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Understanding impulse spending behavior in Kazakhstan: the role of digital payment systems

**Thesis submitted for
the degree of Bachelor in
6B04104 Finance**

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Astana 2025

Abstract

This study investigates the effects of Buy Now, Pay Later (BNPL) usage on impulse spending behavior among consumers in Kazakhstan. As BNPL rapidly becomes more common, there is growing concern that it may lead to an excess of unplanned purchases and long-term financial difficulties. The research aimed to answer whether frequent BNPL use leads to more impulse spending; what kind of psychological factors influence the impulsive decision to buy using BNPL; and whether certain demographic groups are more vulnerable to overusing BNPL. A mixed-methods approach was used. Data was collected through a survey of 140 respondents (with 102 BNPL users). Quantitative data was analyzed using logit models, and thematic analysis was used for qualitative data. The findings show that people who use BNPL more often are more likely to make impulsive purchases. Psychological factors such as ease of access, convenience, misperception of interest, present-biased thinking were identified as key drivers for using BNPL. Demographic factors were not statistically significant in predicting overuse. These results suggest the importance of improving financial literacy and regulating digital credit tools to protect consumers. The study adds to the understanding of how digital payment systems, precisely BNPL, affects consumer behavior and offers ideas for policy and education in digital finance.

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Introduction

Kazakhstan is currently experiencing widespread digitalization of payments: the people are now using QR-codes and transfers to pay for their purchases. This process started around ten years ago and has grown rapidly since then. Instead of using cash, which had its own advantages and disadvantages, people began using quick and easy digital payment systems. These payments are convenient, cost-effective, fast, easy-to-track, however, all of these traits contribute to negative ones if not used properly. One of the main issues with digital payments is its facilitation of impulse spending behavior. Impulse spending is any expenditure that was not planned and thought over thoroughly.

One important aspect of digital payment systems that possibly encourages impulse spending is installment plans or Buy Now Pay Later (BNPL) payments. BNPL is a short-term loan that allows users to pay in installments over a certain period of time, typically without any interest incurred by the consumer (Udavant, 2025). In particular, the most popular bank amongst individual consumers – Kaspi.kz has set the trend for BNPL payments with its “Kaspi Juma” promotion. According to Forbes Kazakhstan, the sales during “Kaspi Juma” in July 2023 have increased by 82% in comparison with promotion in the same month previous year (Forbes Kazakhstan, 2024). This shows that the popularity of this payment method is growing rapidly and raises questions about consumers’ ability to manage their money and plan purchases. The high rate of sales growth might indicate either that the number of consumers is growing substantially, or each consumer is making purchases for a larger amount, or both. Either way, the need to analyze whether this kind of payment systems and promotions are related with unplanned purchases emerges. Because impulse spending can lead to dissatisfaction, poor money management, financial stress and debt to be able to repay the installments.

For this reason, this paper aimed to explore the factors that lead people to buy impulsively and, in particular, whether the electronic payment systems like BNPL are connected to such behavior; to find out what psychological factors trigger impulse spending, whether different demographic groups have different spending patterns, which goods and services do people buy impulsively with BNPL the most; and lastly, to

give any suggestions on the policy and provide recommendations on the promotion of financial well-being and responsible spending among Kazakhstani consumers. Thus, the research questions are:

1. Is higher BNPL usage associated with more frequent impulse spending behavior among Kazakhstani consumers? If yes, how?
2. What psychological factors drive impulse spending in a BNPL context?
3. Which demographic groups (age, gender, income level, financial literacy level) are most vulnerable to overusing installment payments?
4. What categories of goods and services are most susceptible to impulse purchases?
5. How can financial struggles related to BNPL be prevented through policy and education on financial literacy?

Based on these research questions, the following research hypotheses are proposed:

H1: More frequent BNPL usage is associated with increased impulse spending behavior.

H2: Psychological factors such as illusion of affordability, convenience, social influences and trends promote higher BNPL usage and impulse spending.

H3: Younger, female population with a lower monthly income and financial literacy level are most vulnerable to overusing BNPL.

Because the topic of this study is relatively new, little research has been conducted on it. There are research articles on the influence of digital payment systems and BNPL on impulse spending, however most of the studies were done in foreign countries, notably in Asia due to the rapid rise of FinTech there, but nothing similar has been conducted in Kazakhstan. So, this study aims to make a significant contribution to Kazakhstan's behavioral economics, and perhaps in some parts to other countries' as well. By filling the gap in existing knowledge, it hopes to provide even more directions and guidance to further explore the topic.

