



Antecedents of Buy Now Pay Later Usage Among Gen-Z in Pakistan: The Moderating Role of Financial Self-Control

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ABSTRACT

Customer credit in the digital age has been forever changed by buy now pay later (BNPL), which lets consumers purchase something now and pay for it in instalments over time. The current study aims to explore the role of cognitive (financial literacy and digital literacy) and psychological factors (perceived ownership of borrowed money, and perceived pain of payment) in influencing BNPL usage among the Gen Z consumers in Pakistan. The data were gathered by conducting a physical survey with 337 Pakistani Gen Z customers who have already availed BNPL, and analyzed with partial least squares structural equation modeling. All of the eight hypotheses are supported. The intention is negatively associated with financial literacy and perceived pain of payment, whereas digital literacy and perceived ownership of borrowed money are positively associated with intention. The intention to use is a strong predictor of actual use. Financial self-control reduces positive influence on intention, increases the deterrent effect of payment pain and reduces the conversion of intention to usage. The study builds on the theory of planned behavior by incorporating cognitive capability, payment psychology and self-regulation in the context of a credit market in an emerging economy. It also provides practical recommendations to regulators, educators, providers and retailers interested in responsible BNPL growth with youth.

Keywords: *Financial Literacy, Digital Literacy, Perceived Pain of Payment, Perceived Ownership of Borrowed Money, BNPL Usage.*

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1. Introduction

Buy now pay later (BNPL) is short-term credit that is initiated and embedded in digital transactions and paid for over several instalments in the future. It may seem like a payment, not a loan, given that it is found within the checkout. Research in recent years has demonstrated that BNPL helps to boost liquidity, purchase conversion, frequency, and basket value (Cook et al., 2023; Ji et al., 2023; Kumar et al., 2024; Maesen & Ang, 2025). It can also decrease the sense of financial limitations and the salience of payment (Ashby et al., 2025; deHaan et al., 2024). But with repeated usage, the likelihood of debt stacking increases, so does the impulse buying, materialism and repayment stress (Guttman-Kenney et al., 2023; Kumar & Nayak, 2024; Powell et al., 2023; Raj et al., 2024b). BNPL is thus a financial-access innovation, and also a behavioral consumer-protection issue.

The context and concept research gap exists. The findings are predominantly from developed countries or key Asian economies and focus on utility, trust, privacy, social influence, impulsiveness, and sales results (Abed & Alkadi, 2024; Bachwani et al., 2024; Behera & Dadra, 2024; Raj et al., 2024a; Relja et al., 2024). Although Pakistani Generation Z is highly active with their smartphones for payments and e-commerce (Khan et al., 2024), they have not yet been thoroughly studied. Furthermore, it is noted that the existing literature has not united financial literacy, digital literacy, perceived ownership of borrowed money, perceived pain of payment, intention and financial self-control in one empirical model. The authors believe that all the suggested direct and moderated paths are new in this setting, except for the intention to usage relationship already established.

The research is required because Gen Z is a generation that has grown up with digital familiarity and is also facing financial pressures due to their early career years, lack of savings, and high exposure to social-commerce promotions. While BNPL can help ease cash-flow mismatches in the short term, its seamless integration can still create a perception of debt and reduce the notion of paying, which is typically a powerful barrier to debt (Blue et al., 2023; Broekhoff & van der Crujisen, 2024; Schomburgk et al., 2024). It is

important to note that while BNPL may be a disciplined form of managing liquidity, it can also be a form of ‘psychological overuse’ – where evidence suggests it is not actually used to decrease purchasing, but rather, it is used to maintain or increase spending (Ashby et al., 2025; Kumar et al., 2024). It can be useful in Pakistan for education, product design, and proportionate regulation in a country where formal credit access and financial capability varies.

The explanation is that the rationale behind technology-adoption can't fully account for BNPL. Financial literacy can reveal overall obligations, limitations on affordability, and repayment repercussions (Lusardi & Mitchell, 2023); digital literacy can boost confidence in digital onboarding, authentication, security, and app-based management of repayment (Yadav & Banerji, 2024; Demir et al., 2024). Payment psychology is another interesting aspect: deferred payment and cashless payment diminish the immediate experience of giving up and the coupling of giving up with consumption (Broekhoff & van der Crujisen, 2024; Ma et al., 2024). The consumer can also manage an approved limit as capacity and money that is theirs own, rather than borrowed. The study of these mechanisms together gives a more complete explanation of intention and usage.

The study is focused on the BNPL users of Gen Z consumers from Pakistan. The unit of analysis is the individual user, and the outcome is actual self-reported use, not the performance of providers or profitability of retailers. A structured questionnaire was used to collect the data, and 398 valid questionnaires were analyzed by partial least squares structural equation modeling. The four antecedents-predict intention, which predicts usage: financial literacy, digital literacy, perceived ownership of borrowed money, and perceived pain of payment. The ownership–intention and pain–intention paths and the intention–usage path was moderated by financial self-control. This user-focused scope addresses calls for evidence on responsible behavior, financial stress, and the heterogeneous functioning of the self-regulatory system (Healy et al., 2025; Powell et al., 2023).

The variables are aspects of consumer choice decision making. Financial literacy is about knowledge of credit, cost, risk, budgeting, and

repayment; digital literacy is about the safe and competent use of digital financial interfaces (Lusardi & Mitchell, 2023; Yadav & Banerji, 2024). Perceived ownership of borrowed money is the sensation of having one's own spendable money when buying with BNPL, and perceived pain of payment is the expected feeling of a monetary sacrifice when paying (Khan & Belk, 2024; Ma et al., 2024). The three components are intention (motivational readiness), usage (acted behavior), and financial self-control (resisting immediate consumption and protecting longer-term goals).

The main theoretical basis is the theory of planned behaviour (TPB). According to TPB, one's beliefs and social expectations, along with perceived control, influence one's intention, which is the best predictor of behaviour (Ajzen, 1991; Fishbein & Ajzen, 2010). The TPB theory has been employed in BNPL research to shed light on the role of trust, privacy, attitude, norms, and control on intention (Raj et al., 2024a). According to this model, the cognitive variables, namely literacy, signify cognitive capacity, while the behavioral beliefs and affective evaluations, namely ownership and payment pain, signify the behavioral belief and attitudes, respectively, while intention signifies the behavioral actions that follow the behavioral beliefs and attitudes. In addition, mental accounting, payment decoupling, and psychological ownership provide explanations of the reasons why deferred credit could be classified as current resources and why delayed payment would decrease the perceived sacrifice (Khan & Belk, 2024; Prelec & Loewenstein, 1998; Soman, 2001).

