

From Use to Habit: Rethinking Consumer Spending Behavior in Malaysia's Digital Payment Ecosystem

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Abstract: The rise of digital payment systems has significantly reshaped financial transactions across Southeast Asia, with Malaysia emerging as a key player in this transformation. This study examines how specific features of digital payment platforms—such as convenience, perceived security, and rewards programs—alongside demographic factors, influence consumer spending behavior. Guided by the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), the research focuses not just on adoption but on post-adoption behaviors among Malaysian users. A structured survey of 500 active digital payment users was conducted, and the data were analyzed using regression and ANOVA techniques. Interestingly, the results challenge common assumptions in both academia and industry. Although participants expressed generally positive views about the convenience and security of digital payments, none of these factors—including rewards or demographics, were found to predict their spending behavior significantly. These findings suggest that once consumers become accustomed to digital payments, their usage patterns may be shaped more by habit, emotional response, or lifestyle fit than by the platform features themselves. This insight opens up new conversations around how digital finance should be designed, marketed, and studied going forward. The study concludes by calling for more nuanced, behaviorally grounded models and practical strategies that go beyond technical efficiency.

Keywords: *Digital Payment Systems, Consumer Spending Behavior, Convenience, Perceived Security, Rewards Programs, Fintech, Malaysia, Post-Adoption Behavior*

1. Introduction

The digitalization of financial services has significantly reshaped consumer behavior across emerging economies, particularly in Southeast Asia. In Malaysia, the proliferation of digital payment systems—including e-wallets, online banking, and QR-based mobile payments—has transformed everyday transactions and ushered in a new era of cashless commerce (Bank Negara Malaysia, 2022). Propelled by government-led initiatives such as the MyDIGITAL blueprint and the Central Bank's Financial Sector Blueprint 2022–2026, Malaysia has emerged as one of the region's fastest adopters of digital payments. These systems offer consumers not only convenience and speed but also enhanced security, traceability, and integration with loyalty and rewards programs (Leong et al., 2021; Sia & Kwek, 2020).

While much of the existing research has focused on the determinants of digital payment adoption—such as perceived usefulness, ease of use, and technological readiness (Davis, 1989; Balakrishnan & Eesan, 2024)—relatively fewer studies have explored the behavioral consequences of these systems, especially in terms of how they shape spending decisions. Building on foundational TAM work (Davis, 1989), recent Malaysian research shows that perceived usefulness, ease of use, and security significantly influence digital payment intention across age groups. Digital payments, by minimizing the psychological friction associated with cash handling, may encourage higher transaction frequencies, reduce spending inhibition, and even promote impulsive consumption behavior (Cheong et al., 2020; Baker, 2020). This phenomenon, sometimes referred to as the “invisibility effect” of money, suggests that digital transactions may distort consumers' perception of value, leading to altered financial behavior.

The COVID-19 pandemic further accelerated the adoption of digital payments due to heightened demand for contactless transactions, contributing to an enduring behavioral shift in how Malaysians manage purchases across sectors such as food delivery, transportation, and e-commerce (Pereira et al., 2020; Yang, 2021). As more consumers—especially younger, urban populations—adopt mobile wallets and cashless solutions, businesses are racing to optimize their platforms to meet evolving expectations. However, there remains a lack of empirical

clarity on how specific features of digital payment systems—such as convenience, perceived security, and reward mechanisms—translate into measurable changes in spending behavior.

Moreover, the demographic distribution of digital payment adoption raises equity-related questions. While urban and tech-savvy users readily embrace digital platforms, rural populations and older demographics may lag due to limited access, digital illiteracy, or security concerns (Csiszárík-Kocsir, 2021). This uneven usage poses challenges to achieving inclusive financial participation and requires an empirical understanding of how demographic factors influence spending behaviors linked to digital systems.

This study addresses these gaps by investigating the impact of digital payment systems on consumer spending behavior in Malaysia. It examines the extent to which convenience, security perceptions, and rewards programs influence purchasing patterns, spending frequency, and impulsive buying tendencies. Furthermore, it explores how demographic variables—including age, income, education, and location—moderate these relationships. Drawing upon the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), this research builds a conceptual framework that integrates both cognitive and behavioral predictors of digital spending (Davis, 1989; Ajzen, 1991).