This study focuses on impulse spending behavior of Kazakhstanis aged from 18 to 45+ from different cities who use digital payment and BNPL. It primarily uses a survey-based quantitative approach with some open-ended questions to get qualitative insights. Logit models are applied to assess the mentioned relations. Thematic analysis was chosen to analyze qualitative data. The limitations of this study are possible biases in self-reported answers, an insufficiently randomized sample with demographic biases, and cross-sectional design that could not establish causality.

Literature review

To identify key findings and gaps in existing knowledge regarding the topic, this section reviews literature on Buy Now Pay Later services, digital payment systems and their effect on consumer behavior, and regulation of BNPL.

This study mainly refers to the research design that was used by Aji and Adawiyah (2022). In their work, they employed a mixed-method sequential (QUAL-QUANT) design in two consecutive phases: firstly, qualitative with an online survey with open-ended question and focus group discussion, and then quantitative using an online survey with five-point Likert scale and testing for reliability and validity in SPSS. However, this research is focused on quantitative analysis of the responses from an online survey with answer choices rated on Likert scale and all of the analyses are done in Python. The qualitative part is less significant as only responses from open-ended questions included in the online survey will be analyzed. The results of their study revealed that excessive spending behavior among young adults is associated with easiness, illusion of liquidity, self-control and promotional campaigns. In comparison, this study focuses on impulsive spending rather than excessive spending.

Another study found that mainly women aged 19 to 44 often use BNPL services because they are easy to access and convenient (Kusmalinda, 2025). However, using these services excessively can lead to more debt. Generation Z tends to act on impulse more than Millennials, but increased financial literacy helped them to be less impulsive. Research indicates that women tend to make unplanned purchasing choices influenced by current social trends, whereas men are more motivated by discounts and financing options. In general, the study shows that financial education is important for using "Buy Now, Pay Later" responsibly.

The third research presented findings on how PayLater systems are driving impulsive purchases, increasing their frequency and making it difficult to control shopping behavior (M Gelar Faisal, 2024). This

problem holds its relevance among individuals aged 18-21. According to Faisal, it is because people in this age group are more susceptible to psychological influences, and women showed higher rates of impulsive spending.

Empirical research findings indicate that the adoption of BNPL in payment options increases online spending by 6.42%, which illustrates its high effect on online shopping. (Kumar et al., 2024). Authors also stated that impulsive buying was mainly caused by a few psychological factors. Kumar et al. (2024) found that when an individual uses interest-free installment payments, the feeling of immediate benefit from the purchase made outweighs future discomfort of payments. Furthermore, it was discovered that the way of showing installment prices in smaller numbers instead of showing the whole price makes the purchase look less expensive, leading to higher spending. Consumers tend to focus on the first installment amount rather than the total price (Ashby et al., 2025).

Existing behavioral finance studies mainly focus on the link between impulse buying and different payment methods such as credit cards and mobile payment systems, lacking relevance in today's rapidly evolving financial environment with other options such as BNPL. Li et al. 's (2024) recent study focused on whether the existence of BNPL as a payment method itself encourages the consumers to behave differently. With the rapid improvements in the financial world, technology aims to make transactional activities simple, convenient and efficient. Initially intended to enhance the consumer experience, it has several unforeseen negative effects for consumers such as increased debt levels (Li et al., 2024). In the study, in order to estimate BNPL's role, they evaluated sales data from one Chinese marketplace. They found a direct correlation between the introduction of BNPL as a payment method and the volume of sales, which indirectly showed that consumers choose to spend more if they have a BNPL payment method. To further explore this, authors conducted experiments with two groups — one with BNPL as a payment option and the other without. The results showed that the presence of BNPL increased consumers' willingness to make a purchase by reducing their perceived constraints. As analyzed by the authors, BNPL is perceived as a

psychological cue that “triggers consumers’ subjective perception of accessible financial resources,” and, as a result, positively affects their shopping intentions. (Li et al., 2024).

