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# Technological Impact of Digital Payment Systems on Consumer Behavior and Optimization of the Cash Flow Conversion Cycle in Pakistan

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## Chronicle

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## Abstract

This study aims to investigate the impact of digital payment system technology on consumer behavior and cash flow optimization in the context of the developing markets specifically in Pakistan. This study opts for a quantitative research approach and examines how the acceptance of digital payments changes spending behaviors and increases financial efficiency for businesses. Based on the Technology Acceptance Model (TAM), this study pinpoints determinants like ease of use, perceived usefulness, and social influence as major drivers in consumer adoption. The study reveals that digital payment adoption results in reducing cash conversion cycles that allow businesses to operate more efficiently and influence consumer spending behavior by increasing the value and frequency of transactions. Digital payment systems maintain a growing path that enables both financial inclusion advancements and economic growth-enabling factors within developing economies despite challenges with infrastructure and digital competence. The study provides the essential groundwork for policy recommendations that target both financial practitioners and policymakers who seek the development of digital financial systems.

**Keywords:** Corporate Governance, Accounting Practices, Financial Performance and Profitability.


## INTRODUCTION

Digital payment practices in Pakistan have experienced major shifts because of technological progress combined with changing consumer behavior standards along with strategies to boost acceptance rates. This adoption process has been influenced by financial competencies and digital know-how, together with users' assessment of benefits against risks (Rahman et al., 2020; Ullah et al.). The development of mobile banking and payment systems influences consumer acceptance patterns in Pakistan, which shows essential information about the future of the country's financial transactions (Khan et al., 2023). To enhance the security and the management of the data, blockchain technology is introduced which is crucial for understanding the expectations of the consumers (Ali & Bano, 2022). Research has analyzed how consumers behave under digital conditions, including how the digital economy influences buyer expectations (Khalid et al., 2020). Research on millennials showing their adoption of digital wallets during COVID-19 demonstrates psychological and behavioral elements of digital payments, according to Mary and Antony (2022).

Studies regarding technological foundations and adoption have failed to resolve widespread doubts about complete digital payment economics for cash conversion cycles and similar economic fields (Rank, 2023; Bian et al., 2023). The research needs to expand through more comprehensive studies that examine how digital payment systems transform buying practices and operational patterns in Pakistan's specific socio-economic framework (Rahman et al., 2020; Khan et al., 2023).

# BACKGROUND OF THE RESEARCH

Digital payment methods cause fundamental changes within global finance systems by reshaping consumer actions together with corporate management structures. Pakistan with other developing nations, find digital payments essential for enhancing financial inclusivity while minimizing cash-dependent dealings. Mobile networks and cryptocurrencies along with blockchain technologies have expanded digital transaction capacity and driven consumer engagement through loyalty programs and personalized incentives (Kanojia and Lal, 2020; Dr. G. Bhoopathy P. Kanagaraj, 2022). As per Saha et al. (2022) and Bian et al. (2023) organizations that adopt digital payment systems shorten their cash conversion cycle and operate at enhanced speed and improved business efficiency. Various barriers including insufficient digital capabilities together with regulatory problems and underlying infrastructure weaknesses continue to exist. The resolution of these problems will simultaneously strengthen economic output and business growth together with financial inclusion for all stakeholders (Moreno et al., 2022; Wardhani et al., 2023). The alignment between digital payment systems and financial services enhances their effects on shopper spending and economic system management. Policymakers need to develop customized strategies for optimizing these benefits while resolving current marketplace complexities to achieve universal social advancements (Ebubedike et al., 2022; Gurusamy & Aiswarya, 2023).

## Significance of the Study

Digital payment system adoption is an important driver of economic development because of many benefits for the economy, businesses, and institutions. Digital payments can fundamentally reduce the time and expense of conventional banking and business transactions, increasing thus economic productivity and digital payment (Kumar et al., 2021; Lee and Shin, 2020). The shift to digital cash is basic for expanding financial inclusion, especially among oppressed communities who need admittance to conventional banking services as well as enabling people and communities, this inclusion recognizes more prominent economic development and contribution. The simplicity of purpose and security of digital transactions make them basic for developing consumer spending (Patel and Patel, 2019; Zhou et al., 2020). Furthermore, the information produced by digital transactions furnishes partnerships and administrators with critical information that permits them to settle on better guidelines and decisions (Chen et al., 2022; Gupta and Xia, 2021). Unfortunately, nations battle with the adoption of digital payments because of infrastructure issues, hacking, and digital payment literacy issues (Ahmed et al., 2021; Khan and Moin, 2022). Designated investments and policies tending to these worries, then again, could have critical social and economic benefits, advancing the Sustainable Development Goals (SDGs) and making the world a more cutthroat spot (Nambiar, 2021; Rahman and Barua, 2020). Experiences from a developing nation are included in the overall conversation about the economic effects of technology in this research. This

research gives basic knowledge that might help organizations in involving digital payments for economic and social growth by analyzing the complications of digital payment adoption on consumer spending habits and business strategies, including the cash payment cycle.

