

2. Literature Review

2.1 Buy Now Pay Later (BNPL)

BNPL, also commonly known as Point of Sale (POS) instalment loan, is a type of short-term loan-based financial assistance (Gogoi & Baruah, 2023). Irawati et al. (2024) further defined BNPL as the introduction of a service that allows consumers to spread their payments over time, which is often interest-free. Simply, BNPL is a payment option that allows consumers to buy something with the ability to pay for it at a later time. According to Tay et al. (2024), BNPL provides the essential feature of a credit card that enables people to buy on credit. However, BNPL is a more accessible and simpler alternative to credit cards.

BNPL allows consumers to select the option to pay later at the checkout page while doing their online and physical shopping (Raj et al., 2024). Consumers can split the total payment into smaller instalments instead of paying the full amount upfront. BNPL has become more and more popular, especially among young consumers, due to its flexible financing options. BNPL has attracted much interest from various stakeholders due to its rapid expansion and broad acceptance by retailers (Desai & Jindal, 2023). According to Kenney et al. (2023), BNPL is often used by consumers to purchase goods via online platforms. Many e-commerce websites and apps offer BNPL as a payment option.

2.2 Generation Y (Gen Y)

Gen Y has been introduced to the digital world at a young age (Betz, 2019). This digital mindset has greatly influenced how Gen Y communicates and consumes information. According to Mazzini et al. (2016), the generation known as Gen Y comprises those born in the 1980s and early 1990s. Gen Y uses technology extensively for social interaction, entertainment, and emotion control (Bolton et al., 2013). One prominent characteristic of Gen Y is integrating technology into their daily lives for marketing purposes. This includes the use of mobile devices and the Internet to connect with retailers and brands.

According to Lim et al. (2015), Gen Y is the group of people who were born right following Gen X. Gen Y refers to the demographic cohort following Gen X and preceding Gen Z. According to Berkup (2014), Gen Y is those who

were born between 1980 and 1994. As early adopters of technology, Gen Y has significantly influenced consumer trends, particularly in areas such as e-commerce, social media, and mobile apps.

2.3 Generation Z (Gen Z)

Gen Z are those born after 1995, and distinguished by their distinct traits and digital nativism (Jayatissa, 2023). Gen Z refers to the demographic cohort succeeding Gen Y and preceding Generation Alpha. According to Turner (2015), Gen Z refers to young people born between the middle of the 1990s and the end of the 2010s. Gen Z is composed of digital natives who have grown up in a world where technology is ubiquitous. Social media has become essential to Gen Z's upbringing and socialisation process (Sharma et al., 2023). Gen Z is the people born between 1995 and 2010 (Nirupama & D'souza, 2021). Gen Z is highly connected and tech-savvy as they grow up in an era of rapid technological advancement.

2.4 Unified Theory of Acceptance and Use of Technological (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) model consists of four key factors influencing individuals' intention to use technology and subsequent adoption behaviour (Venkatesh et al., 2003). UTAUT studies how social impact, effort expectancy, performance expectancy, and enabling factors affect technological acceptance (Marikyan & Papagiannidis, 2023). UTAUT was developed by Venkatesh et al. (2003) to understand and forecast people's adoption of new technologies and information systems. According to Aytekin et al. (2022), UTAUT is a popular and recent concept for adopting information technologies. UTAUT has been used, expanded, and integrated by researchers to examine people's acceptance and usage of technology in a range of contexts (Venkatesh et al., 2016). UTAUT has been widely used in research (Bakri et al., 2023; Lee & Tai, 2023; and Kutbi et al., 2024) to study the adoption of BNPL.

Fig. 1 shows the research model of the study. The model was adapted and extended based on the UTAUT model. The UTAUT model is deemed suitable for studying the adoption of BNPL because it focuses on understanding the variables that influence consumers' decisions to adopt and use new technologies or services. According to Nguyen et al. (2024), attitude is essential because it determines one's faith in BNPL as a payment method. Abed and Alkadi (2024) added that there is still a significant gap in the study of young consumer attitudes in the study of BNPL. Additionally, Tay et al. (2024) noted that prior research has emphasised the need for perceived security in the context of technology adoption. Hence, attitudes and perceived security have been added to the study's framework to give a deeper insight into adopting BNPL among Gen Y and Z in the context of Sarawak.