The rapid adoption of BNPL for daily purchases has raised concerns about financial effects. The regulatory bodies have started to assess the impacts of BNPL on the well-being of consumers. The research has provided several benefits of such methods and also stated that it brings several hidden risks, encouraging the development of protective policies. It was revealed that upgrading financial literacy could mitigate the risk that overuse of BNPL brings. The question of the issues caused by lack of regulations among the fintech products was the basis for Sahil Soni’s research study. According to Soni (2023), BNPL can impact consumers' financial stability. It encourages them to spend more than they should, overestimating their financial capacity. Whenever the price is divided into smaller amounts, it can mislead individuals into thinking that they can afford the deal (Soni, 2023). He also stated that the Consumer Financial Protection Bureau (CFPB) has started to regulate BNPL usage in the same way as credit card providers, in order to mitigate financial risks. Nonetheless, studies argue on the effectiveness of such initiatives in reducing financial problems. This is because BNPL operates within a different consumer mindset and spending framework.

Previous studies examined the impact of BNPL on consumer spending, but only few of them focused on impulse spending rather than excessive or more frequent spending. This study aims to focus specifically on Kazakhstani consumers. The primary goal of this research is to fill out the gaps through thorough analysis of the correlation that might exist between BNPL usage and impulse spending in the context of Kazakhstan.

Methodology

To assess the level of usage of Buy Now, Pay Later (BNPL) services and explore its relationship with impulse spending behavior among Kazakhstani consumers, a mixed-method explanatory research design was used. This strategy allows deeper understanding of consumer behavior by combining strength of statistical analysis with the depth of open-ended questions. Three of five research questions were approached using quantitative techniques, while remaining two were addressed through qualitative evaluation, which is especially relevant in behavioral finance research.

The quantitative elements involved cross-sectional survey data collected at a single point in time. These data were examined using descriptive statistics, ordinal logistic regression, and interaction methods to identify the existence of potential patterns, associations and predictive relationships between BNPL usage and impulse spending, as well as demographic characteristics.

The qualitative elements such as personal experience and motives driving to use BNPL were analyzed manually using thematic analysis, providing contextual insights. This helped to identify the themes that could not be covered in close-ended questions.

The language in which the survey was administered is Russian, most used among participants, which in turn helped to minimize misunderstanding and provided more clarity and response validity. Later, the questionnaire was translated to English for the purpose of analysis and data processing. The foundation of study design was influenced by existing prior research on behavioral economics, however focused particularly on Kazakhstani context, aiming to contribute empirical insights to the evolving area of digital financial behavior.

Data Collection and Participants

The data was collected through an online survey on Google Forms, which was active for approximately two weeks. It was shared via Microsoft Outlook, social media and messaging groups. A total of 140 participants, all residents of Kazakhstan completed the survey. The majority were between the ages of 18 and 35, a demographic considered central to BNPL adoption and digital consumption. Participation was entirely voluntary and anonymous. Although the sample is non-probabilistic, it provides the study with a digitally engaged portion of the population.

The raw data was later exported to Python (in Jupyter Notebook) as a CSV file, to clean, analyze and visualize findings. Responses were retained in Russian to ensure clarity and avoid the loss of meaning during translation. The survey was structured into five sections, aligning each with one or more research questions:

1. **Demographic and Socioeconomic Information:** Covers data on age, gender, income, and current employment status.
2. **BNPL Usage and Financial Behavior:** The following section assessed how frequently participants use BNPL, for which categories of goods and services, and the reasons for using it. Additionally, the section provided insights about the users' experience with and emotions related to BNPL.
3. **Impulse Spending Behavior:** Obtained self-reported answers about the frequency of impulse purchases made by the respondents, which served as key dependent variable in multiple analyses.
4. **Financial Literacy and Knowledge:** Questions about the knowledge of BNPL terms were asked to assess the level of financial literacy for this study.

5. Open-ended questions: Real-life experiences of unforeseen BNPL purchases and motives behind the initiative were described. The respondents were also asked to share ideas about the measures that banks can take in order to promote responsible financial behavior.

Financial literacy was assessed by a researcher-defined approach. Participants answered three questions related to fully understanding BNPL terms, interest charges, and consequences of late repayment. Each answer had its own point awarded, producing a composite Financial Score ranging from 0 to 3. The following method allowed for a context-specific measure of financial literacy, reflecting the practical knowledge essential for making informed decisions about use of BNPL.

Data Analysis

The quantitative analyses were conducted using several Python libraries. An alpha level of 0.05 was used for all statistical tests.