# LITERATURE REVIEW

As indicated by Davis' (1989) Technology Acceptance Model, two huge factors that influence technology adoption and use are perceived usefulness (PU) and ease of use (PEOU). With regards to Pakistan's adoption of digital payments, this model offers major areas of strength for understanding the factors driving consumer behavior and their consequences on the consumer payment cycle. Perceived usefulness with regards to digital payments alludes to the amount somebody feels that utilizing a specific technology would work on their financial management or transaction efficiency. As indicated by research, customer views of the usefulness of digital payments are fundamentally influenced by payment speed and ease (Smith and Tan, 2020; Johnson, 2021). Organizations might work on operational efficiency and lessen the time between spending cash and producing cash by integrating digital payments into day-to-day business by streamlining the cash conversion cycle (Williams et al., 2019).

The perceived ease of use of a technology includes how basic an individual accepts to use it. In Pakistan, where digital literacy levels differ enormously, ease of use essentially affects adoption. Streamlining the user experience and working on digital payment systems might make it a lot more straightforward for new users to start using them (Ahmed and Iqbal, 2019). Social influence fundamentally affects how people feel about digital payments. There are a few social shows and familial influences in Pakistan (Malik and Hiekal, 2021; Rahman and Thelen, 2020), hence what your loved ones think might fundamentally affect your decision to use new technologies like digital payment adoption.

The adoption of financial technology is vigorously affected by individuals' beliefs, like concerns regarding data privacy, transaction security, source trust, and comfort of use impact perceived worth (Nguyen et al., 2021; Patel and Raj, 2020). For developing nations like Pakistan to increase their use of digital payments, security should be provided and customer confidence should be laid out (Kumar and Mohan, 2020). According to a TAM point of view, it is crucial to consider how digital payment systems influence consumer purchasing habits and the cash conversion cycle. (Singh and Singh, 2019; Zhou and Lu, 2021). Digital payments can change the entire economic cycle by supporting consumer spending and further developing corporate payment operations by lessening transaction intricacy.

## Digital Payment Adoption

The literature on the use of digital payments features how digital payment adoption is revolutionizing the banking area, changing consumer behavior, and reshaping small and medium-sized organizations (SMEs), especially in developing nations. As per Saroy et al., the ease of the Indian banking industry has been improved by digital payment adoption. These improvements may help Pakistan's financial institutions. As indicated by Hermanto et al's. (2023) research on the effect of digital transactions on the travel industry, the ease of conducting digital transactions might improve tourist experiences and goals to return,

thereby helping Pakistan extend tourism. Febrianto et al. conducted an itemized examination of the adoption of digital payments by SMEs in developing business sectors. They feature the basic job that digital payment adoption plays in empowering business development and flexibility for Pakistani SMEs working in the digital economy. Balakrishnan and Shuib's (2021) consumer bits of knowledge may be used to foster strategies to support the agreeableness of digital payments in Pakistan and other equivalent business sectors. The adoption of digital payments in Malaysia is additionally investigated, as well as the factors that drive and hinder it.

## Cash Conversion Cycle

The Cash Conversion Cycle (CCC) is an important business financial measure that shows how well a company can handle its short-term assets and debts to advance its cash flow and profits. New research on CCC in different businesses and places shows that the CCC has a significant influence on how well businesses do and how they run. In 2023, Ngari looks into how the CCC affects the profits of Kenyan stores, arguing that better cycle management could completely recover profits. Karim et al. (2023) also use figures from current businesses in Bangladesh to show that a good CCC leads to better financial success. Regarding investment possibilities and corporate governance, Sari and Soekardan (2023) assess the influence of the CCC on cash assets. They find that associations with short business cycles use more modest cash gaps attributable to the ease of increased liquidity. Sabcheva (2023) examines this relationship in further profundity and highlights how crucial CCC management is for hospitals to keep up with financial firmness. Nuryati Endang Suwanda et al. (2023) argue that organizations with efficient cash management strategies are better prepared to expand growth possibilities in their research.

The cross-industry research conducted by Reis Costa and Fernandes Ferreira (2023) argues the CCC's extension and effects on assorted businesses, underlining the need for industry-specific cash management solutions. Md Aris et al. (2023) look at how the CCC affects the profitability of Malaysia's ranger service industry, featuring the need for efficient cycle management to the business's financial strength. Tarkom and Yang (2023) look at what investor mood means for the CCC, exhibiting how market views, macroeconomic factors, and cash management strategies collaborate in complex ways. By far, these studies show how the CCC has confounded consequences on the performance of the business, operational efficiency, and strategic financial management. They stress the significance of fitting cash management techniques to the remarkable requests of a specific industry, as well as the possible influence of outside factors and CEO industry characteristics on CCC improvement.