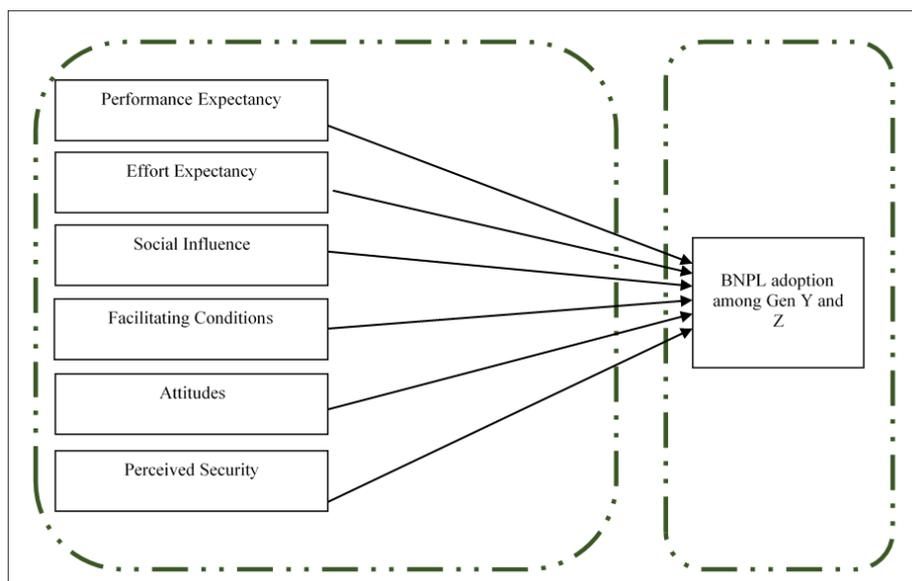


Fig. 1 Research model (Source: Venkatesh et al., 2003)

2.4.1 Performance Expectancy (PE)

Performance expectancy refers to the consumer's belief that technological advances simplify daily tasks (Venkatesh et al., 2003). Rizakalla et al. (2024) further define performance expectancy as consumers' belief that the application of technology increases productivity in their daily tasks. In this study context of BNPL services, the performance expectancy aspect of the UTAUT relates to the extent of users' beliefs on how utilizing BNPL will improve performance or facilitate their shopping.

Lee and Tai (2023) found that performance expectancy affects consumers' intention to use BNPL. Customers can spread out the cost of purchases over time with BNPL, frequently without paying interest, as long as payments are made on schedule. Martinez and McAndrews (2022) conducted a study on the intention to use mobile payment, and it was proven that performance expectancy plays a significant role among consumers in the US. Mobile payment and BNPL are closely related because they often work together to create a seamless and convenient shopping experience for consumers.

The availability of BNPL at the point of sale improves the general shopping experience for online consumers. Performance expectancy significantly affected the consumers' intention to use BNPL in Shopee (Kadua et al., 2023). Researchers have shown that users' perceptions of the performance expectancy associated with BNPL play a significant role in adopting BNPL services. As a result, the following hypothesis is proposed:

H1: PE has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak.

2.4.2 Effort Expectancy (EE)

Effort expectancy can be defined as the level of complexity of effort needed to use technology (Catherine et al., 2017). According to Saputri et al. (2022), effort expectancy is the level of convenience associated with technology usage. In this study context, effort expectancy refers to users' perception of how easy or hard it is to use BNPL to facilitate their transactions.

Hanafi et al. (2023) found that effort expectancy plays a significant role in determining the user adoption of digital payment among consumers in rural areas of Malaysia. Effort expectancy was found to be significant in determining the consumers' adoption of Paylater (Nurfaiza & Prayitno, 2023). The availability of BNPL services on various platforms and devices has an impact on effort expectancy. Effort expectancy was found to be significant in determining the adoption of technology among consumers in Pakistan (Sair & Danish, 2018). Users appreciate the ease of making purchases and managing payments through BNPL platforms. Users' perceptions of effort expectancy play a crucial role in the acceptance and adoption of BNPL services. Consequently, the following hypothesis is put forth:

H2: EE has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak

2.4.3 Social Influence (SI)

Social influence refers to ways in which society shapes the beliefs of the individual (Weng, 2022). According to Ram and RizoIU (2024), social influence is a pervasive force of influential people that shapes and influences an individual's attitudes. Azzahra et al. (2023) further defined social influence in the context of BNPL as the social influences from peers, family, and social media on an individual's intention to use BNPL.

Lee and Tai (2023) in their study found that social influence affects consumers' intention to use BNPL. Positive recommendations or endorsements from friends, family members, or peers can influence an individual's decision to use BNPL services. Chauhan et al. (2022) found that social influence is one of the proven adoption factors of M-payment among Gen Z.

Individuals feel more comfortable using BNPL if they observe it as a widely adopted payment method among their peers or on social media. Nurfaiza and Prayitno (2023) found that social influence significantly contributed to consumers' intention to use Paylater. Perceptions of what is considered normal or acceptable within one's social circle can influence the adoption of BNPL. Consumers use BNPL in an effort to fit in or live up to social expectations when they perceive their friends or peers to be using it frequently as a social norm. For that reason, the following hypothesis is put forth:

H3: SI has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak.

2.4.4 Facilitating Conditions (FC)

Facilitating conditions can be defined as the availability of resources to support the application of certain technology (Buraimoh et al., 2023). According to Wulandari et al. (2023), facilitating conditions refer to the availability of supporting technology and organisational support to facilitate or streamline an individual's use behaviour of certain technology. Tang and Tsai (2024) further defined facilitating conditions in the BNPL context as the institutional and technological framework that promotes and ensures the effective adoption of BNPL.