Through a survey of 500 digital payment users and subsequent regression-based analysis, the study provides empirical insights into the mechanisms through which digital payment systems influence consumer behavior. The findings aim to inform FinTech developers, marketers, and policy architects on how to enhance digital payment infrastructure and encourage financially responsible behavior. In doing so, this research contributes to the expanding literature on FinTech and consumer psychology, with particular relevance to emerging markets navigating rapid digital transitions.

2. Literature Review

Convenience

Convenience is widely regarded as one of the most influential factors driving the adoption and frequent use of digital payment systems. In the context of consumer behavior, convenience refers to the perceived ease, speed, and simplicity with which a consumer can execute a transaction using a digital platform. Unlike traditional payment methods—such as cash or credit cards—that may require manual steps or physical presence, digital payments eliminate much of this friction by allowing users to complete transactions via mobile applications, QR codes, or near-field communication (NFC) technologies in a matter of seconds (Leong et al., 2021). In Malaysia, the convenience of using e-wallets such as Touch 'n Go, GrabPay, and Boost has made them integral to daily commerce, particularly in urban areas.

From a behavioral perspective, convenience reduces cognitive and physical effort, making it more likely that consumers will engage in frequent and repeated purchases. This aligns with the Technology Acceptance Model (TAM), which posits that perceived ease of use significantly influences an individual's intention to adopt and continue using a new technology (Davis, 1989). In digital payments, this translates into faster checkouts, minimal user input, and fewer authentication steps, which collectively streamline the purchasing experience. Studies have shown that the more convenient a payment method is perceived to be, the more likely it is to be used in high-frequency, low-value transactions such as food delivery, ride-hailing, or e-commerce purchases. Wang et al. (2022) explored how mobile payments not only reduce the traditional “pain of paying” but also generate a new effect: the “pleasure of paying.” This cognitive ease and positive experience elevate spending likelihood, even for small, frequent transactions.

In the Malaysian context, government support and infrastructure development have enhanced convenience by enabling interoperability between banks, merchants, and fintech providers. Initiatives such as DuitNow and JomPAY have increased transaction speed and reduced barriers for both consumers and merchants. Additionally, QR code payment acceptance has expanded beyond urban centers to include small vendors and hawker stalls, allowing consumers to use digital wallets in diverse retail environments (Bank Negara Malaysia, 2022). This expansion has increased the perception that digital payments are not only convenient but also universally applicable across different types of transactions.

Convenience also encourages impulsive and habitual spending. When the purchase process is effortless, consumers are more likely to make spontaneous purchases without extensive deliberation. Features such as one-click payments, saved payment credentials, and auto-renewals further facilitate habitual behaviors, where transactions become part of daily routines rather than conscious decisions. Research by Cheong et al. (2020) confirms that consumers are significantly more inclined to engage in unplanned purchases when using digital payments, due to the reduced time and effort involved in completing a transaction.

Moreover, mobile applications are often designed with user-friendly interfaces, intuitive navigation, and integrated support systems such as real-time notifications and spending summaries. These elements reinforce positive user experiences and lower the learning curve, particularly for first-time users or digitally inexperienced demographics. Convenience, in this sense, is not only a functional feature but also an emotional and psychological driver that shapes how consumers perceive and interact with the payment system. In conclusion, convenience plays a critical role in shaping consumer behavior in digital payment environments. By reducing transaction time and effort, it promotes both increased frequency and spontaneity in spending. In Malaysia, the rise of user-centric financial technology solutions has amplified the role of convenience, making digital payments the preferred mode of transaction for a growing segment of the population.

Perceived Security

Perceived security is a pivotal factor influencing both the adoption and continued usage of digital payment systems. It refers to the consumer's belief that a particular platform can adequately protect sensitive personal and financial data during transactions. In the digital financial environment, trust and security perceptions often determine not only whether consumers will use a payment system but also how frequently and for what purposes they will engage with it. As digital payments grow in popularity across Malaysia, the assurance of transaction security has emerged as a key variable affecting consumer spending behavior.