The study is theoretical, empirical and practical in nature. It separates the concept of financial prudence from that of digital competency, adds the notion of borrowed capital ownership and presents self-control as a boundary condition instead of as a direct characteristic. It adds to prior research in more typical settings (Abed & Alkadi, 2024; Aisjah, 2024; Aji et al., 2024) with evidence from Pakistan's young generation (Gen Z) who actively use digital technologies. The findings can enable regulators to define BNPL unambiguously as credit, to integrate financial and digital literacy into education, to include affordability measures in the designs, and to prevent designs that take advantage of low pain of the payment process.

This type of evidence provides a balance between financial inclusion and commercial innovation, as well as preventing overextension (Berg et al., 2025; Chen et al., 2024; Cheng & Huo, 2025).

2. Literature Review

2.1. Theoretical Understanding

The theory of planned behaviour (TPB) can be used to understand how ideas move to the level of intention to act and subsequently into action. TPB suggests that attitudes toward a behavior, perceived social expectations and perceived behavioral control combine to affect behavioral intention, and that behavioral intention is the most direct motivational predictor of performance (Ajzen, 1991; Fishbein & Ajzen, 2010). The theory is applicable to BNPL as deferred credit is a deliberate consumer choice that is part of convenience assessments, risk, affordability and control. The previous study on BNPL found that the TPB variables, trust and privacy concerns can account for intention to use the BNPL service (Raj et al., 2024a). The proposed model suggests that the increased financial education and literacy leads to better assessment of debt and repayment, while the enhanced digital education and literacy enhance perceived ability in how to access and navigate BNPL systems. Perceived ownership of borrowed money fosters a positive belief through the sense that money is available to them, while perceived pain of payment fosters an unfavorable affective evaluation. Thus, these factors influence intention which, in turn, predicts usage. Financial self-control has been included as a boundary condition because, for those who are psychologically stronger to self-control, they might also be psychologically less inclined to accept psychologically appealing credit options and their ability to translate intentions into action is not guaranteed. In addition, TPB, mental accounting and payment-decoupling logic can help explain why delayed instalments diminish the salience of money, and borrowed money can be mentally categorized as present spending power (Prelec & Loewenstein, 1998; Soman, 2001).

2.2. Buy Now, Pay Later Usage

BNPL usage means the consumer actually uses deferred-payment service to purchase goods or services and pays the amount later using a series of scheduled payments. In contrast to a traditional

credit card payment, BNPL payments are typically built into a merchant checkout or mobile application, and presented as an easy alternative to credit card payments. This framing could boost online conversion rates, basket size, buy incidence, and liquidity (Ji et al., 2023; Kumar et al., 2024; Maesen & Ang, 2025). Consumers, however, may also be vulnerable to repayment stacking, decreased debt salience, and financial stress (Guttman-Kenney et al., 2023; Powell et al., 2023). Intention to use BNPL is the conscious choice or intention to choose the facility within the next purchase. It differs from usage in that desirable intentions can be disrupted by affordability concerns, self-control, store availability or evolving needs. TPB defines behavioral intention as the closest predictor of an action, and the studies on BNPL suggest that positive attitude, perceived benefits, trust and perceived control are all positively associated with intention to use the products (Abed & Alkadi, 2024; Aisjah, 2024; Raj et al., 2024a). Thus, in the current study, intention is considered as the motivational mechanism of how cognitive and psychological factors shape enacted BNPL use.

2.3. Financial Literacy

Financial literacy is the knowledge and decision-making skills needed to understand financial concepts, to assess alternatives, to manage a budget and to be aware of the risks and costs associated with borrowing. It is more than merely factual knowledge; it is about making informed judgments regarding affordability, repayment schedule, total obligations, and the opportunity cost of consumption (Lusardi & Mitchell, 2023). Whereas, financially knowledgeable consumers are more likely to understand that an interest free installment is still debt, that multiple small installments can add up to a significant debt, and that a missed payment can create future credit problems or fees. Evidence of financial capability is related to positive debt management and financial situation, whereas financial incapability is related to negative financial behaviour and financial stress (Powell et al., 2023). However, recent research reveals that consumer attitudes and continuous-use intentions are also influenced by BNPL knowledge and financial behavior (Kumar et al., 2026). The effect could go either way—literacy could make it easier for consumers to make good use of credit, but it could also

diminish the desire to use credit if consumers recognize risks of overextension or behavioral design. Financial literacy should make the repayment of instalments more salient to young people, who may not earn as much or have as much experience as older people, and should deter them from seeing the instalment as the harmless effect of a discount. Based on this, this study hypothesizes that there is a negative correlation between financial literacy and intention to use BNPL.

2.4. Digital Literacy

Digital literacy is a competency that includes the ability to access, understand, evaluate and use digital technologies and information safely and responsibly. In the financial environment, it involves using apps, navigating online terms, handling permissions and passwords, understanding dashboards, detecting fraud, and making secure digital transactions with ease (Yadav & Banerji, 2024). BNPL is an app-based credit product, and therefore depends on some extent on whether the consumers can fill out the identity verification, grasp interface prompts, choose instalment choices, observe the reimbursement due dates and make digital repayments. The findings from the study of embedded and mobile payments suggest that technology competence, perceived ease, and perceived control lessen adoption friction and boost behavioral intention (Demir et al., 2024; Khan et al., 2024). For Gen Z, knowing how to operate a smartphone might make BNPL seem like it's within their reach, but digital literacy isn't the same as overall screen literacy. The security and privacy settings can be understood by a digitally-literate user and the handling of repayment notifications improved. Thus, digital literacy can even help to boost confidence and perceived behavioral control when financial literacy results in greater caution when borrowing money. This distinction is really at the core of the model; one is for helping the consumer understand the financial implications, and the other is for helping the consumer to use the technology. Based on this, the study assumes digital literacy to be positively linked with intention to use BNPL.

2.5. Perceived Ownership of Borrowed Money

The subjective feeling that money borrowed from outside is one's own and is intended for personal

spending is perceived ownership of borrowed money. Psychological ownership is the feeling that a target belongs to them, although they don't have physical ownership, and may manifest in terms of control, familiarity, and incorporation into the self (Pierce et al., 2001). This effect can be achieved by digital credit, as it is locked in the personal account, can be used again and again by the user, and is usually shown as the account's available capacity. Previous studies on cash and psychological ownership demonstrated that ownership attitudes impact valuation and expenditure, and Digital abstraction has been shown to reduce the physical experience of relinquishing one's own assets (Khan & Belk, 2024). This can be exacerbated by BNPL as a user receives the product upfront with the liability deferred. There is a recent unconfirmed association between BNPL attitudes and adoption with credit-limit misconceptions and lower payment salience (Kumar & Nayak, 2025; Relja et al., 2024). This study focuses on perceived ownership meaning an ownership illusion over borrowed purchasing power. If the establishment appears like personal cash, consumers might concentrate on what they can obtain and discount the loan repayment. In the case of BNPL, an increase in perceived ownership of borrowed money should lead to higher intention to use BNPL.