It was found that facilitating conditions are a significant factor in determining the adoption of Shopee Paylater in a study by Bakri et al. (2023). In order to enable customers to choose BNPL as a payment option during the purchase process, it is necessary to guarantee a smooth integration with retailers' e-commerce platforms or point-of-sale systems. Raj et al. (2024) found that facilitating conditions were a significant factor in the adoption of BNPL services among consumers in India.

Hui and Huynh (2023) found that facilitating conditions were the determining factor of e-wallet adoption in Vietnam. Strong technical infrastructure, such as online platforms, mobile apps, payment processing systems, and customer support channels, is necessary for BNPL services to function. Facilitating conditions involve ensuring the technical infrastructure's reliability, security, and scalability to accommodate the growing user base and transaction volume. Thus, the following hypothesis is put forth:

H4: FC has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak

2.5 Extension of UTAUT:

2.5.1 Attitude (AT)

Attitude can be defined as an individual's feelings and reactions towards an event or person (Olufemi, 2012). According to Vargas-Sanchez (2016), attitude is how an individual views and evaluates something or someone. In this study context, attitude refers to the consumer's attitude towards BNPL. User attitudes toward BNPL can vary based on various factors, including individual preferences, experiences, and perceptions of BNPL services.

Relja et al. (2023) found that attitude was a positive psychological determinant of BNPL in the UK. BNPL is a convenient option for many customers because it lets them make purchases without paying the entire amount at once. Aina and Chalid (2023) found that credit attitude was significant in BNPL adoption. By spreading out payments over time, users see BNPL as a flexible payment option that helps them better manage their cash flow. Financial attitude was found as significant to the possibility of financial vulnerability (Amirah et al., 2020). Users are attracted to BNPL services that offer interest-free financing if payments are made on time, seeing it as a cost-effective way to make purchases. BNPL providers must address user needs and concerns effectively and promote responsible and sustainable use of BNPL services. Consequently, the following hypothesis is put forth:

H5: AT has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak

2.5.2 Perceived Security (PS)

Perceived security is the anticipation of threats due to fraud, denial of service, and abuse of authority (Siagian et al., 2022). According to Dinari and Tjhin (2023), perceived security is the expectation of the user on the service provider's capacity to provide secure protection against security breaches. In the context of BNPL, perceived security refers to customers' trust in the security of using BNPL services for purchase transactions. Madyatmadja, et al. (2024) found that security positively influences consumer intention to use BNPL. Consumers value BNPL services with effective fraud prevention and detection mechanisms to identify and mitigate fraudulent activities, such as unauthorised transactions or identity theft.

Perceived security was found to have a significant positive effect on consumer intention to use transactions online in a study conducted by Budiman et al. (2023). Consumers appreciate BNPL providers with transparent policies and disclosures regarding their terms of service, fees, repayment schedules, and dispute resolution processes. Clear and accessible information helps consumers make informed decisions and understand their rights and obligations when using BNPL services. According to Cuandra (2022), perceived security was proven as the adoption factor in his study of BNPL adoption among consumers in Batam City, Indonesia. Thus, the authors suggest the following hypothesis:

H6: PS has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak

3. Methodology

3.1 Research Design

The research design employed in this study was quantitative, leveraging primary data and a cross-sectional approach. The primary data for this study was collected through a structured questionnaire designed to capture relevant information directly from the target population. Besides, the study employed a cross-sectional approach, collecting data at a single point to examine the factors influencing BNPL adoption among Generation Y and Z in Sarawak. According to Wang and Cheng (2020), cross-sectional studies are observational in nature and examine data from a population at a specific point in time.

3.1.1 Location, Respondents, and Sample Size

The study on BNPL adoption in Sarawak was conducted within the bustling urban centres and remote rural communities, capturing the diverse consumer landscape of the region. Sarawak, the largest state in Malaysia, is

located on the island of Borneo (Wee et al., 2024). Sarawak was selected as the location of the study mainly due to the state's fierce digital transformation effort. This digital transformation initiative provides a conducive environment for the growth of BNPL.

Gen Y and Z are more inclined to use BNPL services because they are familiar with the internet and exposed to digital technology at a very young age (Gogoi & Baruah, 2023). Hence, the respondents of the study were from Generation Y and Z in Sarawak. Gen Y and Z were born between 1980 and 2010 (Berkup, 2014; Nirupama & D'souza, 2021). Based on the 2020 Population Census, there were approximately 1,576,100 individuals categorized as Gen Y and Z in Sarawak (Department of Statistics Malaysia, 2022). This figure was derived by summing the populations from the age groups 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49 in the 2020 Population Census data. The latest population count was from the 2020 Malaysia Population Census, which was conducted every 10 years.

The published table by Krejcie and Morgan (1970) was used to determine the sample size of this study. Based on the published table, this study required a total of 384 respondents. Additionally, Memon et al. (2020) suggest that a sample size of between 160 and 300 valid observations is generally ideal for multivariate statistical analysis techniques such as CB-SEM and PLS-SEM. Hence, the minimum sample size for this study was 384 based on Krejcie and Morgan's (1970) and Memon et al.'s (2020) suggestions. The criteria to be selected as respondents for this study were Sarawakian, having sufficient knowledge of BNPL, and being classified as Gen Y or Z. The sampling strategy used to select study participants was the purposive random sampling technique. Tongco (2007) asserts that, when applied appropriately, purposive sampling is a useful and effective technique. This approach allows the sample to accurately represent key characteristics of the population under study, thereby enhancing the relevance and depth of the findings.