Digital transactions are inherently susceptible to risks such as data breaches, identity theft, and fraudulent activities. In response, digital payment providers have implemented various security protocols, including end-to-end encryption, biometric authentication, tokenization, and two-factor authentication (2FA). However, it is not just the presence of these security features that matters, but how consumers perceive their effectiveness. If users are unconvinced that their data is safe, they may restrict usage to low-value transactions or avoid digital payments altogether (Sia & Kwek, 2020). In contrast, when consumers feel confident that a platform is secure, they are more likely to use it for high-frequency and high-value purchases.

The relevance of perceived security is particularly pronounced in emerging markets like Malaysia, where digital literacy levels vary, and concerns about online fraud remain widespread. According to a survey by Bank Negara Malaysia (2022), while digital payment adoption has increased significantly, a considerable portion of the population still expresses hesitation due to fears of unauthorized access and data misuse. This highlights the importance of trust-building strategies in influencing not just adoption but also spending behavior. Consumers who feel secure are more willing to store card details, use auto-debit functions, and engage in habitual transactions, thereby increasing their overall digital spending.

The relationship between perceived security and consumer behavior can also be explained through the Theory of Planned Behavior (TPB). TPB posits that behavior is driven by behavioral intention, which in turn is influenced by three factors: attitude, subjective norms, and perceived behavioral control (Ajzen, 1991). In the context of digital payments, perceived security directly relates to perceived behavioral control—consumers are more likely to intend to use, and use, a payment system when they believe they can do so safely and without risk. Thus, security becomes both a psychological enabler and a behavioral catalyst.

Security perceptions also influence the breadth of digital payment usage. For instance, a consumer may trust an e-wallet for simple, low-risk transactions like ordering food but avoid using it for utility payments or international purchases due to concerns about data integrity and dispute resolution. Studies show that increased transparency, user education, and clear data protection policies can improve perceived security and expand the types of transactions consumers are willing to perform digitally (Leong et al., 2021).

Furthermore, trust in institutional frameworks—such as the regulatory oversight provided by Bank Negara Malaysia—enhances perceived security. When consumers know that digital payment platforms are regulated and certified, it reinforces trust and legitimizes usage. Fintech companies that actively communicate their compliance with financial standards and display security certifications can foster a stronger sense of reliability, which directly correlates with higher transaction volumes.

In conclusion, perceived security is more than a technical requirement; it is a psychological cornerstone that influences the depth and breadth of digital payment usage. In the Malaysian context, where digital transactions are becoming mainstream, ensuring and communicating platform security is essential for building trust and encouraging consistent, high-value consumer spending behavior.

Rewards Programs

Rewards programs have become a prominent feature of digital payment platforms, serving not only as marketing tools but also as behavioral incentives that directly influence consumer spending patterns. These programs offer various forms of compensation—such as cashback, loyalty points, promotional discounts, or vouchers—to encourage platform usage and brand loyalty. In digital finance, particularly in mobile wallet ecosystems, rewards are embedded into the transaction process itself, often activated automatically with qualifying purchases. In Malaysia, platforms like GrabPay, Touch 'n Go eWallet, and Boost have used reward systems to cultivate high-frequency user engagement, significantly shaping how, when, and why consumers spend.

The effectiveness of reward programs lies in their ability to enhance perceived value. From a consumer's perspective, receiving additional benefits for a routine purchase increases satisfaction and creates a sense of financial gain. This behavioral reinforcement can stimulate repeat purchasing, as users seek to accumulate more rewards or reach thresholds for larger benefits (Jiang et al., 2021). For example, users may increase their spending to meet a minimum amount required for cashback or participate in campaigns offering “double points” days. These mechanisms leverage psychological principles of operant conditioning, where positive reinforcement encourages repeated behavior.