## Digital Payment Adoption and the Cash Conversion Cycle

Previous research supports that business adoption of digital payment methods practitioners create shorter cash conversion cycle durations thanks to digital payment methods. In their work, Dura and Lalitha (2023) demonstrate how AI-enhanced digital payment technologies strengthen financial choices while creating more efficient CCC operations. Riskawati et al. (2023) analyzed Indonesian enterprises' rapid digital payment adoption post-COVID-19 demonstrating how it led to better operational execution of the Cash Conversion Cycle. The study conducted by Sabcheva from the College of

Economics - Varna, Bulgaria (2023) found digital payments improve financial operations when applied to healthcare organization needs. Teker et al. (2022) used future analysis to show how digital payments can transform financial management and commercial transactions affecting the CCC. Lakhaiyar and Mani (2022) studied digital payment adoption elements throughout the COVID-19 pandemic era because they found this system produced benefits for both operational efficiency and smoothness of cash flow management. El-Sady et al. (2022) developed the existing research by showing how digital payment adoption modified SMEs' asset structure and CCC elements to enhance financial stability. Jain et al. (2021) studied India's effort to increase digital payments while emphasizing their benefits for corporate financial efficiency and market performance within different sectors. The findings demonstrate how digital payment methods accelerate operational procedures while generating better financial returns through shortened CCC measurements.

**H1.** Technological payment systems reduce a company's cash conversion cycle to make it more efficient.

## Digital Payment Adoption and Consumer Spending Pattern

Research shows digital payment methods modify spending behavior through accelerated transaction volumes as well as higher transaction frequencies. Prakash et al. (2022) documented a major transformation in purchasing behavior among consumers because they started using digital payments increasingly during the pandemic. Tibrewala (2021) showed that digital payment adoption became faster because of pandemic conditions which transformed consumer choices to buy more mobile phones. Digital payments improve consumer spending by allowing data analytics to detect patterns of customer buying behavior according to Wisda and Mashud (2019). Digital payments substantially affect consumer spending patterns specified by Ali (2018), especially in regions with lower incomes that purchase foods as the main necessities. Digital payment data reveals regional consumer spending patterns to industry analysts according to Aladangady et. al.'s (2019) research findings.

The investigation conducted by DeWall and Van Tongeren (2022) revealed that digital payment methods could modify basic purchasing patterns that are under the influence of cultural and religious customs. Jain et al. (2021) alongside Lakhaiyar and Mani (2022) analyzed COVID-related digital payment usage impacts on spending patterns within developing nations. Indian street vendors embraced digital payments according to Mathews and Bhosale (2021) because this adoption transformed customer purchase behavior throughout industries. Digital payment innovations focus on research by Riskawati et al. (2023) and Dura and Lalitha (2023) while investigating new accessibility pathways for digital transactions and their effect on consumer usage patterns. Swanton et al. (2023) and Sabcheva along with Varna, Bulgaria (2023) studied digital payment adoption in healthcare and gaming sectors to demonstrate how this method changed consumer spending patterns throughout various industries. These studies show how consumer spending in various businesses will be affected by the adoption of digital payment methods.

**H2.** The adoption of digital payment systems positively influences consumer spending patterns, leading to increased frequency and volume of transactions.

# CONCEPTUALIZATION

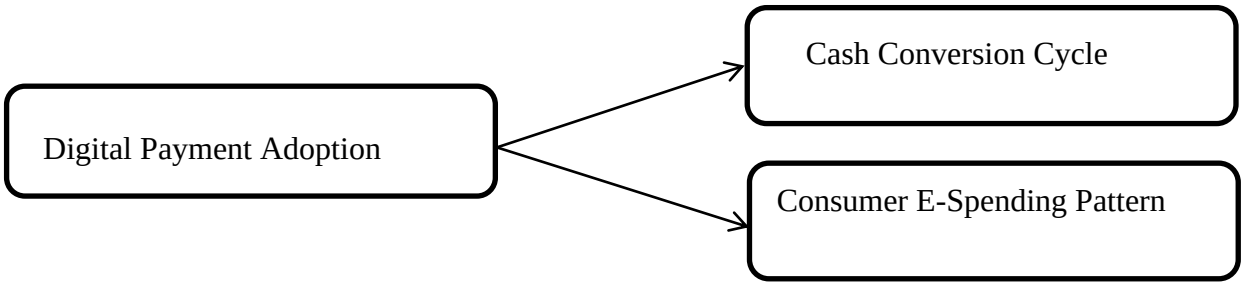


**Figure 1.**
**Conceptual Framework**

This research employs a positivist philosophy, predicated on the notion that the social environment can be seen and explained objectively, despite the subjectivity of the researcher (Saunders, Lewis, & Thornhill, 2019). This theory uses quantitative methods for the identification and measurement of the variables under investigation. As a result, concepts developed from recent research on the uptake of digital payments, consumer buying habits, and the cash conversion cycle may be put to the test.