3.1.2 Research Instrument

The questionnaire is particularly effective when managing a large number of respondents across diverse geographic locations (Rathi & Ronald, 2022). The questionnaire was chosen as the research instrument for this study due to its ease of use in gathering data from a large sample size. The demographic and construct parts make up the two sections of the questionnaire. The first section of the questionnaire gathered the demographic information of the respondents. Subsequently, the second section, namely the construct section of the questionnaire, captured the required information based on the research questions and the main objective of the study. A 5-point Likert scale was used in the construct section of the questionnaire. According to Joshi et al. (2015), the Likert scale is one of the most frequently applied tools in social science study.

3.1.3 Data Collection

The questionnaires were distributed to respondents via online platforms and self-administered. 501 sets of questionnaires were sent out to respondents, and 445 sets of those were received back. 61 questionnaire sets out of 445 had been disregarded because of missing data and straightlining responses. Missing data and straightlining responses were systematically addressed, as such issues can substantially undermine the integrity of the dataset. Consequently, these responses were excluded to ensure the validity and quality of the study's results. According to Kim et al. (2018), straightlining issues reduce the collected data quality mainly because the respondents give identical answers to items in the questionnaire. The final dataset consisted of 384 valid responses, which were used for analysis, ensuring the reliability and accuracy of the study's findings.

3.1.4 Data Analysis

The data was further analysed for data analysis using the SmartPLS 4.0 software. SmartPLS is a software designed for Partial Least Squares Structural Equation Modeling (PLS-SEM), making it ideal for analysing complex models with latent variables (Sarker et al., 2024). The measurement model analysis was initially conducted to assess the reliability and validity of the constructs. Next, the hypotheses of the study were tested via structural model assessment in the SmartPLS 4.0 software. The bootstrapping process was done with 5000 resamples to test the path coefficients. SmartPLS 4 and Microsoft Excel were used to analyse the study's data. The data was entered into Microsoft Excel, which was then used to perform a descriptive analysis of the respondents' backgrounds. Subsequently, SmartPLS 4 was employed to analyse the study's research model.

4. Results

Table 1 displayed the study participants' characteristics and revealed that there were more female respondents (53.65%) than male respondents (46.35%). In addition, there were more respondents from Gen Y, with a percentage of 52.08%, as compared to Gen Z, with a percentage of 47.92%. When it came to race, the majority of respondents were Chinese (29.95%), followed by Iban (28.13%), Malay (25.52%), Bidayuh (45%), Other (3.9%), and Indian (0.78%), respectively. The majority of respondents (51.04%) were single, followed by married

(37.76%), divorced (7.29%) and widowed (3.91%). Lastly, 50.78% of the respondents received undergraduate education, followed by postgraduate (23.44%), secondary level (25%) and other (0.78%).

Table 1 Characteristics of respondents (n=384)

Particular	Frequency (n)	Percentage (%)
Gender		
Male	178	46.35
Female	206	53.65
Generation		
Gen Y	200	52.08
Gen Z	184	47.92
Race		
Malay	98	25.52
Chinese	115	29.95
Indian	3	0.78
Iban	108	28.13
Bidayuh	45	11.72
Other	15	3.90
Marital Status		
Married	145	37.76
Single	196	51.04
Divorced	28	7.29
Widowed	15	3.91
Education Status		
Secondary Level	96	25
Undergraduate	195	50.78
Postgraduate	90	23.44
Other	3	0.78

4.1 PLS-SEM

According to Hair et al. (2018), researchers should use Partial Least Squares Structural Equation Modeling (PLS-SEM) when the goal is to gain a deeper understanding by exploring theoretical extensions of existing theories. This study expands the UTAUT by incorporating perceived security and attitude. Hence, the PLS-SEM technique was applied using SmartPLS software, version 4.0, to perform the data analysis. According to Sarstedt et al. (2021), PLS-SEM has emerged as a widely used approach for estimating path models that involve latent variables and their interrelationships. According to Hair et al. (2011), PLS-SEM functions similarly to multiple regression analysis. PLS-SEM handles complex models with multiple dependent and independent variables, making it well-suited to the needs of the study. The study employed a reflective model to assess the relationships between latent variables and their indicators. According to Hair Jr. et al. (2014), the first step in PLS-SEM for a reflective model is to use composite reliability to evaluate the internal consistency reliability of construct measures, followed by assessing the validity of reflective indicators through the examination of convergent and discriminant validity.

In PLS-SEM, factor loading is used to assess the strength of the relationship between observed indicators and their underlying latent variables. It measures how well each indicator represents the latent construct it is intended to reflect. Higher absolute values of factor loadings, which span from -1.0 to 1.0, signify a stronger association between the item and the underlying factor (Pett et al., 2003). All of the study's items had factor loadings greater than or equal to 0.50 as per Hair et al. (2016) recommendation. Therefore, no items were taken out. The results of factor loadings are shown in Table 2. According to Ximenez (2009), factor analysis is a widely used statistical procedure in psychological research, and weak factors or small loading values may result from the low reliability of the observed variables.