1. Association Between BNPL and Impulse Spending: To answer this question, an ordered logistic regression was conducted. The model was used given the nature of the dependent variable, Impulse Spending frequency, which is ordinal (ranging from “never” to “very often”). This approach appropriately models the ordered categories without assuming that the distances between categories are all equal, providing more accurate estimates compared to linear or multinomial models. An interaction between gender (where 1 = female, 0 = male) and BNPL frequency was added to the ordered logit model to see whether this association varies by gender.

2. Psychological Predictors of Impulse spending: Responses from participants were manually reviewed and categorized using thematic analysis. They were asked to explain why they made

unplanned purchases with BNPL (if they did). Common reasons included ease of access, misperception of interest rate, present-biased thinking, etc.

3. Demographic Predictors of BNPL overuse. Logistic regression tested whether age, gender, income, and financial literacy predicted BNPL overuse, separately and using interactions between the terms. Gender was encoded as binary, income and financial literacy as Likert-scale responses, and age was calculated as a mean age from each age category (18-24, 25-34, etc.) The dependent variable was BNPL overuse, which was defined as a separate term with users who responded “sometimes (every 6 months)”, “often (every month)”, “very often (several times a month)” to the question about frequency of BNPL purchases being categorized as overusers, and the rest as not. No significant effects were found.

4. Categories subject to Impulse BNPL purchases. Responses from multiple-choice and open-ended questions were analyzed, leaving electronics, apparel, and travel frequently mentioned.

5. Preventing Financial Struggles with BNPL. Participants were asked to give recommendations for promoting responsible spending behavior in a BNPL context. Responses supported recommendations for financial literacy education and more strict BNPL regulations.

Results & Discussion

The demographic composition of respondents is as follows: 140 total responses, 48% of them are aged 18-24, ages 25-34 and 45+ compose 21% each, and 9% are 35-44 years old. Women comprise 79% and the rest are men. The majority are students (42%) and full-time workers (32%) while the most frequent monthly income categories were 100,000-300,000 KZT and less than 100,000 KZT. It is worth noting that 27% of respondents never used BNPL, so their answers were not taken into account in analyses regarding BNPL. Another important note is that the majority are not frequent users of BNPL and impulse buyers, because the most popular responses about self-reported frequency were “extremely rare”, “rare” and “sometimes”.

The ordered logit model provided some insights about the relationship between BNPL usage and Impulse Spending. The dependent variable, Impulse Spending frequency, was ordinally scaled (“never” - 0, “rarely [a few times a year]” - 1, “sometimes [once a month]” - 2, “often [several times a month]” - 3, “very often [several times a week]” - 4). The model fit the data adequately: Log-Likelihood = -106.58; AIC = 221.2; BIC = 231.6.

Table 1. Results from Ordered Logit model.

Variable	Estimate
BNPL frequency	0.409** (0.181)

Notes: The table reports the estimate of ordered logistic regression. Standard error is in brackets. Significance levels: $p^* < 0.1$, $p^{**} < 0.05$, $p^{***} < 0.01$.

The equation for this model:

$$\log\left(\frac{P(\text{ImpulseSpending} \leq j)}{P(\text{ImpulseSpending} > j)}\right) = \theta_j - 0.409 \times \text{BNPL Frequency}$$

Where:

- j = cut-off point between categories;
- θ_j = threshold (intercept) between categories.

This equation suggests that the log-odds of a person being in a lower or at a certain impulse spending category rather than a higher one depends on a threshold θ_j and how frequently they use BNPL.

BNPL usage frequency was found to be a significant positive predictor of Impulse Spending frequency ($\beta = 0.409$, p-value = $0.024 < 0.05$). This suggests that *higher BNPL usage is associated with higher levels of impulse spending behavior*. In ordered logit model, the positive coefficient means the odds of being in a higher impulse category increase as BNPL usage increases. Overall, these findings provide empirical support for Hypothesis 1. However, due to the cross-sectional model, the analysis could not establish the causal relationship and therefore it is not clear whether higher use of BNPL leads to more frequent impulsive purchases. This model merely explains the association between the two variables at a single point in time.

Table 2. Results from Ordered Logit model with interactions.

Variable	Interaction Estimate
BNPL frequency	0.917* (0.492)
Gender (1 = female)	1.630* (0.865)
Gender \times BNPL frequency	-0.631 (0.523)

Notes: The table reports the estimates from Ordered Logit model with interaction between gender and BNPL frequency. Standard errors are in brackets. Significance levels: $p^* < 0.1$, $p^{**} < 0.05$, $p^{***} < 0.01$.