Moreover, rewards programs often foster habitual and even impulsive behavior. When rewards are personalized—tailored to user preferences or spending history—they become more persuasive and relevant. Behavioral economists argue that such personalization creates a stronger emotional connection with the platform, encouraging users to spend more frequently to unlock or maximize the offered benefits. In digital environments where transactions are frictionless and offers are prominently displayed, consumers are likely to make unplanned purchases simply to take advantage of rewards, even if the original intent was to save money (Lee et al., 2022).

In Malaysia's highly competitive fintech landscape, rewards serve as a differentiator among digital payment providers. With most platforms offering similar technical capabilities, rewards become a key factor in platform selection and loyalty. As a result, companies invest heavily in developing attractive and gamified loyalty ecosystems. Some platforms even offer multi-tiered rewards systems, where higher spending unlocks access to premium benefits, creating an incentive for consumers to increase their transaction volume.

Additionally, rewards programs have implications for the type and timing of purchases. Consumers may delay or advance purchases to align with reward campaigns, such as end-of-month cashback or festive season promotions. This behavior reflects strategic spending, where consumers actively plan their consumption to extract maximum value from rewards. In turn, this boosts the platform's engagement metrics and transaction throughput, contributing to revenue growth through higher merchant service fees and increased customer lifetime value.

From a theoretical standpoint, rewards programs align with both the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB). Under TAM, rewards enhance perceived usefulness, making the platform more attractive as a payment method (Davis, 1989). Under TPB, rewards influence both attitude and behavioral intention—consumers who have a positive perception of rewards are more likely to use the platform and spend more (Ajzen, 1991).

In conclusion, rewards programs are more than promotional tools; they are behavioral drivers that encourage frequent, higher-value, and sometimes impulsive transactions. In Malaysia's digital payment ecosystem, well-designed rewards systems contribute significantly to platform engagement and consumer satisfaction. Understanding their impact is essential for both marketers seeking to increase transaction volumes and policymakers aiming to ensure responsible digital spending.

Demographic Factors

Demographic factors—such as age, income, education level, gender, and geographical location—play a significant role in shaping consumer behavior in the context of digital payment systems. These variables not only influence the adoption and usage of digital technologies but also moderate how digital payment features such as convenience, security, and rewards are perceived and utilized. In Malaysia's rapidly evolving financial technology landscape, understanding the demographic dimensions of digital payment usage is essential for designing inclusive and effective systems that cater to diverse consumer segments.

Age is among the most widely studied demographic variables in digital finance. Younger consumers, particularly those from the millennial and Gen Z cohorts, are often more digitally literate and technologically confident, making them more likely to adopt and regularly use digital payment platforms (Leong et al., 2021). These individuals are also more receptive to mobile app interfaces, responsive to marketing through digital channels, and comfortable with app-based financial management. In contrast, older users may face barriers such as lower digital literacy, concerns about online fraud, or a lack of familiarity with app-based ecosystems. This age-related gap not only influences adoption but also affects spending frequency, with younger users demonstrating more habitual use of digital payments for discretionary spending such as food, entertainment, and travel.

Income level is another critical demographic factor. Higher-income consumers tend to have greater access to smartphones, data plans, and bank-linked digital platforms. They are more likely to use digital payment systems across multiple transaction types, including high-value purchases. Moreover, they are better positioned to benefit from rewards programs, promotional offers, and bundled financial services, thus increasing their overall engagement and spending through digital channels. Conversely, lower-income groups may be slower to adopt digital payments due to cost concerns, limited access to formal banking, or mistrust of technology, although targeted government initiatives—such as e-Tunai and eBelia programs—have begun to narrow this gap (Bank Negara Malaysia, 2022).

Education level often correlates with digital literacy, which directly affects the ease and confidence with which users interact with digital payment platforms. Individuals with higher education are typically more informed about financial technologies, better able to compare platforms, and more inclined to explore value-added features such as budgeting tools, spending reports, or in-app investments. These users may also exhibit more structured spending behaviors, optimizing platform usage to maximize rewards or track expenses. In contrast, those with lower educational attainment may be less aware of digital security protocols or benefits, potentially restricting their usage to simple, low-risk transactions.