4.1.1 Measurement Model Assessment

The measurement model assessment forms the foundation for evaluating the quality of the study's constructs. The constructs' reliability was assessed using Composite Reliability (CR) and Cronbach's Alpha. Based on the reliability testing, Cronbach's Alpha and CR values were greater than 0.700. Wasko and Faraj (2005) state that a

CR value greater than 0.700 must be regarded as reliable. Next, assessing the reflective model involves evaluating convergent validity using Average Variance Extracted (AVE) and discriminant validity through the Heterotrait-Monotrait (HTMT) ratio (Hair Jr. et al., 2021). According to Cheung et al. (2023), the AVE should be at least 0.5 to indicate an acceptable level of convergent validity. The study's convergent validity was approved due to the Average Variance Extracted (AVE) value exceeding 0.500. Table 2 displays the study's factor loading, validity, and reliability tests. The potential issues of overestimating reliability and overlooking other aspects of model validity were addressed by providing a more thorough evaluation. Reliability metrics such as Cronbach's alpha, composite reliability, and AVE were reported, along with assessments of convergent and discriminant validity, to ensure the constructs were consistent and distinct. Next, the study's discriminant validity was evaluated using HTMT. The HTMT results (see Table 3) indicate that every value is below the 0.90 threshold. The HTMT value must be below 0.90 to establish discriminant validity (Henseler et al., 2015).

Table 2 *Measurement model*

Constructs	Items	Loadings	Cronbach's Alpha	CR	AVE
Attitudes (AT)	AT1	0.829	0.974	0.98	0.926
	AT2	0.891			
	AT3	0.977			
	AT4	0.972			
BNPL Adoption (BNPL)	BNPL1	0.913	0.977	0.983	0.937
	BNPL2	0.946			
	BNPL3	0.974			
	BNPL4	0.955			
Effort Expectancy (EE)	EE1	0.926	0.947	0.962	0.864
	EE2	0.874			
	EE3	0.898			
	EE4	0.940			
Facilitating Conditions (FC)	FC1	0.916	0.962	0.972	0.897
	FC2	0.897			
	FC3	0.865			
	FC4	0.942			
Performance Expectancy (PE)	PE1	0.953	0.95	0.964	0.87
	PE2	0.908			
	PE3	0.780			
	PE4	0.903			
Perceived Security (PS)	PS1	0.947	0.968	0.977	0.913
	PS2	0.947			
	PS3	0.947			
	PS4	0.950			
Social Influence (SI)	SI1	0.939	0.964	0.974	0.902
	SI2	0.915			
	SI3	0.956			
	SI4	0.942			

Table 3 Discriminant validity (HTMT)

	AT	BNPL	EE	FC	PE	PS	SI
AT							
BNPL	0.171						
EE	0.165	0.616					
FC	0.137	0.852	0.569				
PE	0.236	0.762	0.581	0.755			
PS	0.160	0.471	0.523	0.449	0.451		
SI	0.199	0.665	0.603	0.598	0.622	0.511	

4.1.2 Structural Model Assessment

Following assessing the measurement model, the subsequent step is to investigate the presence of Common Method Bias (CMB). According to Kock (2015), CMB is a phenomenon resulting from the measurement method employed in an SEM study. CMB has become an increasing concern for quantitative researchers, as it undermines the rigor of research (Memon et al., 2023). This bias can distort results by exaggerating relationships between variables, making it essential to identify and mitigate them. Kock et al. (2021) added that CMB is an issue that appears when both the independent and dependent variables capture the same response method, affecting the study's validity. Variance Inflation Factors (VIF) are commonly used to test the CMB (Kock, 2017). The VIF value in this study was calculated via the PLS-SEM Algorithm calculation in the SmartPLS 4.0 software. Table 4 below shows the VIF values of the study. The values ranged from 1.003 to 1.028. According to Kock (2015), the VIF values lower than 3.3 show that the CMB issue is absent. Hence, the CMB issue was not present in this study since the VIF values were lower than the threshold of 3.3.

Fig. 2 below illustrates the visual representation of the structural model's assessment. The diagram reflects the postulated paths based on the research framework. The R^2 , Q^2 , and path significance evaluated the structural model fit. R^2 was used to assess the model's quality. For the dependent variable, the R^2 value indicates the strength of each structural path (Penalver et al., 2018). R^2 numbers should be higher than 0.1 (Falk & Miller, 1992). The R^2 value of the study was more than 0.1, indicating that this study was predictive (see Table 6). Additionally, Q^2 establishes the endogenous components' predictive value. This study's predictive relevance was established because the Q^2 value in this study's structural model was greater than zero (see Table 6). Table 6 below presents the results of the R^2 and Q^2 tests for the study, showing the model's explanatory power and predictive relevance.