An interaction term between gender and BNPL frequency was added to the model to examine whether the association between BNPL usage and Impulse Spending varies by gender. The rationale behind this is that prior research suggests that financial behavior can differ between men and women. By including the interaction, we aimed to determine whether BNPL usage has a stronger effect on impulse spending among any of the genders. The results are presented in Table 2, where the coefficient for BNPL frequency is still positive and marginally significant ($\beta = 0.917$, p-value = 0.063). The positive coefficient for gender

is also marginally significant, meaning that women are more likely than men to engage in impulsive spending behavior. However, the interaction term is negative and not significant ($\beta = -0.631$, $p\text{-value} = 0.227$), indicating that the relationship between BNPL use and Impulse Spending does not significantly differ by gender in this sample. This result suggests that while both gender and BNPL usage individually influence Impulse Spending, there is no strong evidence that their effects combine in a meaningful way that changes the outcome.

To test the hypothesis about psychological factors that drive impulse spending in a BNPL context, multiple-choice and open-ended questions, such as “Why do you use BNPL? (choose one or more options)”, “Can you explain how you decide whether to use BNPL for a purchase?”, “Describe a case when you made an unplanned BNPL purchase. What influenced your decision?” were asked. Thematic analysis revealed several themes under which the responses were categorized:

Theme 1: Ease of Access. *“It is convenient and quick to arrange”, “Sometimes it’s easier to arrange an installment plan without straining the financial part”.* Respondents have mentioned being “spontaneous” and “impulsive”, and BNPL’s convenience, quickness and easiness is likely to drive this behavior.

Theme 2: Misperception of Interest and Lack of Knowledge. *“I use BNPL because of 0% interest”, “No overpayment”, “Once I bought a phone with BNPL because of the 0% overpayment and bonuses promotion, although I did not plan to buy it right away”.* To the question “Is there any interest charged on BNPL purchases?” 24% responded that there is no interest charged and 14% did not know the answer when in fact, sellers of goods and services charge a higher price for purchases with BNPL. Another question was asked about the consequences of late installment payments, and 21% did not know the answer and 6% believe they can repay later without penalties. Thus, a significant number of respondents have a lack of knowledge about BNPL.

Theme 3: Present-biased Thinking and Optimism About the Future. *“BNPL is convenient for me because I receive the goods now and start paying only in a month... gives me time to find money”, “When I want to*

buy now and pay later". These respondents tend to prioritize immediate gratification over future financial consequences.

Theme 4: Psychological Relief Through Smaller Payments. *"It is convenient for me to slowly pay in installments", "If the purchase is large but necessary, then for psychological peace of mind (it is easier to pay in smaller amounts but in time)".*

Theme 5: Marketing and Social Influence. *"When I saw something on the internet, Instagram, marketplaces and wanted to buy the thing under the influence of advertising and trends", "When I bought an expensive vacuum cleaner, my friends came to me and highly recommended it", "I participated in a webinar on creating websites, and at the end they started selling their courses. I was influenced by their marketing ploy and I bought this course in installments. Before that, I was thinking of doing websites, but not on installments. Then I regretted buying it."*

Theme 6: Strategic Use for Financial Gain. Part of the respondents have reported rational spending behavior and taking installment payments seriously. For example, *"The reason I'm taking an installment plan: I have the amount to pay immediately without installments, but it is better to keep a large amount on deposit, where the interest drops monthly and pay installments at a lower cost"*. Although this is the opposite of impulse spending behavior, it is worth mentioning that a considerable number of people use BNPL to enhance their financial well-being.

To examine whether demographic characteristics are predictors of BNPL overuse, a logistic regression analysis was conducted with age, gender, income level, and financial literacy as independent variables and BNPL overuse as the dependent variable ($n = 102$). The overall model wasn't statistically significant with LLR p -value = 0.1874. The results are presented in Table 3. None of the individual predictors were statistically significant at the 0.05 level. These results suggest that age, gender, income level, and financial literacy, when considered separately, do not robustly predict the likelihood of overusing BNPL in this sample. Some trends were observed, such as a slight increase in overuse with growing age and income, and lower overuse among women, however there was no evidence of significant association.

Table 3. Results from Logistic Regression.