2.6. Perceived Pain of Payment

Perceived pain of payment is the expected negative emotion, discomfort, or loss when making a payment. The construct is used to explain the reason for the impact of payment timing and payment form on consumption beyond objective price. Immediate and salient payments are more painful because they are tied to financial sacrifice, while delayed, divided, or cashless payments are less painful because they are less coupled (Prelec & Loewenstein, 1998; Soman, 2001). Recent evidence also demonstrates that swift digital payments have a negative impact on well-being, and cashless methods have a positive impact on spending (Broekhoff & van der Cruijssen, 2024; Schomburgk et al., 2024). The use of mobile payment can also shift focus from the loss of money towards the enjoyment of consumption (Ma et al., 2024). This form of payment is particularly effective as a decoupling tool as it postpones the cost to subsequent

payments and biases the current choice against paying the full amount. However, the pain a consumer expects from repayments in the future varies. Some people are still sensitive about losing their money, they may mentally add up the payments, envision future pain and neglect the service. People with low payment pain will be concerned with short-term acquisition. The model assumes that the perceived pain of payment is a protective psychological indicator and posits it is negatively associated with intention to use BNPL.

2.7. Financial Self-Control

Financial self-control is the ability to control spending urges, delay gratification, stick to budgets, and restrain from immediate consumption to benefit long-term financial objectives. It's especially applicable to BNPL since it not just expands access to purchases but also delays the strongest expense. General research on financial-behaviour indicates that, self-control is related to financial-behaviour and financial well-being (Strömbäck et al., 2017). Consumers employ proactive and reactive control mechanisms as well, including budgeting, separating the accounts, setting spending limits, and avoiding tempting situations (Davydenko et al., 2021). In BNPL environments, self-control becomes a factor between convenience and discipline in cash-flow and repeated debt-financed consumption. Recent studies have found that BNPL usage is related to impulsiveness, risky borrowing, and diminished payment salience, while responsible financial habits are linked to greater BNPL outcomes (Kumar & Nayak, 2024; Powell et al., 2023). In the present study, self-control is conceptualized as a moderator and not just another direct predictor. The feeling of borrowing money as if it were one's own should be less persuasive and the feeling of the payment pain being personally experienced should be more persuasive; and the use of money should not be automatic when the intention is favorable. It thus serves as a control mechanism both during intention formation and during intention enactment.

2.8. Hypothesis Development

2.8.1. Cognitive Factors and Intention to Use Buy Now, Pay Later

Increasing financial literacy may shift the perception of BNPL from credit to payment

models. Higher financial literacy can change consumer perceptions of BNPL as a credit purchase. A financially competent user can more easily add up the instalments on purchases, see the difference between a zero interest and a zero cost, judge his repayment capacity and understand that a low periodic loan repayment could indicate a high total loan commitment. Financial knowledge is one type of human capital that enhances financial decision quality, according to Lusardi and Mitchell (2023). Responsible financial behaviours are linked to financial well-being, and the issues of risky indebtedness and impulse buying are key concerns in BNPL research (Kumar & Nayak, 2024; Powell et al., 2023). The attitudes and continued use intention (CUI) is also affected by knowledge of BNPL and financial behavior (Kumar et al., 2026). Whilst strategic credit use is a possibility with literacy, the present model is about overall intention among young users. Increased literacy should bring the future claims of current consumption into view and make borrowing for non-essential consumption less desirable. A financially literate consumer can also consider an alternative to BNPL, such as using a debit card, credit card, personal borrowing, and delaying purchases. The comparison makes the opportunity costs visible and also decreases the vulnerability to instalment framing. If consumers know that the savings from their little steps today are their dollars tomorrow, then the convenience becomes less significant. There is a recent trend in BNPL scholarship that highlights the importance of not equating access with responsible affordability, and further research on the influence of knowledge on continued use (Chen et al., 2024; Kumar et al., 2026).

H1: Financial literacy is negatively related to intention to use buy now pay later.

Digital literacy, on the other hand, reduces barriers of operation around BNPL. Consumers are required to use a digital interface, evaluate online information, grant access to information, comprehend repayment terms and conditions, and control electronic notification. The digital financial literacy thus has a positive impact on the perceived competence and control (Yadav & Banerji, 2024). Research on mobile and embedded payments indicates that ease, familiarity, and technological readiness boost intentions to adopt payments (Demir et al., 2024;

Khan et al., 2024). The adoption studies of BNPL also include factors such as technological convenience and perceived behavioral control (Abed & Alkadi, 2024; Bachwani et al., 2024; Raj et al., 2024a). While Gen Z is generally aware of smartphone devices, those who are more digitally literate can make informed assessments of service providers, onboarding and even instalment management. This competence should help to decrease anxiety and make the use of the product seem more attainable. Digital literacy also allows consumers to check the authenticity of a merchant, privacy settings, suspicious links, and repayment alerts. These skills reduce uncertainty and improve perceived behavioral control, one of the TPB components. They can also reinforce the trust that the user has in the ability of BNPL to be controlled and managed without any mistakes. So, while financial literacy can discourage avoidable borrowing, digital confidence can make desired borrowing more attainable and easier.

H2: Digital literacy is positively related to intention to use buy now pay later.

2.8.2. Psychological Factors and Intention to Use Buy Now, Pay Later

The feeling of being the borrower and thus the owner of the money can make it feel like it's more a personal resource than an external claim. Psychological ownership theory suggests that no formal ownership is necessary for creating a sense of "mine" because of control and repeated interaction (Pierce et al., 2001). If they have an approved limit, BNPL interfaces typically include that limit in a personalized account, give the consumer options to allocate the limit and highlight items the consumer can buy now. Mental appropriation is possible with these design elements. This form of money also impacts psychological ownership (Khan and Belk, 2024), and research on BNPL revealed that financial constraints reduction, credit-limit misconception, and positive payment framing are BNPL adoption mechanisms (Ashby et al., 2025; Maesen & Ang, 2025; Relja et al., 2024). If borrowers perceive the loaned funds as their own, then they might value the lenders residual claim less and prioritize immediate consumption. This logic is supported by the concept of mental accounting whereby consumers can allocate the approved amount in an account that is easy to access for spending, and

then allocate repayment in an account that is psychologically distant in the future. The appropriation is furthered by personal control over selection and timing. This means the consumer may have a better intention to purchase now than to pay the bill later, even if there has been no additional income generated.