Table 5 below provides a detailed summary of the results from the Path Coefficients analysis conducted in this study, illustrating the strength and direction of the relationships between the variables under investigation. All six hypotheses were examined to determine the importance of the association and to further analyse the goodness of fit. Firstly, H1 was supported ($\beta = 0.192$, $\tau = 3.135$, $p < 0.002$). PE has a significant impact on BNPL. Next, H2 evaluates whether EE has a significant impact on BNPL. The results revealed that H2 was supported ($\beta = 0.094$, $\tau = 2.018$, $p < 0.044$). Furthermore, H3 assesses if SI significantly affects BNPL adoption. The results revealed that H3 was unsupported ($\beta = 0.015$, $\tau = 0.403$, $p > 0.687$). In addition, H4 was not supported ($\beta = 0.005$, $\tau = 0.184$, $p > 0.854$), which means FC has an insignificant impact on BNPL. Besides, H5 evaluates whether AT has a significant impact on BNPL. The result shows that H5 was supported ($\beta = 0.538$, $\tau = 8.453$, $p < 0.000$). Lastly, H6 stated that PS has a significant impact on BNPL. The results revealed that PS has a significant impact on BNPL ($\beta = 0.159$, $\tau = 3.400$, $p < 0.001$). Hence, H6 was supported. Table 7 summarizes the outcomes of the hypothesis testing.

Table 4 Result of VIF

	VIF
AT -> BNPL	1.018
EE -> BNPL	1.017
FC -> BNPL	1.003
PE -> BNPL	1.027
PS -> BNPL	1.015
SI -> BNPL	1.028

Table 5 Result of path coefficients

	β	SE	T	P
AT -> BNPL	0.538	0.064	8.453	0.000
EE -> BNPL	0.094	0.047	2.018	0.044
FC -> BNPL	0.005	0.025	0.184	0.854
PE -> BNPL	0.192	0.061	3.135	0.002
PS -> BNPL	0.159	0.047	3.400	0.001
SI -> BNPL	0.015	0.038	0.403	0.687

Table 6 R² and Q² values of the study

	R ²	Q ²
BNPL	0.752	0.738

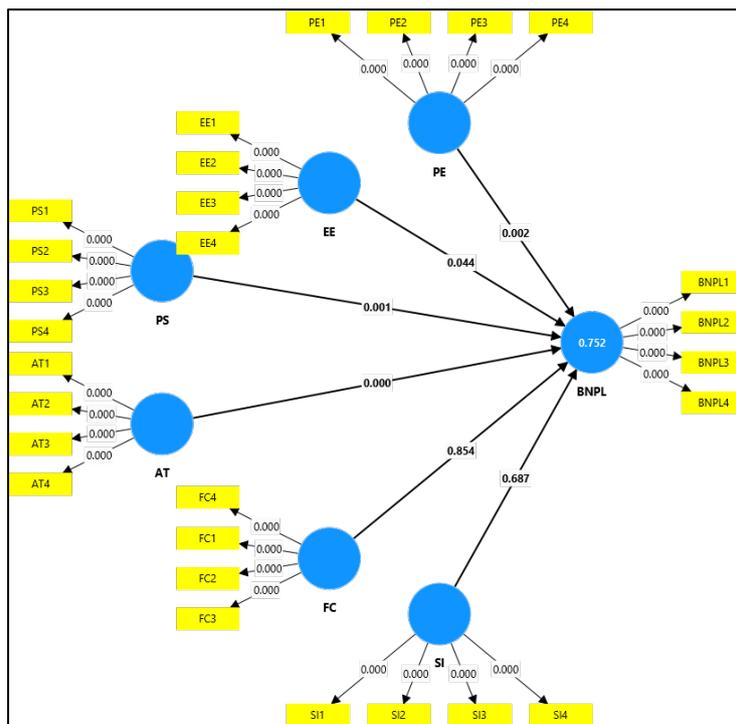


Fig. 2 Result of structural model assessment

Note(s): Performance expectancy, PE; effort expectancy, EE; perceived security, PS; attitude, AT; facilitating conditions, FC; social influence, SI; buy now pay later adoption, BNPL

Table 7 Summary of hypotheses testing

H	Relationship	Decision
1	PE has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak	Supported
2	EE has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak	Supported
3	SI has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak	Not Supported
4	FC has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak	Not Supported
5	AT has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak	Supported
6	PS has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak	Supported

5. Discussion

The analysis's results have brought up several crucial points for this section's discussion. The was to investigate the influence of performance expectancy, effort expectancy, social influence, facilitating condition, attitude, and perceived security on the adoption of BNPL among Gen Y and Z in Sarawak. Four of the six hypotheses that were put forth and tested were found to be significant, while the other two were found to be insignificant (see Table 7). As demonstrated by the t-value of 8.453, attitude yields the highest significance for the factor of BNPL adoption, followed by t-values of 3.400 and 3.135 for perceived security and performance expectancy, respectively. This suggests that consumers' overall positive or negative attitude towards BNPL plays a critical role in their decision to use BNPL.