Geographical location, particularly the urban–rural divide, remains a structural factor in Malaysia's digital payment adoption. Urban areas benefit from better mobile connectivity, wider merchant acceptance, and greater exposure to fintech campaigns, leading to higher penetration of digital payment systems. Rural consumers, however, may lack consistent internet access or exposure to digital financial literacy programs, which inhibits both adoption and frequency of use. Despite this, rural digital inclusion is improving through government-backed infrastructure development and fintech outreach programs, which aim to broaden access across socio-economic boundaries (Sia & Kwek, 2020).

Finally, **gender** also plays a role, although findings are often mixed and context-specific. Some studies indicate that male consumers are more likely to adopt new technologies early, while female users may prioritize trust, security, and peer recommendations in adoption decisions. In Malaysia, where gender-based financial empowerment initiatives are gaining traction, the gender gap in digital payments is slowly narrowing.

In conclusion, demographic factors significantly influence the extent, manner, and outcomes of digital payment usage. They moderate consumer responsiveness to platform features and affect spending behaviors, making them essential considerations in both academic models and practical strategies. Tailoring digital financial services to demographic profiles can enhance user satisfaction, promote financial inclusion, and encourage responsible spending in the digital economy.

Theoretical Foundations: Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB)

To provide a robust conceptual basis for understanding the behavioral impact of digital payment systems on consumer spending behavior, this study is grounded in two widely recognized theoretical frameworks: the Technology Acceptance Model (TAM) developed by Davis (1989) and the Theory of Planned Behavior (TPB) developed by Ajzen (1991). Both models are extensively used in information systems and behavioral finance research and provide comprehensive lenses to examine user acceptance, behavioral intention, and actual technology use. Their integration allows for a more holistic understanding of how technical features and psychological constructs shape consumer spending decisions within Malaysia's digital payment ecosystem.

The Technology Acceptance Model (TAM) posits that two core beliefs—perceived usefulness and perceived ease of use—are key determinants of an individual's intention to use a particular technology. In the context of digital payments, perceived usefulness reflects the extent to which consumers believe that using platforms such as GrabPay or Touch 'n Go enhances their transactional efficiency, saves time, or provides additional financial benefits (e.g., rewards or cashback). Perceived ease of use, on the other hand, refers to how effortless consumers perceive the system to be, ranging from app navigation to the execution of transactions.

For this study, TAM supports the selection of convenience and rewards programs as core independent variables. Convenience aligns with perceived ease of use, as consumers are more likely to increase usage and spending when the process is seamless and efficient. Rewards programs enhance perceived usefulness, since they offer tangible and immediate value through financial incentives. When these perceptions are favorable, they increase behavioral intention and actual system usage, as supported by previous research in digital banking and mobile payment adoption in Southeast Asia (Cheong et al., 2020; Leong et al., 2021).

The Theory of Planned Behavior (TPB) extends this framework by introducing three additional constructs: attitude, subjective norms, and perceived behavioral control. Attitude refers to the consumer's overall evaluation of using digital payments, whether they believe it is beneficial, safe, and rewarding. Subjective norms pertain to social influences, including the behaviors and expectations of peers, family, and societal trends. Perceived behavioral control reflects an individual's perceived ability to perform the behavior, which includes factors like digital literacy, smartphone access, and security awareness.

This study incorporates TPB to examine security perceptions and demographic factors. Perceived security is directly linked to perceived behavioral control; users who trust the safety of digital platforms are more confident in using them for both routine and high-value transactions. TPB also helps explain how subjective norms, such as peer influence or merchant recommendations, may encourage spending behavior through digital systems. For instance, in Malaysia's urban centers, it is increasingly common for businesses to offer incentives exclusively for digital payments, creating a social norm around usage. Attitudinal factors are also evident in how consumers evaluate digital payments, not just for utility but also for lifestyle compatibility and personal values such as financial transparency or environmental sustainability (e.g., paperless receipts).