H3: Perceived ownership of borrowed money is positively related to intention to use buy now pay later.

The opposite should happen if there is perceived pain of payment. The affective response to financial sacrifice is called payment pain, and it is reduced by delays, fragmentation and by making payment easy to do (Prelec & Loewenstein, 1998; Soman, 2001). The latest findings suggest that accelerated cashless payments have negative consequences on payments outcomes and lead to more spending, while mobile payments can decrease the focus on money flowing out of the system (Broekhoff & van der Cruysen, 2024; Ma et al., 2024; Schomburgk et al., 2024). BNPL has the effect of breaking up the purchase from the payment, but if a consumer expects to feel uncomfortable with the next payment, they can mentally re-connect the purchase with payment. These users are at higher risk of envisioning a reduction in budget, regret or pressure to pay back and develop a negative opinion of the service. With the introduction of payment pain, BNPL should be less appealing even though it's convenient. Planned pain can also trigger loss aversion and prospective budgeting. Consumers who anticipate multiple deductions in the future might feel this as a lack of flexibility to pay for necessities and emergencies. This reaction reestablishes what BNPL design is trying to break, the connection. In this sense, therefore, payment pain can't be just a bad feeling, it can have a diagnostic value of what it is possible to afford and can reduce the appeal of deferred payment.

H4: The perceived pain of payment has a negative relationship with intention to use buy now, pay later.

2.8.3. Intentions of using Buy Now, Pay Later and Buy Now, Pay Later usage.

Behavioral intention is a person's preparedness and planned action to engage in a behavior. In TPB, intention combines the influence of beliefs, attitudes, social influence and perceived control

and is generally the most direct determinant of behavior (Ajzen, 1991; Fishbein & Ajzen, 2010). This is a good match for BNPL, as the use of BNPL involves a string of conscious decision-making steps: choosing BNPL at checkout, agreeing to the repayment plan, completing authentication process, and authorizing future instalments. The higher the intention, the more likely that a consumer will be aware of the available BNPL options, keep their account open, and will use deferred payment if they are presented with an opportunity to buy. Intention also indicates commitment level: consumers with a clear intention are more likely to maintain their account, remember that the limits are available, and choose BNPL when a relevant purchase is displayed. Weak intentions, on the other hand, can be only a preference and never translate to checkout and repayment approval.

H5: Intention to use buy now, pay later is positively related to buy now, pay later usage.

2.8.4. Financial Self-Control as a Moderator

Financial self-control should be the driver of the strength of BNPL beliefs and intentions to act. First, when credit money is perceived as one's own, intention can be enhanced because credit money is perceived as the money available to oneself. Those with high self-control tend to have a clearer idea that the sum of money is a future liability, to refer to a budget, and to avoid the ownership illusion. The positive ownership–intention relationship should therefore be reduced by self-control. Second, it is a signal that signals the cost of repayments. When consumers don't suppress that discomfort, it should make them more willing to use it as decision information, which should make the negative relationship between payment pain and intention stronger; thus, it should strengthen the negative relationship between payment pain and intention. Third, a good intention can be a non-usage. Self-controlled consumers can choose to put off purchases, set spending criteria and cancel an intended BNPL commitment if it is inconsistent with future intentions (Davydenko et al., 2021; Strömbäck et al., 2017). This regulatory function aligns with the BNPL research findings that impulsiveness and risky debt correlate with BNPL adoption and good financial practices correlate with responsible adoption of BNPL (Kumar & Nayak, 2024;

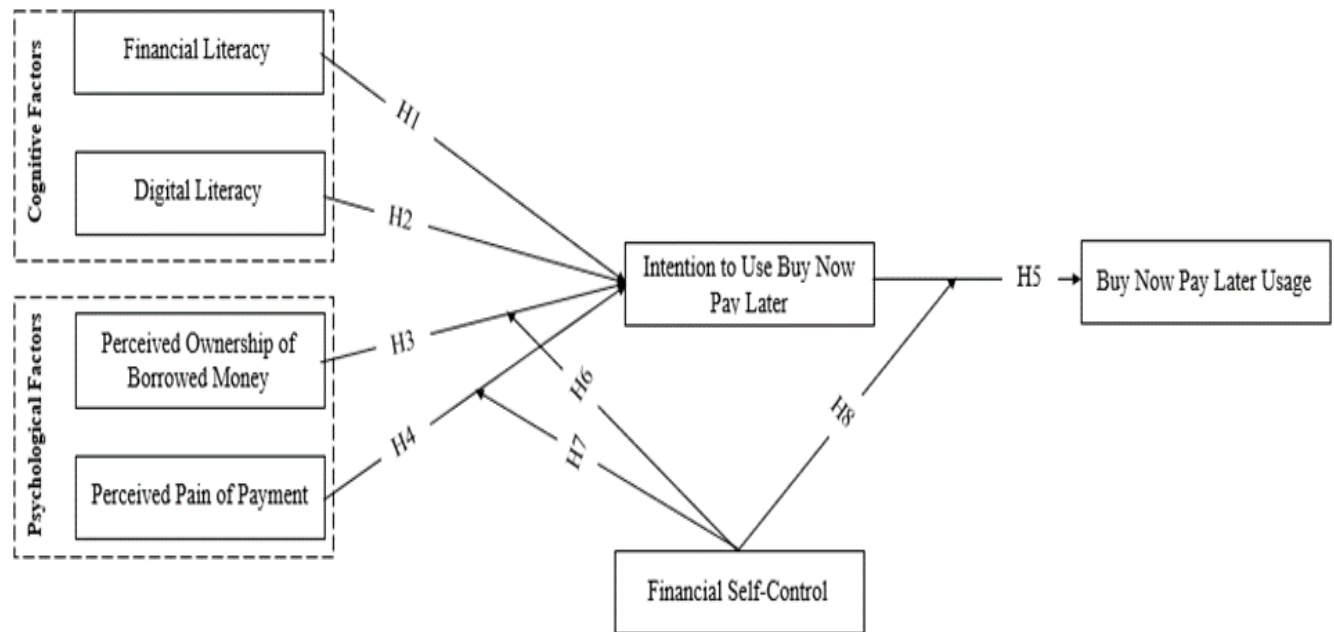
Powell et al., 2023). Thus the following moderation hypotheses can be proposed:

H6: Financial self-control moderate the relationship between perceived ownership of borrowed money and intention to use buy now pay later.