Variable	Estimate
Age	0.023 (0.02)
Gender (1 - female)	-0.487 (0.521)
Monthly Income Level	0.287 (0.224)
Financial Literacy Score	0.155 (0.269)

Notes: The table reports estimates from logistic regression. Standard errors are in brackets. Significance levels: $p^* < 0.1$, $p^{**} < 0.05$, $p^{***} < 0.01$. No statistically significant results.

These results may indicate that demographic characteristics alone might be insufficient to predict the BNPL overusing behavior. It is possible that other factors, such as psychological or behavioral, have a stronger effect. Furthermore, the relatively small number of BNPL overusers in the sample (50 respondents) may have limited the statistical power of the model.

For the further analysis of the nature of impulse spending behavior associated with BNPL, participants were asked to indicate which category of goods and services is most vulnerable to such behavior. The most repeatedly stated section was "*Electronics and gadgets*", selected by 79 participants (70.5%). Other commonly stated categories were "*Clothing and footwear*", with 28 responses (25%), and "*Travel and entertainment*", with 19 responses (17%).

These findings support the themes identified in Question 2, particularly Marketing and Social Influence. The categories of goods and services most susceptible to BNPL-assisted impulse purchases - such as electronics, apparel, and dining - are typically non-essential and emotionally appealing, catering to the desire for immediate gratification. This pattern is consistent with the psychological factors outlined in Question 2, such as present-biased thinking and the influence of marketing strategies (Themes 3 and 5).

Given the identified patterns of impulsive purchasing behavior, it is important to explore strategies to mitigate the financial difficulties with BNPL usage (Question 5). To address this, the final question was raised: “How can financial struggles related to BNPL be prevented through policy and education on financial literacy?”. After the careful analysis of responses, the answers were categorized into the following categories:

Theme 1: Improving Financial Literacy rate. First, the majority of responses suggested creating financial literacy courses at schools by dedicating finance classes, promoting webinars and explanatory videos to better inform about BNPL policies and educate consumers. “*Conduct financial literacy courses*”, “*Initiate financial education in schools*”, “*Send short videos with explanations*”.

Theme 2: Limiting BNPL accessibility. Second, ideas like strict income checking procedure, setting limits based on consumers’ income levels and denying BNPL access to consumers with a high level of indebtedness. “*Check income before approving BNPL*”, “*Don’t approve if a person is already in debt*”, “*Increase requirements for BNPL approval*”.

Theme 3: Reduce BNPL marketing and aggressive promotion. “*Less advertising*”, “*Stop pushing BNPL everywhere*”, “*No annoying promotions*”.

Theme 4: Transparent and easy-to-understand BNPL terms. Fourth, “*Better explain installment conditions*”, “*Show real costs of BNPL*”, “*Give short and clear explanations*”. It was mentioned that banks need to provide clearer information about real costs, interest rates, terms, and list consequences of late repayments.

Theme 5: Personal responsibility. A portion of respondents marked that responsibility is on consumers, and that individuals must educate themselves. “*It is not banks’ interest, people should be smarter*”, “*Each individual should be responsible for their finances*”.

Theme 6: Technological Solution. Initiatives on integration and promotion of specialized financial apps for budgeting and tracking spendings were suggested.

Overall, the findings of this study revealed a significant relationship between BNPL usage frequency and impulse spending behavior among Kazakhstani consumers, supporting the first hypothesis (H1). The second hypothesis (H2), “Psychological factors such as illusion of affordability, convenience, social influences and trends promote higher BNPL usage and impulse spending”, was partially proven, as there are more psychological factors that were not mentioned in the reviewed studies. The third hypothesis (H3) was not confirmed due to the lack of statistical significance of the results, although the coefficients of the predictors suggest the opposite – older, male population with higher income and financial literacy level would be more prone to overusing, if the results were significant. Additionally, categories of goods and services BNPL payments are most used for were identified, two of them being expensive (electronics and travel), possibly meaning consumers mostly use BNPL to afford expensive purchases, however apparel and footwear being the second most popular category could indicate impulsive spending behavior. Several insights about regulation from financial institutions were provided by respondents including financial education, limiting accessibility and thorough approval process, reducing promotion, which could be helpful for further analysis and implementation.