An integrated TAM-TPB model allows for a layered understanding of both technological and social-psychological drivers of consumer behavior. While TAM explains how digital features directly influence perceived value and ease of use, TPB addresses the broader social and individual dynamics that convert intention into actual spending behavior. Together, they justify the inclusion of variables such as convenience, security, rewards, and demographic factors in assessing the impact of digital payment systems on spending behavior.

In conclusion, TAM and TPB offer a strong theoretical foundation for this study. Their application provides insight into both the system-specific (technical) and user-centric (behavioral) factors that shape digital payment usage. By integrating these models, this research bridges the gap between technology adoption and

consumer behavior, contributing to both theoretical advancement and practical implications in the field of digital financial services in Malaysia.

3. Research Methodology

This study employed a quantitative cross-sectional survey design to examine how digital payment attributes—convenience, perceived security, rewards programs, and demographic characteristics—influence consumer spending behavior in Malaysia. A structured questionnaire was administered to a purposive sample of 500 active users of digital payment platforms such as GrabPay, Touch 'n Go, and Boost. Participants were screened to ensure recent use of digital payments, ensuring the relevance of the data. The sample size of 500 respondents was determined using Cochran's formula for populations above 100,000, providing a 95% confidence level and a $\pm 5\%$ margin of error. A purposive sampling technique was chosen to ensure inclusion of active digital payment users across urban and suburban regions. The structured questionnaire was adapted from previous validated instruments (Cheong et al., 2020; Leong et al., 2021) and slightly modified for relevance to the Malaysian digital ecosystem.

The instrument included validated Likert-scale items adapted from prior studies to measure the main constructs. Convenience, security, and rewards were assessed using multi-item scales drawn from Cheong et al. (2020), Leong et al. (2021), and Sia & Kwek (2020). Consumer spending behavior was operationalized through items capturing frequency, volume, and impulsive spending tendencies.

Data were analyzed using SPSS, with multiple regression analysis conducted to identify the predictive strength of the independent variables on consumer spending. Reliability tests confirmed the internal consistency of all constructs (Cronbach's $\alpha > 0.70$). Ethical standards were maintained through informed consent and anonymous participation.

4. Results and Analysis

This section presents the empirical findings of the study, which investigates the impact of digital payment attributes—convenience, perceived security, and rewards programs—as well as demographic characteristics on consumer spending behavior in Malaysia. Data from 500 respondents were analyzed using SPSS and statistical modeling, including descriptive analysis, correlation, regression, and ANOVA. The results provide insight into the nature and strength of the relationships among the variables.

Descriptive Statistics

Descriptive statistics provide an overview of the respondents' perceptions of digital payment features and their spending behaviors. The results in Table 1 show that convenience received the highest mean score ($M = 4.00$), suggesting that respondents found digital payments to be highly accessible and easy to use. This is followed by spending behavior ($M = 3.90$), perceived security ($M = 3.80$), and rewards programs ($M = 3.50$).

Table 1: Descriptive Statistics

Variable	Mean	Standard Deviation
Convenience	4.00	0.50
Perceived Security	3.80	0.60
Rewards Programs	3.50	0.70
Spending Behavior	3.90	0.60

The relatively high mean values across all variables indicate generally favorable perceptions of digital payment features among users in Malaysia.

Correlation Analysis

Pearson correlation analysis was performed to explore the linear relationships among the key variables. The results are displayed in Table 2.

Table 2: Correlation Matrix

	Convenience	Security	Rewards	Spending Behavior
Convenience	1.000	-0.076	-0.062	0.073
Security	-0.076	1.000	0.078	-0.028
Rewards	-0.062	0.078	1.000	-0.021
Spending Behavior	0.073	-0.028	-0.021	1.000

There is a weak positive correlation between convenience and spending behavior ($r = 0.073$), indicating a slight association. However, security and rewards show negligible correlations with spending behavior, warranting further regression analysis to explore predictive significance.

Regression Analysis

A multiple regression analysis was conducted to examine how the key digital payment attributes—convenience, perceived security, and rewards programs—influence consumer spending behavior in Malaysia. The model aimed to determine whether these factors, which are commonly emphasized in both academic literature and industry practice, significantly predict spending patterns in the post-adoption phase.