H7: Financial self-control moderate the relationship between perceived pain of payment and intention to use buy now pay later.

H8: Financial self-control moderate the relationship between intention to use buy now pay later and buy now pay later usage.

Figure 1: Theoretical Framework



3. Research Methodology

The aim of this study is to understand that how cognitive factors (i.e., financial literacy and digital literacy) and psychological factors (i.e., perceived ownership of borrowed money and perceived pain of payment) influence intention to use buy now pay later and actual buy now pay later, while investigating the moderating role of financial self-control in these relationships for Gen-Z. For this purpose, data was collected from Generation-Z. A face to face and paper-based survey approach was adopted to collect the data during the period of November, 2025 to February, 2026. The users were approached in universities, colleges, and cafes at shopping malls from Lahore, Gujranwala, Gujrat, Sialkot, and Narowal Districts of Punjab, Pakistan. A convenience sampling technique was adopted due to accessibility considerations and the dispersed nature of the target population. Although this non-probability method may introduce selection bias and limit the

generalizability of findings (Etikan et al., 2016; Taherdoost, 2016), it was deemed suitable given the practical constraints of reaching Generation Z users who are active on mobile shopping. Moreover, convenience sampling has been widely used in online shopping research where obtaining a complete sampling frame is often impractical.

Before data collection, verbal consent was obtained from all participants. Considering the validity of the sample, only those respondents who indicated familiarity with BNPL and used it were asked to complete the questionnaire. A total of 400 questionnaires were distributed, out of which 337 complete questionnaires were included in the study. Most of the respondents were females i.e., 206 (61.1%). While, mostly respondents are from the age of 22-25 years as 151 (44.8%) and 126 (37.4%) respondents have graduate level education. Respondents' characteristics results are presented in Table 1.

Table 1: *Respondents' Characteristics (N= 337)*

Demographic Characteristics	Code	Frequency	Percentage of Total
Gender	Male	131	38.9
	Female	206	61.1
Age	18-21	83	24.6
	22-25	151	44.8
	26-29	103	30.6
Education	Matric	31	9.2
	Intermediate	77	22.8
	Graduate	126	37.4
	Post Graduate	103	30.6

3.1. Measures

The questionnaire was used to collect the data. A cover letter is provided that contained all relevant information and scope of the study. Respondents were asked to fill the questionnaire anonymously. The 5-point likert scale is used for measuring the constructs with 1 reflect strongly disagree and 5 reflect strongly agree. Well established instruments are adopted for all constructs. Financial literacy is measured with 6 items adopted from Garman et al. (1999). Digital literacy is measured with 5 items adopted from Gunathilaka et al. (2022). Perceived ownership of borrowed money is measured through 5 items adopted from Pierce et al. (2001). Perceived pain of payment is measured with 5 items scale adopted from Rick et al. (2008). Financial self-control is measured with 9 items scale adopted from Bai (2023). Intention to use buy now pay later is measured with 3 items scale adopted from Amin et al. (2011). BNPL usage is measured with 1 item adopted from Schomburgk and Hoffmann (2023). A pilot study was conducted to ensure the reliability of all adaptive scales with 70 respondents and pretest score showed good reliability results (i.e., Cronbach's $\alpha > 0.70$) of all scales.

4. Data Analysis

The following factors led to the selection of partial least squares (PLS) for data analysis in this study. First off, PLS-SEM works well for analyzing intricate models. Second, it loosens the requirement that sample data have a normal

distribution. Finally, because PLS-SEM's estimation results are accurate under construct specifications, many statisticians recommend it when a research model includes higher-order constructs or formative constructs (Attiq et al., 2025; Becker et al., 2012; Hair et al., 2019). Seven first-order constructs are part of the present study's complex research approach. In light of the aforementioned considerations, the measurement and structural models were evaluated using Smart-PLS 4.0. Fitness indices were used to assess the measuring model's discriminant validity, convergent validity, and reliability. We investigated the pathways and relevance of each hypothesis for the structural model.

4.1. Common Method Bias

In cross-sectional researches, it is critical to examine common method bias (CMB). The findings of Harman-Single Factor test demonstrated that maximum explained variance was 36.4% which is less than threshold of 50% (Hair et al., 2019). These findings revealed that there is no significant issue of CMB.

4.2. Measurement Model

Table 2 shows the results of reliability, validity, and fitness indicators. The outer loadings and indicator reliability is measured for each observed variable. Result shows that all observed indicators have outer loadings above 0.708 (Hair et al., 2019). Cronbach's α and composite reliability both measures how well observed variables measures latent constructs (Hair et al., 2019). All values are above 0.708 that confirm the reliability.

For convergent validity, AVE is checked and all constructs met the threshold i.e., above 0.50, which show no issue of validity. Model evaluation considered both global fit and explanatory power. SRMR was used to assess overall model fit, with a value of 0.053 meeting the criterion of <0.08 (Hair et al., 2019), while NFI value is 0.814 that

also meeting the criterion of > 0.80 for good NFI (Hair et al., 2019). R² value is 0.32 and 0.31 for intention to use buy now pay later and buy now pay later usage respectively that indicate moderate variance explained by the model. These findings confirm that the model demonstrates adequate fit and strong explanatory capability.

Table 2: Reliability, Validity, and Fit Indices

Latent Variables	Item Code	Outer Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted	R square	SRMR	NFI
<i>Threshold</i>		<i>> 0.708</i>	<i>> 0.708</i>	<i>> 0.708</i>	<i>> 0.50</i>		<i>< 0.08</i>	<i>> 0.80</i>
							0.053	0.814
Financial Literacy	FLT1	0.684	0.812	0.816	0.515			
	FLT2	0.716						
	FLT3	0.677						
	FLT4	0.747						
	FLT5	0.741						
	FLT6	0.736						
Digital Literacy	DLT1	0.770	0.783	0.795	0.533			
	DLT2	0.732						
	DLT3	0.745						
	DLT4	0.759						
	DLT5	0.640						
Perceived Ownership of Borrowed Money	OBM1	0.695	0.764	0.776	0.513			
	OBM2	0.743						
	OBM3	0.663						
	OBM4	0.701						
	OBM5	0.773						
Perceived pain of payment	PPY1	0.738	0.816	0.853	0.571			
	PPY2	0.733						
	PPY3	0.827						
	PPY4	0.735						
	PPY5	0.739						
Intention to Use Buy Now Pay Later	IBL1	0.863	0.792	0.795	0.706	0.326		
	IBL2	0.837						
	IBL3	0.821						
Financial Self-Control	FNL1	0.724	0.880	0.883	0.510			
	FNL2	0.765						
	FNL3	0.709						

	FNL4	0.691	
	FNL5	0.731	
	FNL6	0.713	
	FNL7	0.642	
	FNL8	0.723	
	FNL9	0.722	
Buy Now Pay Later Usage	BNPL1	1.000	0.310

4.3. Discriminant Validity

Establishing discriminant validity is essential since it measure that the latent variables are

unrelated to one another. As per the HTMT method, all values met the threshold i.e., < 0.85 ; thus, there is no issue of discriminant validity (Hair et al., 2019).