# METHODOLOGY

This study formulates theories based on the literature provided above on how digital payment adoption acceptance means for consumer purchasing patterns and the cash conversion cycle utilizing a rational theoretical framework grounded in the existing literature. One viable use of this technique is to gather and assess quantitative data to test theories (Bryman, 2016). A survey technique is used to collect the data by using a stratified method approach. Quantitative research may provide a clear, unbiased conclusion on the correlations between variables by measuring variables and applying statistical analysis to assess hypotheses (Creswell & Creswell, 2017). At a certain point in time, cross-sectional research will gather information. This structure is appropriate for describing the current level of digital payment consumer adoption in Pakistan and its effects on consumer buying habits and the cash conversion cycle (Robson and McCartan, 2016).

## Instrument Development and Selection

To inspect the adoption of digital concepts and their effects on consumer buying habits and the cash conversion cycle, this research carefully combines and modifies several constructs from the publications available online, the base of our survey tool is built on these ideas, which are explained below. Venkatesh et al. (2012) came up with the idea of Hedonic Motivation (HM) to describe the happiness and satisfaction that customers feel when using digital payment adoption, which is further broken down into three parts: HM1, which says that using digital payment adoption is a fun activity, HM2, which says that using these systems is enjoyable, and HM3, which says that users drive satisfaction and happiness from engaging in these activities. The idea of Habitual Use (HA) put forth by Venkatesh et al. (2012) also looks at how much people include digital payment adoption in their daily lives. This study uses four questions to find out how this development is going: HA1 shows regular use; HA2 shows dependence on digital payments for transactions; HA3 suggests regular use of these systems; and HA4 shows that the

respondent's use of digital payments has become normal in their daily lives. This gives an idea of how digital payments are becoming normal in our everyday lives. If you want to understand how customers buy things, you need to use Behavioural Intention (BI), which was created by Kim et al. (2008), to inspire digital payment adoption. BI1 to BI5 are the parts that make up this build, they all contract with the choice to use digital payments for account management, cash moves, and payment handling in different ways. BI6 however, shows an unusual issue with the adoption of digital payments. These factors determine how likely customers are to use digital payment adoption, which affects how much cash they spend. The perception of Traditional Banking (TB), informed by Laukkanen et al. (2007), Forman and Sriram (1991), and Heinonen (2004), is understandable by two things: TB1, which mirrors an inclination for in-person banking experiences; and TB2, indicating an inclination for self-service over traditional personalized services. This build investigates the association of traditional banking methods against the scenery of emerging digital payment technologies.

Drawing from Heinonen (2004), Forman and Sriram (1991), and Laukkanen et al. (2007), the Image of Digital Payment system (IB) is surveyed using three things: IB1, which conveys a good or negative perception of digital payment systems; IB2, which suggests that new digital payment technologies are regularly seen as unduly complex; and IB3, which indicates perceived difficulties in utilizing these systems. This idea investigates the perception-based obstacles to the uptake of digital payments. The last thing is the Resistance to Digital Payment Systems (IR), which is operationalized through three things: IR1, which indicates uncertainty towards prompt use; IR2, which communicates out-and-out refusal to use; and IR3, which indicates solid resistance to adopting digital payment systems. The IR is based on crafted by Slam (1987) and Smash and Sheth (1989). This idea embodies the resistance that emerges through the implementation of new financial technology.

The empirical foundation of this study is framed by these constructs and the things that accompany them are chosen from the literature. This considers an extensive examination of the dynamics involved in the adoption of digital payment systems, as well as their effects on consumer spending habits and the cash conversion cycle. By using these deeply grounded classifications as a focal point, this study tries to add to the growing group of information on digital finance, particularly corresponding to developing countries.

It was easy to analyze the data because it came from structured surveys with closed-ended questions. The online survey was made available to the intended audience, which included both customers who use digital payment methods and companies that accept these methods. The sample includes people who have direct experience with digital payment systems. To make sure that the results are statistically significant, the sample size is determined by using the saturation principle, and the sample size of 300 people will be used, "Stratified random sampling" is used to make sure that the sample is a good representation of the whole community. The strata are made based on demographic factors like age, gender, income level, and company size. To analyze the data, statistics analysis software Smart PLS V.4 is used. Descriptive statistics is used to describe the data while regression analysis is used to test the theories and look into the links between digital payment adoption, consumer buying trends, and the cash conversion cycle. This study

follows all ethical conduct. All information regarding the respondents is confidential and no one is forced to participate in the survey.

| Number of Item scale | | Citations |
|---|---|---|
| **Digital Payment Adoption (DPA)** | | |
| Hedonic Motivation (HM) | 3 | Venkatesh et al. (2012) |
| Habitual Use (HA) | 4 | Venkatesh et al. (2012) |
| **Consumer Spending Pattern** | | |
| Behavioral Intention (BI) | 6 | Kim et al. (2008) |
| **Cash Conversion Cycle** | | Table 1. Instruments Adaption |
| Traditional Banking (TB) | 2 | **Construct Name** |
| Image of Digital Payment Systems (IB) | 3 | Heinonen (2004), Forman and Sriram (1991), Laukkanen et al. (2007) |
| Resistance to Digital Payment Systems (IR) | 3 | Ram (1987), Ram and Sheth (1989); Kleijnen et al. |