The findings of the study discovered that performance expectancy has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak. This finding is consistent with the findings by Kutbi et al. (2024). The researchers found that performance expectancy significantly influences the perception of the usefulness of BNPL adoption in Saudi Arabia. Convenience and flexibility are frequently given top priority in financial transactions by Gen Y and Z. As a practical substitute for conventional credit cards or upfront payments, BNPL fits in nicely with these preferences. In addition, Tang et al. (2021) also support the findings of the research. With BNPL, consumers can easily make purchases both in-person and online without having to worry about making quick payments. The ease of splitting payments over time aligns with their desire for flexibility and convenience, thus increasing the likelihood of adoption. From a practical standpoint, businesses should highlight how BNPL offers a practical, flexible alternative to credit cards and upfront payments. By providing straightforward payment plans both online and in-store, companies can better align with consumer preferences. This, in turn, enhances the likelihood of BNPL adoption. This trend suggests businesses should focus on flexibility and convenience to appeal to younger shoppers.

The findings of the study revealed that effort expectancy has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak. This result line with the findings conducted by Hanafi et al. (2023). The researcher proved that effort expectancy influenced the adoption of BNPL. In addition, Namahoot and Jantasri (2022) found that effort expectancy was one of the factors that influenced the BNPL services adoption in Thailand. The adoption of BNPL services by Gen Y and Z is heavily influenced by effort expectancy. In general, younger generations are more familiar with technology and quickly adapt to new apps and digital platforms. The adoption of BNPL by Gen Y and Z is greatly influenced by effort expectancy, which shapes their perceptions of the ease of use and the convenience of these services. From a practical point of view, companies should ensure their BNPL services are simple, intuitive, and easy to navigate. By prioritising user-friendly designs and reducing complexity, businesses align with the preferences of younger consumers and drive higher adoption rates.

Unfortunately, the study discovered that social influence has an insignificant impact on the adoption of BNPL among Gen Y and Z in Sarawak. This finding is consistent with the findings conducted by Azzahra et al. (2023). The authors found that social influence does not have a significant impact on the adoption of BNPL, specifically Shopee Paylater, among millennials. Surprisingly, social influence does not have a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak. This reflects that peer pressure or recommendations from close family do not affect Gen Y and Z's decision to use the BNPL services. Gen Y and Z's familiarity with digital technology allows them to evaluate and adopt the BNPL services without significant input from others. However, the finding is consistent with previous research by Maurizka et al. (2021), who asserted that social influence has a significant direct impact on the intention to use BNPL in the B2C online marketplace in Indonesia. Social influence is critical in driving adoption in a market where digital technology is relatively new. However, the state of Sarawak is rapidly undergoing digital transformation. Hence, this provides a conducive environment for BNPL services to grow and sustain.

The study found that facilitating conditions have an insignificant impact on adopting BNPL among Gen Y and Z in Sarawak. Surprisingly, facilitating conditions do not have a significant impact on the adoption of BNPL services among Gen Y and Z in Sarawak. This study's findings align with the study conducted by Martinez and McAndrews (2022). Martinez and McAndrews (2022) found that facilitating conditions did not impact the adoption of financial technology. In Sarawak, the availability of digital payment infrastructure makes facilitating conditions less critical for adoption. The state government introduced Spay Global and pushed for the adoption of financial technology. Government support plays a crucial part in adopting financial technologies such as BNPL services. However, this finding is not consistent with previous research by Suharsono et al. (2023), who asserted that facilitating conditions had a significant direct impact on the adoption of BNPL. Facilitating conditions play a crucial role in adoption, especially when digital payment systems are less mature or widely adopted.

The study found that attitude has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak. This finding is supported by the study done by Susilo et al. (2024). The authors found that attitude was significant to the intention to use Paylater among Gen Z in Indonesia. Gen Y and Z highly value the convenience of seamless and hassle-free experiences, and BNPL gives them the freedom to make purchases that suit their lifestyle choices. This finding is in line with the findings conducted by Yuwono et al. (2023), whereby attitude significantly impacts

the BNPL adoption among millennials in Indonesia. Thus, it is safe to say that attitude plays a significant role in determining the adoption of BNPL among Gen Y and Z in Sarawak. The positive attitude towards the convenience of BNPL may drive its adoption. However, this same mindset can lead to impulsive buying behaviours, as consumers may underestimate the long-term financial implications of their actions. Easy access to credit and the ability to delay payments may make Gen Y and Z feel less responsible for their spending, resulting in overconsumption. In practical application, businesses should highlight how BNPL offers a simple and hassle-free purchasing experience. Companies can boost BNPL adoption among younger consumers by offering simple designs and clear communication. Furthermore, marketing strategies should highlight how BNPL offers flexibility in payment options, allowing consumers to make purchases at their convenience without the immediate financial burden. This, in turn, supports a lifestyle that values both freedom and ease in managing finances.