Table 3: Discriminant Validity Analysis

Constructs	FLT	DLT	OBM	PPY	IBL	FNL	BNPL
Financial Literacy (FLT)							
Digital Literacy (DLT)	0.127						
Perceived Ownership of Borrowed Money (OBM)	0.082	0.114					
Perceived Pain of Payment (PPY)	0.103	0.084	0.115				
Intention to Use Buy Now Pay Later (IBL)	0.330	0.406	0.386	0.291			
Financial Self-Control (FNL)	0.081	0.122	0.097	0.145	0.135		
Buy Now Pay Later Usage (BNPL)	0.116	0.167	0.254	0.137	0.468	0.384	

4.4. Structural Model

The variance inflation factor (VIF) test is applied to gauge multicollinearity. Results revealed that there is no issue of multicollinearity as VIF values are below the threshold i.e., < 3.3 (Hair et al., 2019). The t and p values are used to draw conclusions about the decision whether hypotheses are accepted or rejected (see Table 4). The t value should be more than ± 1.96 for acceptance of hypothesis (Haenlein & Kaplan, 2004). H1 proposed that financial literacy negatively influence intention to use buy now pay later, which is accepted as $\beta = -0.256$, t value = 5.998, with $p < 0.000$ and with weak effect size i.e., 0.096, result demonstrating that high financial literacy will minimize the intention to use buy now pay later services among Gen-Z. H2 proposed that digital literacy positively influence intention to use buy now pay later, which is accepted as $\beta = 0.255$, t value = 5.975, with $p <$

0.000 and with weak effect size i.e., 0.092, result demonstrating that high digital literacy will enhance the intention to use buy now pay later services among Gen-Z. H3 depicted that perceived ownership of borrowed money positively influence intention to use buy now pay later, which is accepted as $\beta = 0.286$, t value = 6.656, $p < 0.000$, and $f^2 = 0.119$ which is weak, result is showing that high perceived ownership of borrowed money amplify the intention to use buy now pay later services among Gen-Z. H4 proposed that perceived pain of payment negatively influence intention to use buy now pay later, which is accepted as $\beta = -0.223$, t value = 5.414, with $p < 0.000$ and with weak effect size i.e., 0.071, result demonstrating that high perceived pain of payment will minimize the intention to use buy now pay later services among Gen-Z. H5 proposed that intention to use buy now pay later positively influence buy now pay later usage, which is accepted as $\beta = 0.405$, t value =

9.590, with $p < 0.000$, and $f^2 = 0.232$ that indicates moderate effect size, result depicted that high intention to use buy now pay later increase the buy

now pay later usage. Figure 2 also depicts the results of structural hypotheses.

Table 4: Hypothesis Testing

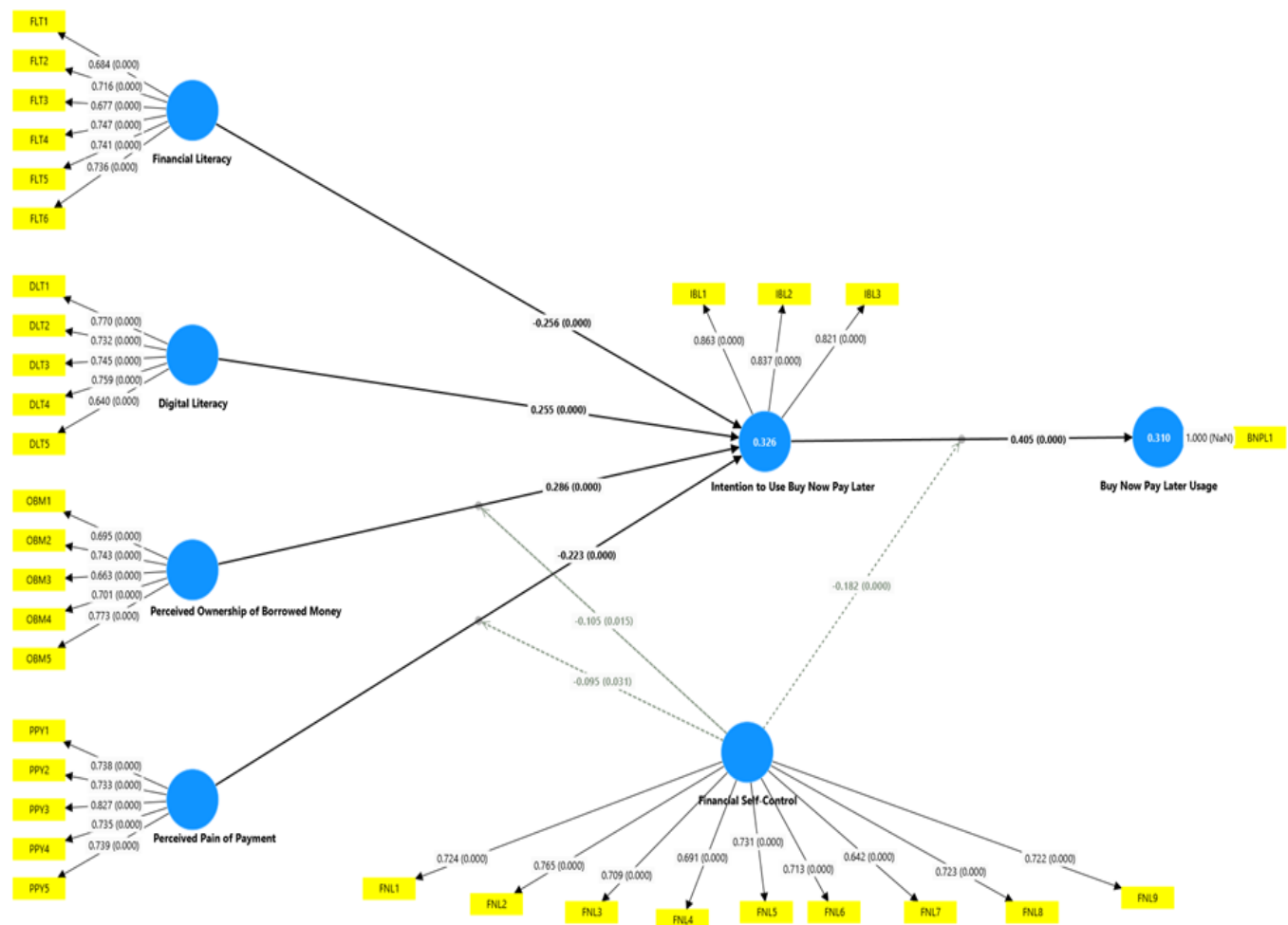
No.	Hypotheses	β	Mean	Standard Deviation (STDEV)	T Value	P Value	VIF	Effect size (f^2)	Confidence interval		Decision
									2.5%	97.5%	
H1	FLT $\rightarrow$ IBL	-0.256	-0.264	0.043	5.998	0.000	1.015	0.096	-0.346	-0.177	Accept
H2	DLT $\rightarrow$ IBL	0.255	0.263	0.043	5.975	0.000	1.050	0.092	0.174	0.349	Accept
H3	OBM $\rightarrow$ IBL	0.286	0.287	0.043	6.656	0.000	1.022	0.119	0.205	0.366	Accept
H4	PPY $\rightarrow$ IBL	-0.223	-0.229	0.041	5.414	0.000	1.032	0.071	-0.311	-0.154	Accept
H5	IBL $\rightarrow$ BNPL	0.405	0.405	0.042	9.590	0.000	1.024	0.232	0.326	0.484	Accept
Moderation Analysis											
H6	OBM*FNL $\rightarrow$ IBL	-0.105	-0.102	0.043	2.436	0.015	1.054	0.016	-0.188	-0.018	Accept
H7	PPY*FNL $\rightarrow$ IBL	-0.095	-0.093	0.044	2.168	0.031	1.063	0.013	-0.183	-0.013	Accept
H8	IBL*FNL $\rightarrow$ BNPL	-0.182	-0.184	0.045	4.064	0.000	1.035	0.043	-0.269	-0.093	Accept