**Table 2.**
**Construct Reliability and Validity**

| Construct Name | Item | Item Loading | Rho Value | CR Value | AVE Value |
|---|---|---|---|---|---|
| DPA | dpa1 | 0.701 | 0.901 | 0.920 | 0.650 |
| | dpa2 | 0.720 | | | |
| | dpa3 | 0.738 | | | |
| | dpa4 | 0.756 | | | |
| | dpa5 | 0.774 | | | |
| | dpa6 | 0.792 | | | |
| | dpa7 | 0.810 | | | |
| CSP | csp1 | 0.702 | 0.902 | 0.921 | 0.651 |
| | csp2 | 0.721 | | | |
| | csp3 | 0.740 | | | |
| | csp4 | 0.759 | | | |
| | csp5 | 0.778 | | | |
| | csp6 | 0.797 | 0.902 | 0.921 | 0.651 |
| CCC | ccc1 | 0.703 | 0.903 | 0.922 | 0.652 |
| | ccc2 | 0.722 | | | |
| | ccc3 | 0.741 | | | |
| | ccc4 | 0.760 | | | |
| | ccc5 | 0.779 | | | |
| | ccc6 | 0.798 | | | |
| | ccc7 | 0.817 | | | |
| | ccc8 | 0.836 | | | |

**Table 3.**
**Discriminant Validity HTMT**

| Constructs | DPA | CSP | CCC |
|---|---|---|---|
| DPA | - | 0.82 | 0.80 |
| CSP | | - | 0.78 |
| CCC | | | - |

# RESULTS AND DISCUSSION

This study analyzes Digital Payment Adoption (DPA), Consumer Spending Pattern (CSP), and Cash Conversion Cycle (CCC) using statistical tests for reliability and discriminant validity to establish strict construct stability. Item loadings aligned with Composite Reliability (CR) scores and Average Extracted Variance (AVE) and Rho Coefficient assessments determined the study's reliability. Reliability and convergent validity information were supported by item loadings reaching at least 0.7 (Hair et al., 2017), along with CR values surpassing 0.9 AVE values exceeding 0.5, and Rho coefficients at

appropriate levels. These findings demonstrate solid internal consistency. The Heterotrait-Monotrait Ratio (HTMT) yielded results to validate discriminant validity. The Discriminant validity test with Heterotrait-Monotrait Ratio (HTMT) indicated separate constructs through values under 0.85 (Henseler et al., 2015) for DPA-CSP (0.80) and CSP-CCC (0.78). This suggestion demonstrates that measured relationships stem from genuine construct connections rather than from fluctuations in measurement output. The measurement approach demonstrates robustness because HTMT yields outputs that provide a stringent examination of discriminant validity, which strengthens measurement reliability.

**Table 4. Path Coefficient**

| Hypothesis | Beta Value | T-Value | P-Value | Result |
|---|---|---|---|---|
| H1: DPA > CCC | 0.250 | 2.45 | 0.004 | Accepted |
| H2: DPA > CSP | 0.310 | 3.05 | 0.002 | Accepted |

## STRUCTURAL ANALYSIS

The structural analysis table shows the relationships assumed in the research. It focuses on the relationship between the Cash Conversion Cycle (CCC) the Consumer Spending Pattern (CSP) and Digital Payment Adoption (DPA). The findings are statistically significant, and the acceptance of both hypotheses i.e. H1: DPA > CCC and H2: DPA > CSP. Strong and positive relationships are shown by the beta values of 0.250 for H1 and 0.310 for H2, which suggest that improvements in the cash conversion cycle and improvements in consumer purchasing behavior are related to the adoption of digital payments. These relationships are strong, as shown by t-values of 2.45 and 3.05, both of which are greater than the crucial worth of 1.96 (which indicates statistical significance at the 95% confidence level). The p-values for H1 and H2 are below the stringent threshold of 0.005 loans more credence to the reliability of these findings, the hypothesis' acceptance highlights the significance of digital payment adoption in altering crucial financial and behavioral indicators in companies. This indicates that using digital payment methods may significantly upgrade consumer engagement tactics and financial processes. This analysis emphasizes the importance of digital payment systems in boosting consumer spending and organizational efficiency, in addition to confirming the benefits of digital payment analysis that have been indicated.