The result showed that perceived security has a significant impact on the adoption of BNPL among Gen Y and Z in Sarawak. Based on the research findings, it can be concluded that Gen Y and Z in Sarawak value perceived security as one of the adoption factors of BNPL services. This finding is consistent with the research conducted by Limantara et al. (2024). In addition, this finding is also supported by Nurfaiza and Prayitno (2023) whereby it was found that perceived security was a significant factor in predicting the adoption of BNPL services among Gen Z in Jakarta, Indonesia. Gen Y and Z's adoption of BNPL service is significantly influenced by their perception of security. Digital natives, Gen Y, and Z have grown up with technology and are typically aware of the risks associated with online security. Through prioritizing data security, payment protection, open communication, and positive user experiences, BNPL services successfully reduce security-related obstacles and promote adoption within these target audiences. From a practical perspective, businesses must prioritise strong data protection and secure payment systems. Clear communication regarding security features, such as fraud protection and encryption, is essential for building consumer trust. This approach, in turn, fosters greater adoption among younger, tech-savvy users.

6. Conclusion

The study aims to identify the adoption factor of BNPL among Gen Y and Z in Sarawak and sheds some light on this emerging payment solution. The size and significance of Sarawak's economy offer a substantial foundation for the growth and integration of BNPL. The study was adapted and extended based on the UTAUT model. The UTAUT model was deemed suitable for studying the adoption of BNPL because it focuses on understanding the variables that influence consumers' decisions to adopt and use new technologies or services. Attitudes and perceived security were added to the study's framework to give a deeper insight into adopting BNPL among Gen Y and Z in the context of Sarawak. 501 sets of questionnaires were sent out to respondents, and 445 sets of those were received back. 61 questionnaire sets out of 445 had been disregarded because of missing data and straightlining responses. Based on the data analysis, four out of six hypotheses were accepted. The findings indicated that performance expectancy, effort expectancy, attitude, and perceived security were significant in the adoption of BNPL services among Gen Y and Z in Sarawak. All things considered, this study yielded valuable data regarding BNPL use in Sarawak among Gen Y and Z. Thus, it is believed that this study has improved the existing body of knowledge related to financial technology.

The UTAUT was applied and extended in this study to validate the intention of Gen Y and Z in Sarawak to adopt BNPL services. The theoretical framework has been expanded to include other variables like perceived security and attitude to broaden the usage of UTAUT in the BNPL field. Hence, the research has contributed to an expanded model of UTAUT for future researchers and academicians to adopt in conducting studies regarding financial technology, especially BNPL. Additionally, the study advances our understanding of the application of UTAUT to capture the intention to adopt BNPL services, especially in Sarawak. Since Sarawakian consumers are accustomed to transacting with physical currency, it is intriguing to learn what factors influence BNPL adoption among Gen Y and Z in Sarawak with a proven model of UTAUT. It is imperative to comprehend the adoption factors of the local populace in order to further accelerate the growth of BNPL in Sarawak, Malaysia.

The study on BNPL adoption in Sarawak has several important implications for practitioners and other stakeholders. The findings of the study guide the development of targeted marketing strategies and product offerings tailored to the preferences and needs of Gen Y and Z consumers. Understanding the factors that drive adoption helps in refining their services for growth and sustainability. Policymakers should focus on improving digital security and building consumer trust in BNPL services, as security and attitudes are key factors in adoption. Additionally, aligning BNPL with Sarawak's digital transformation efforts in the Sarawak Digital Transformation Blueprint 2030 could help maximise its benefits, support economic growth, and reduce potential risks. For retailers and e-commerce platforms, offering BNPL can attract more customers, particularly Gen Y and Z, by providing flexible payment options. This could result in increased sales and higher conversion rates, as well as enhanced customer satisfaction and loyalty.

The study on BNPL adoption among Gen Y and Z in Sarawak faces several limitations. Purposive random sampling carries the risk of bias. Purposive sampling might not capture the full range of perspectives or

behaviours in a population, as the sample is intentionally chosen based on specific criteria. The rapidly evolving BNPL market and potential regulatory changes in the Sarawak context could also limit the study's long-term relevance. Finally, Sarawak's unique cultural and economic landscape may restrict the generalizability of findings to broader or other country contexts. Other countries with different cultural values and attitudes toward financial products may not exhibit the same behaviours when it comes to BNPL adoption.

Future studies should consider using more diverse sampling techniques, such as stratified or random sampling, to ensure a more representative sample. This would help reduce the risk of bias inherent in purposive random sampling. These approaches can capture a wider range of perspectives and behaviours, providing a more comprehensive understanding of the population. Next, a longitudinal study could be beneficial in future research to track the adoption and usage patterns of BNPL services over an extended period. This approach would allow researchers to observe how the market evolves, how consumer behaviours change, and how regulatory developments impact the BNPL landscape in Sarawak. Finally, comparative studies with other regions could enhance understanding of how local cultural, economic, and regulatory contexts influence BNPL usage. It helps identify trends, challenges, and opportunities that are unique to particular contexts.

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Conflict of Interest

The authors state that there is no conflict of interest in publishing the paper.

Author Contribution

*The authors confirm contribution to the paper as follows: **study conception and design:** Tang, M.B; **data collection:** Sa'adi, N; **analysis and interpretation of results:** Tang, M.B., Sa'adi, N; **draft manuscript preparation:** Tang, M.B; **manuscript revision:** A, J.L. All authors reviewed the results and approved the final version of the manuscript*

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