Conclusion

Kazakhstan has been experiencing fast growth of the use of digital products and services for the past decade. Financial industry's major players like Kaspi.kz and Halyk Bank are the key facilitators of the widespread use of Buy Now, Pay Later services. This raises questions about how well Kazakhstani consumers use it and manage their finances, how financially responsible and literate they are, and whether they indulge in impulsive spending behavior because of it. Impulse buying is a phenomenon in consumer behavior that may lead to high levels of financial stress and debt if not taken under control. Thus, this study aimed to understand the causes of impulse spending and especially, the role of BNPL in it.

The study used a mixed-method design to gain insights using statistics and identify the motivations and psychological drivers that the statistical analysis is not able to capture. To sum up, the results revealed a positive relationship between impulse spending and BNPL usage. That is, the more frequently a person uses BNPL, the more they are likely to engage in impulsive buying behavior. This result supports Hypothesis 1, which was stated as "More frequent BNPL usage is associated with increased impulse spending behavior". The relationship between these two variables do not significantly differ by gender, as it was revealed in the analysis with interaction. However, it was found that women are more likely to engage in impulse spending behavior than men in this sample.

Hypothesis 2, "Psychological factors such as illusion of affordability, convenience, social influences and trends promote higher BNPL usage and impulse spending.", was partially supported by the results of thematic analysis. While it is true that convenience, social influences and trends were mentioned in the responses, one of the main drivers was misperception of interest and lack of knowledge about BNPL (consumers not knowing that there is a hidden interest carried by sellers, thus making the products with BNPL options more expensive to some extent). Present-biased thinking, in other words, people choosing immediate gratification and believing they will have the funds in the future to pay the installments, was also one of the psychological drivers. Illusion of affordability, as it was described in the reviewed studies, can be restated as one of these themes, although not explicitly mentioned by the respondents.

Hypothesis 3, “Younger, female population with a lower monthly income and financial literacy level are most vulnerable to overusing BNPL.”, which was derived from findings of the reviewed literature, was not supported in this study due to the not statistically significant results. This might mean that demographic factors do not play an important role in predicting overuse of BNPL. Further research with a bigger and more diverse sample and a different design (for instance, longitudinal study or experiment) may reveal more meaningful findings.

It was also revealed that the majority of BNPL-driven impulse buying tends to occur in categories of goods and services that are either costly, emotionally appealing, or both: electronics, clothing and footwear, and travel and entertainment. These may be the most susceptible to social influences and marketing promotions.

The research question 5 was partially answered by the respondents. To promote responsible or low-risk financial behavior, people have proposed improving financial literacy of consumers by conducting courses, teaching it in schools and making digital content about it; limiting BNPL accessibility by making the approval process more thorough; reducing the advertising of BNPL services; making the terms more transparent and easy-to-understand; and technological solutions such as tools and apps for budget tracking.

These findings contribute to the growing number of research studies about impulse buying and digital payment systems. While some similar studies exist, many of them focused on excessive spending and other digital payment methods (i.e., e-wallets, transfer and QR-payments), and were conducted in other countries. This study, however, focuses solely on BNPL and Kazakhstani consumers. The topic of this study is important because it may help to solve the issue of debt-prone behavior and financial well-being of people. It also provides insights for financial institutions and policymakers to understand behavior of their consumers.

Policy implications of this study are to 1) integrate financial literacy into school curriculum, focusing on digital finance and debt awareness; 2) create eligibility criteria and spending limits based on user profiles, such as income verification, spending caps, or risk assessments to prevent overuse; 3) require

BNPL providers to present clear disclosures of payment terms, fees, and penalties; 4) promote budget-tracking tools to help consumers monitor and manage spending.

This study provides a foundation for future research. While it offers valuable insights, there are certain limitations. First of all, insufficiently randomized data: the majority of respondents were young adults with a lower-than-average income, due to the survey being distributed via university email. Second of all, cross-sectional design of the study limited its ability to capture causal relationships that could be captured by longitudinal design. Third of all, self-reported data that was used in the analysis may have biases, e.g., respondents may have underestimated their impulse spending behavior and were inclined to appear as more financially responsible. Thus, further research with these limitations eliminated might develop this topic further.

Overall, this study adds to the understanding of the relationship between impulse spending and digital payment methods, specifically BNPL, and the psychological effects, drawing attention to the need for stronger consumer education and regulatory measures in Kazakhstan's rapidly changing financial environment. This paper may serve as the beginning of research on the topic of impulse spending in Kazakhstan.

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