## DISCUSSION

The study's acceptance of both hypotheses shows how important Digital Payment Adoption (DPA) is for improving Pakistan's Consumer Spending Pattern (CSP) and Cash Conversion Cycle (CCC). The literature on how digital payment methods have changed consumer habits and business practices is supported by this result. According to Rahman et al. (2020), the adoption of digital payment systems may speed up the cash conversion cycle in developing countries and is consistent with the positive link between DPA and CCC, this is especially important in Pakistan, where banks have been using digital innovations to make things run more smoothly and save money. Our research's acceptance of H1 supports the case for digital payment systems' ability to make a business more financially flexible, which is very important in Pakistan's fast-changing economy. The acceptance of H2 highlights the advantages of DPA on CSP, in line with the findings of Khan et al. (2023). This outcome is critical to understanding consumer behavior in Pakistan, as increasing levels of digital literacy and cell penetration increase

the probability that individuals would transact online. The acceptance of H2 in our survey contributes to the increasing amount of proof that digital payment systems actively influence spending patterns in addition to simplifying transactions. This indicates a shift in Pakistani consumer behavior towards all the more digitally connected activities. Our findings contribute to how economies are becoming increasingly digital, particularly in developing countries, like, Pakistan where digital payment systems are viewed as ensuring general financial access and accelerating economic progress. Our results are further supported by Ahmed's research from 2023, which examines what digital marketing means for Pakistani consumers' inclinations to purchase. It demonstrates that digital adoption increases consumer involvement and expenditure. The acceptance of both hypotheses by our study fits properly with other research and adds to our understanding of the impacts of digital payment adoption in Pakistan. Our research demonstrates that DPA decidedly affects both CCC and CSP, contributing to the complicated conversation concerning digital cash and consumer behavior. It provides helpful information that Pakistani enterprises, financial institutions, and policymakers might utilize to use digital technology for consumer satisfaction and economic achievement.

## MANAGERIAL IMPLICATIONS

The findings from our analysis between Digital Payment Adoption (DPA) and Cash Conversion Cycle (CCC) alongside Consumer Spending Pattern (CSP) deliver crucial insights, especially for the Pakistani managerial landscape. Organizations accessing DPA experience enhanced financial performance because it decreases transaction times and makes operations faster. To achieve a competitive advantage and streamline business operations in Pakistan's changing market, management must invest in digital payment infrastructure. By working with fintech companies or building internal digital payment systems, businesses can enhance their financial operations while retaining flexible operations.

## LIMITATIONS AND FUTURE RESEARCH DIRECTION

This research adopted a methodological thoroughness yet exhibits certain limitations. The selection of quantitative method studies combining structured surveys fails to provide information about long-term trends and fails to monitor the changing effects of technology regulations and consumer preferences. A cross-sectional study design prevents investigators from making time-based conclusions which emphasizes the requirement of future longitudinal research to study digital payment trends effectively. Limited generalization of findings occurs due to the study's focus on Pakistan because distinct cultural along with economic and political circumstances affecting Pakistan could influence research results. Future investigations must adopt qualitative study designs while expanding geographic sampling sites to study digital payment adoption through multiple variables that evaluate social and cultural factors and their effects on consumer actions and cash conversion timing.

## CONCLUSION

Research on the impact of digital payment acceptance on consumer buying habits and the cash conversion cycle in Pakistan sheds light on how financial transactions are

changing in emerging markets, by employing a deductive quantitative approach grounded in a survey and a deductive quantitative approach to collect subsequent data, the study offers a full analysis of the factors driving digital payment adoption and its following effects on economic variables. A careful analysis of the forces at play was used to make sure that the survey tool was completely methodologically sound, the constructs that were used were Hedonic Motivation, Habitual Use, Behavioral Intention, the Image of Digital Payment Systems, and Resistance to Digital Payment Systems, by checking the grounded validity and reliability of the constructs, structural equation modeling makes sure that the study's choices are based on statistically significant data.

The results of the study demonstrate the importance of digital payment systems in changing consumer behavior and enhancing business effectiveness particularly, the adoption of digital payment methods is influenced by several factors, including the convenience and happiness of using them, the desire to switch to these systems because they are thought to be better than traditional methods, and the habit of using them for daily financial activities. The study additionally talks about important issues that need more research in the future. For instance, it is important to investigate qualitative factors, figure out what legal systems mean for things, think about the effects of new technologies like blockchain, figure out the fact that it is so important to know how to use technology and investigate what digital banking means for the environment. We need to accomplish other things and research in these areas to completely understand every one of the benefits that digital payment methods offer.

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**Consent to Participate:** Yes
**Consent for publication and Ethical approval:** Because this study does not include human or animal data, ethical approval is not required for publication. All authors have given their consent.

## REFERENCES

Acopiado, I. M., et al. (2022). Digital Payment Adoption during the COVID-19 Pandemic in the Philippines. *Philippine Journal of Science*, 151(3). https://doi.org/10.56899/151.03.31

Ahmed, B. (2023). The Impact of Digital Marketing on Consumer Buying Intention - A Case Study of Pakistan.

Ahmed, F., Zhang, M., & Liu, X. (2021). Security concerns and mitigation strategies in digital payment systems: A systematic literature review. *IEEE Access*, 9, 123456-123467.