Where; FLT- Financial Literacy, DLT- Digital Literacy, OBM- Perceived Ownership of Borrowed Money, PPY- Perceived Pain of Payment, IBL- Intention to Use Buy Now Pay Later, BNPL- Buy Now Pay Later Usage, VIF- Variance Inflation Factor

4.5. Moderation Analysis

After the analysis of direct paths, the moderation analysis is performed whether financial self-control moderate the relationships. H6 proposed that financial self-control moderate relation between perceived ownership of borrowed money and intention to use buy now pay later, which is accepted as $\beta = -0.105$, t value = 2.436, $p < 0.015$, lower confidence limit (LCL) = -0.188, upper confidence limit (UCL) = -0.018 and zero is excluded. This result indicates that financial self-control dampens the relationship between perceived ownership of borrowed money and intention to use buy now pay later. H7 depicted that financial self-control moderate the relationship between perceived pain of payment

and intention to use buy now pay later, which is accepted as $\beta = -0.095$, t value = 2.168, $p < 0.031$, LCL = -0.183, UCL = -0.013 and zero is excluded. This result indicates that financial self-control enhances the relationship between perceived pain of payment and intention to use buy now pay later. H8 depicted that financial self-control moderate the relationship between intention to use buy now pay later and buy now pay later usage, which is accepted as $\beta = -0.182$, t value = 4.064, $p < 0.000$, LCL = -0.269, UCL = -0.093 and zero is excluded. This result indicates that financial self-control dampens the relationship between intention to use buy now pay later and buy now pay later usage

Figure 2: Structural Model

5. Discussion

All eight hypotheses were confirmed, demonstrating that Pakistani Gen Z's usage of BNPL is associated with financial knowledge, digital literacy, payment psychology, intention and self-regulation. There was no problematic collinearity as the confidence intervals did not include zero and the VIF values were low. This pattern is an amalgamation of streams that typically have studied adoption beliefs, trust, materialism, risky indebtedness, and retailer outcomes independently (Abed & Alkadi, 2024; Kumar & Nayak, 2024; Raj et al., 2024a, 2024b; Relja et al., 2024).

Financial literacy reduced intention (H1: $\beta = -0.256$, $p < .001$, $f^2 = .096$). They also seem to have a better understanding of debt stacking, affordability, and aggregation of instalments, rather than seeing an interest-free plan as free money. The result is consistent with the human-capital perspective on financial literacy (Lusardi & Mitchell, 2023) and reinforces links between good financial habits and improved mental health

(Powell et al., 2023). It is also consistent with recent research indicating an association between BNPL knowledge and financial behavior, and how these affect attitudes and continued-use intention (Kumar et al., 2026); and potentially with other credit and financial stress evidenced by intensive use (Guttman-Kenney et al., 2023; Healy et al., 2025).

Digital literacy increased intention (H2: $\beta = .255$, $p < .001$, $f^2 = .092$). The similarity of the size of H1 and H2 shows the presence of opposing cognitive mechanisms: Financial literacy creates caution; Digital literacy creates operational confidence. Users who are competent will be able to move through verification, privacy settings, interfaces and repayment dashboards with fewer roadblocks. This aligns with literature indicating that digital competence, ease of use and perceived control drive embedded and mobile-payment uptake (Demir et al., 2024; Khan et al., 2024; Yadav & Banerji, 2024) and why digital savvy youth show high interest in BNPL services.

Perceived ownership of borrowed money had the

highest beta coefficient (H3: $\beta = .286$, $p < .001$ and $f^2 = .119$) with the highest antecedent of intention. An approved limit that is shown in a personalized account could be the user's available funds instead of the provider's claim that needs to be paid back. The result aligns with Khan & Belk (2024), who found that the perception of financial constraint and spending were reduced with the use of BNPL, and is consistent with the results of Ashby et al. (2025) and Maesen & Ang (2025), who reported higher spending and reduced perceived financial constraint with the use of BNPL. It also is aligned with recent research on credit-limit misconception, payment framing and positive attitudes towards BNPL (Kumar & Nayak, 2025; Relja et al., 2024).