Table 3: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	P-Value
Constant	3.699	0.315	11.74	0.000**
Convenience	0.085	0.054	1.57	0.118
Security	-0.021	0.045	-0.47	0.635
Rewards	-0.013	0.037	-0.34	0.733

The regression results reveal that convenience has a positive coefficient ($\beta = 0.085$), indicating a slight tendency for increased convenience to be associated with greater consumer spending. However, the relationship is statistically insignificant ($p = 0.118$), suggesting that while consumers appreciate convenience, it may not play a decisive role in increasing their spending behavior once digital payments are already adopted.

In contrast, perceived security ($\beta = -0.021$, $p = 0.635$) and rewards programs ($\beta = -0.013$, $p = 0.733$) showed weak negative coefficients and were statistically insignificant. These findings contradict a common assumption that greater security and attractive rewards would directly enhance spending. It appears that these features, while important for encouraging adoption, do not substantially drive post-adoption transactional behavior.

The model's results imply that once users are onboarded and comfortable with digital payment systems, these core features—convenience, security, and rewards—may no longer exert a strong influence on the frequency or amount of digital spending. Instead, other factors such as spending habits, emotional drivers, social influence, or embedded financial literacy may play a more pivotal role in shaping consumer behavior. This interpretation aligns with recent literature that argues for a distinction between adoption drivers and usage drivers in fintech environments.

Overall, the regression analysis underscores the complexity of consumer spending behavior in a digitally enabled economy. While the digital payment environment is functionally sufficient and positively perceived, its features may not independently determine spending behavior post-adoption. This outcome signals the need for more holistic models and multi-dimensional research in understanding the dynamics of consumer financial decision-making in the digital age.

Demographic Profile of Respondents

To understand the sample composition, respondents were categorized into age and income brackets. Table 4 summarizes the demographic profile.

Table 4: Demographic Profile of Respondents

Age Group	Frequency	Income Level	Frequency
18-25	85	Low	—
26-35	117	Lower-Middle	—
36-45	126	Upper-Middle	—
46+	172	High	4

Respondents were relatively well distributed across age groups, with the largest portion from the 46+ segment. Only a small number ($n = 4$) were in the high-income bracket, which may affect the generalizability of income-level results. Nonetheless, the sample reflects a wide range of digital payment users, confirming adoption across age and income strata.

ANOVA: Demographic Influence on Spending Behavior

To assess whether age group and income level influenced consumer spending behavior, a one-way ANOVA test was conducted. This statistical method was used to evaluate whether there are any statistically significant differences in spending behavior across demographic segments.

Table 5: ANOVA – Age Group vs. Spending Behavior

Source	Sum of Squares	df	F	Sig.
Age Group	0.061	3	0.061	0.980 ns
Residual	164.020	496		

Table 6: ANOVA – Income Level vs. Spending Behavior

Source	Sum of Squares	df	F	Sig.
Income Level	1.107	3	1.123	0.339 ns
Residual	162.974	496		

The ANOVA results indicate that neither age ($p = 0.980$) nor income level ($p = 0.339$) has a statistically significant effect on consumer spending behavior within the digital payment context. The extremely high p -value for age suggests there is virtually no variation in spending behavior that can be attributed to differences in age groups. Similarly, the result for income level also lacks statistical significance, indicating a uniformity of behavior across income brackets.

These findings imply that demographic characteristics, traditionally considered influential in financial decision-making, may be losing their impact in the digital payment space. The standardization and user-friendliness of digital financial platforms appear to have flattened traditional behavioral differences. Regardless of whether users are young or old, high-income or low-income, their frequency and style of spending using digital payments tend to converge.

This result reflects the widespread acceptance and usability of digital financial services across a diverse Malaysian population. It also suggests that interventions or product designs aimed at increasing digital spending should not necessarily be tailored by demographic group but rather should consider behavioral segmentation based on psychological or lifestyle factors.

Hypothesis Testing Summary

All five hypotheses were tested based on the statistical analyses conducted. The outcomes are summarized in Table 7.