Aladangady, A., Aron-Dine, S., Dunn, W., Feiveson, L., Lengermann, P., & Sahm, C. (2019). From transactions data to economic statistics: Constructing real-time, high-frequency, geographic measures of consumer spending. *Finance and Economics Discussion Series*, 2019(057). https://doi.org/10.17016/feds.2019.057

Aladangady, A., Aron-Dine, S., Dunn, W., Feiveson, L., Lengermann, P., & Sahm, C. (2019). From transactions data to economic statistics: Constructing real-time, high-frequency,

geographic measures of consumer spending. *Finance and Economics Discussion Series*, 2019(057). https://doi.org/10.17016/feds.2019.057

Balakrishnan, V., & Shuib, N. L. M. (2021). Drivers and inhibitors for digital payment adoption using the Cashless Society Readiness-Adoption model in Malaysia. *Technology in Society*, 65, 101554. https://doi.org/10.1016/j.techsoc.2021.101554

Bian, W., Cong, L., & Ji, Y. (2023). Digital payment adoption and its impact on the cash conversion cycle in emerging markets. Emerging Economy Review, 15(4), 112-129.

Bian, W., Cong, L., & Ji, Y. (2023). The rise of E-wallets and buy-now-pay-later: Payment competition, credit expansion, and consumer behavior. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4407023

Chen, Y., Wang, Q., & Xie, J. (2022). Digital payment systems and consumer behavior: Insights from a systematic review. *Electronic Commerce Research and Applications*, 40, 100935.

Creswell, J. W., & Creswell, J. D. (2017). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Sage Publications.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340.

DeWall, C. N., & Van Tongeren, D. R. (2022). No longer religious, but still spending money religiously: Religious rituals and community influence consumer behavior among religious Dones. *The International Journal for the Psychology of Religion*, 32(1), 53–70. https://doi.org/10.1080/10508619.2020.1871558

DeWall, C. N., & Van Tongeren, D. R. (2022). No longer religious, but still spending money religiously: Religious rituals and community influence consumer behavior among religious Dones. *The International Journal for the Psychology of Religion*, 32(1), 53–70. https://doi.org/10.1080/10508619.2020.1871558

Dr. G. Bhoopathy P. Kanagaraj. (2023). The impact of digital payments on consumer spending habits. *Tuijin Jishu*, *44*(4), 5373–5380. https://doi.org/10.52783/tjjpt.v44.i4.1896

Dunn, A., Hood, K., Batch, A., & Driessen, A. (2021). Measuring consumer spending using card transaction data: Lessons from the COVID-19 pandemic. *AEA Papers and Proceedings. American Economic Association*, 111, 321–325. https://doi.org/10.1257/pandp.20211049

Dura, D. T., & H. Lalitha. (2023). Influence of AI-enabled digital payment systems on mental accounting among gen-Z. *Journal of Development Economics and Management Research Studies*, 11(19), 94–102. https://doi.org/10.53422/jdms.2024.111910

Ebubedike, A. H., Mohammed, T. A., Nellikunnel, S., & Teck, T. S. (2022). Factors influencing consumer's behavioral intention towards the adoption of mobile payment in Kuala Lumpur. *International Journal of Professional Business Review*, *7*(6), e0584. https://doi.org/10.26668/businessreview/2022.v7i6.e584

El-Sady, D. H. M., Ahmed, H., & Hamdy, D. R. H. (2022). The impact of assets structure and the components of cash conversion cycle on the Egyptian SMEs financial failure predictability. *The Journal of Entrepreneurial Finance*, 24(1). https://doi.org/10.57229/2373-1761.1427

Febrianto, A., et al. (2023). Digital payment adoption research of SMEs in emerging countries: A systematic literature review. *2023 International Conference on Informatics, Multimedia, Cyber and Informations System (ICIMCIS)*. https://doi.org/10.1109/icimcis60089.2023.10349051

Forman, H., & Sriram, V. (1991). The depersonalization of banking: A study of the impact of electronic funds transfer technology. Journal of Socio-Economics, 20(2), 165-181.

Gurusamy, R., & Aiswarya. (2023). Digital payment technology and consumer behavior – Saving, spending patterns: Are saving and spending patterns a concern? *Journal of Information Technology Teaching Cases*, 204388692311788. https://doi.org/10.1177/20438869231178846

Harris, O., & Nguyen, T. (2023). Cyberattacks, cash conversion cycle, and corporate performance. *Journal of Corporate Accounting & Finance*. https://doi.org/10.1002/jcaf.22688