Perceived pain of payment reduced intention (H4: $\beta = -.223$, $p < .001$, $f^2 = .071$). These users seem to re-encode the immediate acquisition with subsequent sacrifice. This finding is consistent with previous studies showing that quick cashless payment techniques cause less pain and induce spending (Broekhoff & van der Cruisen, 2024; Schomburgk et al., 2024); and mobile payments shift focus from the pain of paying to the pleasure of consuming (Ma et al., 2024). However, maintaining repayment salience could potentially limit BNPL intention, even as repayment evidence suggests that installs boosts purchase incidence and value (Kumar et al., 2024; Maesen & Ang, 2025).

Intention strongly predicted usage (H5: $\beta = .405$, $p < .001$, $f^2 = .232$), the largest direct effect. The confirmation of TPB intention-behaviour sequence in this study and the support of BNPL studies that included attitude, trust, social influence and perceived control to intention (Aisjah, 2024; Raj et al., 2024a) are the results of this study. The results of this study include the confirmation of TPB intention-behaviour sequence and BNPL studies that include attitude, trust, social influence and perceived control to intention (Aisjah, 2024; Raj et al., 2024a). It's also aligned with transaction level evidence, which shows that BNPL influences purchase frequency and spending (deHaan et al., 2024; Kumar et al., 2024; Maesen & Ang, 2025). The four antecedents are therefore channeled into actual usage through the motivational channel of intention.

All proposed pathways were moderated by financial self-control. The negative ownership interaction (H6: $\beta = -.105$, $p = .015$) indicates that self-control has a negative influence on the ownership illusion. The negative main effect and the negative pain interaction (H7: $\beta = -.095$, $p = .031$) indicate that self-control makes payment pain more of a deterrent. The negative intention interaction (H8: $\beta = -.182$, $p < .001$) demonstrates that the intention to use does not automatically follow from self-control. These results are consistent with evidence of the importance of self-control for financial management (Strömbäck et al., 2017), financial self-control to decreasing spending (Davydenko et al., 2021), and impulsiveness and indebtedness as the major risk of BNPL (Blue et al., 2023; Kumar & Nayak, 2024; Powell et al., 2023).

6. Implications

Theoretically, this research will extend the theory of planned behavior in three ways. First, it identifies two cognitive capacities, which can have opposing impacts: Financial literacy lowers intention through amplified debt awareness, while digital literacy boosts intention through enhanced perceived capability of using the technology. Theoretically important differences would be masked if “literacy” was viewed as a single positive resource. Second, it proposes perceived ownership of borrowed money as a psychological factor that influences BNPL intention. Second, the study proposes perceived ownership of borrowed money as a psychological antecedent of BNPL intention. The construct is based on the idea that psychological ownership can be a perceived sense of mental accounting and payment decoupling, as described by an approved digital credit limit. Third, the study transcends the intention-behaviour approach by introducing financial self-control as a boundary condition at two points. Self-control undermines the sense of ownership illusion, enhances the fear of negative consequences of payment costs, and diminishes the automatic implementation of positive intentions. The underlying moderation hypotheses show the behavior does not always lead to credit use. The model integrates the aspects of cognition, affect, motivation, and self-regulation in TPB, and it provides a more behaviorally realistic explanation about the credit of fintech. It also brings BNPL evidence to a new space, one where

digital experience and financial fragility intersect, and Gen Z are accustomed to it.

The results have practical applications for regulators, providers, retailers, educators, and consumers. Aim to ensure that BNPL is disclosed as credit, information on all plans should be clearly documented with total outstanding amount, standardization of information should be provided on due dates, consequences of missed payments, and channels to lodge a complaint. If there are stipulated limits, they should not be celebrated as “available money” as it leads to a sense of “theirs.” Alternatives include liability-based labels, pre-purchase affordability cues, integrated repayment schedules, and cooling-off periods. Negative payment pain implies that the frictionless experience can be counterproductive – careful friction such as displaying the exact purchase cost as well as the budget impact in the future can create and keep cost salience. Financial education for Gen Z must include traditional credit education and digital skills. Users must now be able to identify debt risk, and have the skills to secure accounts, shop around for providers, manage notifying and verify repayment records. Avoid manipulative installment framing; do not price BNPL as a discount. Lastly, financial self-control can be upheld with default spending caps, self-exclusion, due-date reminders, budget linked warnings, and optional transaction delays. These practices can retain the proper liquidity advantages whilst restraining debt stacking and spontaneous intention to utilization.

7. Limitations and Research Recommendations

There are some constraints that provide for further investigation. First, the cross-sectional design cannot claim any cause-and-effect relationship. Literacy, ownership perceptions, self-control, repayment experiences, and use should be followed over multiple billing cycles in longitudinal studies. Second, self-reporting of all constructs and usage may result in recall bias and social-desirability bias. Future studies might integrate survey and transactional data, repayment history and provider information. Third, a physical survey was conducted to recruit 398 Pakistani Gen Z users, which does not necessarily mean that the results can be universally applied to those who do not use Gen Z, older generations,

rural population, or consumers in different regulatory systems. External validity would be enhanced by using probability sampling and multi-country comparisons. Fourth, perceived ownership of borrowed money is a new context-specific construct. There is need for future research to improve the scale, validate the scale in terms of discriminant validity with perceived liquidity, credit-limit misconception, materialism and psychological ownership, and test experimental manipulation. Fifth, the study examined intention as the behavioral mechanism, but did not focus on serial mediation by attitude, perceived control or impulse buying. Other models could have financial stress or repayment performance as outcomes, as well as over-indebtedness and financial well-being. Third, researchers should examine the potential for nonlinear effects of self-control and compare moderation by income, gender, employment and frequency of use.

8. Conclusion

This study aims to understand the use of BNPL among the Gen Z consumers in terms of an integrated model that involves cognitive, psychological, behavioral and financial self-control factors. The study results based on the survey items of 398 experienced users and PLS-SEM showed that all proposed hypotheses were supported. Financial literacy and the pain of payment have a negative association with intention to use BNPL; digital literacy and perceived ownership of borrowed money have a positive association with intention to use BNPL. Intention is the strongest direct predictor of actual use, and hence its key motivational role. Financial self-control alters these relationships by dampening the positive ownership effect, increasing the negative effect of the payment pain, and limiting the translation of intention to usage. The results indicate that the BNPL phenomenon can neither be characterized as technology adoption nor as a financial-literacy issue. It represents a conflict between technological agility and prudence on the financial side and between the psychological feeling of having money and regulation on the other. The study provides evidence from an under-investigated context of an emerging market and adds ownership, payment-pain and self-control to TPB. The credit framing should therefore be clear, the repayment salience

should be fostered, consumers' digital competence should be promoted, and tools should be provided to help customers connect purchases with financial goals.

Conflict of Interest

The authors showed no conflict of interest.

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