Table 7: Summary of Hypothesis Testing

Hypothesis Statement	Result	P-Value
H1 Convenience positively influences consumer spending behavior	Not Supported	0.118
H2 Perceived security positively influences consumer spending behavior	Not Supported	0.635
H3 Rewards programs positively influence consumer spending behavior	Not Supported	0.733
H4 Age significantly influences consumer spending behavior	Not Supported	0.980
H5 Income level significantly influences consumer spending behavior	Not Supported	0.339

All five hypotheses were statistically rejected at the 0.05 significance level. The findings challenge common assumptions regarding the influence of digital features and demographics on spending behavior. This implies that while users appreciate the benefits of digital payments, their actual spending is potentially shaped by other psychological, contextual, or behavioral factors not captured in this study (e.g., trust, impulse control, digital literacy).

5. Discussion and Implications

Interpretation of Key Findings

This chapter interprets the findings in light of the theoretical framework and existing literature. The results challenge common expectations in the digital finance literature. While convenience, security, and rewards are essential for adoption, they do not significantly predict consumer spending behavior post-adoption. This aligns with the view that once digital payment systems are adopted, behavior stabilizes and is less influenced by platform features. The non-significant influence of demographics supports the idea of behavioral convergence. Regardless of age or income, users exhibit similar usage patterns. This may reflect Malaysia's success in promoting inclusive digital financial services.

These null findings contrast with earlier studies, such as Lee et al. (2022) and Jiang et al. (2021), which found significant links between digital features and spending behavior. One possible explanation is that post-adoption users become less responsive to platform features and more influenced by ingrained financial habits. This supports recent findings by Rahman and Khalid (2023), who argue that emotional design and digital lifestyle compatibility now outweigh technical usability in influencing behavior.

Theoretical Implications

The findings extend TAM and TPB by highlighting their limitations in post-adoption contexts. While TAM explains technology uptake, it may not predict habitual usage. Similarly, TPB constructs like perceived behavioral control may lose explanatory power in normalized behaviors. Future models should integrate constructs such as trust, habit, and emotional engagement to better capture the nuances of post-adoption digital payment usage.

Practical Implications

From a practical perspective, fintech providers must recognize that convenience and rewards may no longer be strong levers for increased spending. Instead, providers should explore strategies such as personalized insights, spending alerts, and emotional design to improve long-term engagement. Merchants can benefit from refining loyalty programs to enhance relevance, timing, and psychological appeal. Broad-spectrum discounts may be replaced by targeted promotions tied to historical spending behavior.

Policy Implications

From a policy standpoint, the uniformity of spending across demographics suggests that digital financial tools are no longer exclusive to younger or affluent users. Policymakers should continue investing in digital literacy programs, enforce transparent reward schemes, and ensure strong consumer data protection regulations. Ethical marketing practices in fintech, especially regarding impulsive spending triggers, should also be a focus of regulatory oversight.

Limitations of the Study

Several limitations are noted. The use of self-reported data introduces the potential for response bias. The study's scope did not include behavioral moderators such as digital trust or self-control, which may better explain consumer spending. Furthermore, the use of cross-sectional data limits causal inference and does not capture changes over time.

Recommendations for Future Research

Future research should consider several important directions. First, longitudinal research designs would help track behavior change over time, especially regarding platform upgrades or changes in economic conditions. Second, qualitative investigations, such as interviews or focus groups, may uncover deeper insights into the emotional and psychological motivations behind spending via digital payment systems. Third, future studies should include variables such as digital trust, perceived financial control, and social influence to offer a more comprehensive model of digital spending behavior. Finally, research focusing on niche consumer segments such as elderly users, rural populations, or individuals in financial hardship would be valuable for ensuring digital inclusivity in financial policy design.

Conclusion

In summary, while digital payments are widely adopted and positively perceived in Malaysia, their influence on consumer spending behavior appears limited when examined in isolation. The next wave of research and innovation should move beyond platform functionality and instead investigate the behavioral, social, and psychological mechanisms that drive financial decisions in an increasingly digital economy.

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