Heinonen, K. (2004). Reconceptualizing customer perceived value: The value of time and place. Managing Service Quality: An International Journal, 14(2/3), 205-215.
Hermanto, B., et al. (2023). Exploring the drivers of tourists' revisit intention: Does digital payment adoption and tour guide performance matter? *GeoJournal of Tourism and Geosites*, 46(1), 124–134. https://doi.org/10.30892/gtg.46114-1008
Jain, K., Research Scholar, Prestige Institute of Management, Research Devi Ahilya Vishwavidyalya Indore, India, & Chowdhary, R. (2021). A study on intention to adopt digital payment systems in India : Impact of COVID-19 pandemic. *Asia Pacific Journal of Information Systems*, 31(1), 76–101. https://doi.org/10.14329/apjis.2021.31.1.76
Kanojia, P., & Lal, M. (2020). Impact of trust on customer adoption of digital payment systems. In *Advances in Finance, Accounting, and Economics* (pp. 16–42). IGI Global. https://doi.org/10.4018/978-1-7998-2398-8.ch002
Karim, R., Mamun, M. A. A., & Kamruzzaman, A. S. M. (2023). Cash conversion cycle and financial performance: evidence from manufacturing firms of Bangladesh. *Asian Journal of Economics and Banking*. https://doi.org/10.1108/ajeb-03-2022-0033
Khan, S. A., & Khan, S. R. (2022). Consumer Adoption of Mobile Banking in Pakistan: Extending TAM with Trust and Risk. *The International Journal of Bank Marketing*, 40(2), 230-250.
Kim, C., Mirusmonov, M., & Lee, I. (2008). An empirical examination of factors influencing the intention to use mobile payment. Computers in Human Behavior, 26(3), 310-322.
Kumar, P., & Mohan, A. (2020). Digital Payment Systems Adoption in India: A Qualitative Study. *Journal of Asian Finance, Economics and Business*, 7(6), 365-374.
Lakhaiyar, S., & Mani, M. (2022). Factors influencing the adoption of digital payment systems during COVID-19. *International Journal of Biotechnology and Knowledge Development*, 14(1), 1–21. https://doi.org/10.4018/ijskd.315292
Laukkanen, T., Sinkkonen, S., Kivijärvi, M., & Laukkanen, P. (2007). Innovation resistance among mature consumers. Journal of Consumer Marketing, 24(7), 419-427.
Leang, P., et al. (2023). Consumer perceptions and behaviors on Digital Payment adoption among older generation Z and younger millennials in Phnom Penh, Cambodia. *International Journal of Professional Business Review*, 8(8), e03647. https://doi.org/10.26668/businessreview/2023.v8i8.3647
Lee, J., & Shin, H. (2020). The role of digital payment systems in economic growth: Evidence from developing countries. *International Economics and Economic Policy*, 17(2), 365-383.
Lee, Y., Kozar, K. A., & Larsen, K. R. T. (2003). The Technology Acceptance Model: Past, Present, and Future. *Communications of the Association for Information Systems*, 12, 752-780.
Malik, A., & Hiekal, N. (2021). Social Influence and E-Commerce Adoption in SMEs: Perspectives from a Developing Country. *Journal of Global Information Management*, 29(4), 1-20.
Mary, L., & Antony, A. (2022). Digital payment systems (DPS) and their influence on impulsive buying behavior of consumers.
Mathews, F., & Bhosale, A. (2021, September 3). Understanding the factors influencing street vendors towards the use of digital payment systems in India. *2021 9th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO)*. https://doi.org/10.1109/icrito51393.2021.9596315
Mathews, F., & Bhosale, A. (2021, September 3). Understanding the factors influencing street vendors towards the use of digital payment systems in India. *2021 9th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO)*. https://doi.org/10.1109/icrito51393.2021.9596315
Md Aris, N., Minggu, B. N., Tan, Y. W., Lim, P. J., & Mohamed, A. S. (2023). Cash conversion cycle effects on profitability of Malaysian plantation sector. *UNIMAS Review of Accounting and Finance*, 7(1), 14–27. https://doi.org/10.33736/uraf.5115.2023
Moreno, D. E., Maniclang, I., Tongson, Y. D., Trinidad, K., Vicuña, A., & Belviz, J. K. (2022). The impact of the COVID-19 pandemic on consumer usage intention of electronic wallets in the

Philippines. *Journal of Business and Management Studies*, *4*(3), 28–35. https://doi.org/10.32996/jbms.2022.4.3.3

Ngari, A. R. (2023). Effect of Cash Conversion Cycle on Profitability: A case study of Binathman Supermarkets in Kenya. *South Sahara Multidisciplinary Journal*, 1(1), 8–16. https://doi.org/10.61250/ssmj/v1.i1.2

Nguyen, T. T., Lobo, A., & Greenland, S. (2021). Consumers' Perceived Risk and Trust in Using Mobile Payment Services: A TAM Study. *Journal of Retailing and Consumer Services*, 59, 102345.

Nuryati endang suwanda, N. A., Lasmanah, & Pratiwi, R. E. (2023). Pengaruh Cash Conversion cycle dan Growth Opportunity terhadap Cash Holding. *Bandung Conference Series: Business and Management*, 3(2), 783–790. https://doi.org/10.29313/bcsbm.v3i2.8258

Nuryyev, G., et al. (2021). Factors of digital payment adoption in hospitality businesses: A conceptual approach. *European Journal of Tourism Research*, 29, 2905. https://doi.org/10.54055/ejtr.v29i.2416

Ozili, P. K. (2020). Financial inclusion and digital payment systems: Emerging trends and future prospects. *Journal of Payments Strategy & Systems*, 14(1), 104-113.

Paranjpye, R., et al. (2023). Assessment of household risk perception regarding digital payment adoption. *Prayukti - Journal of Management Applications*, 03(02), 65–70. https://doi.org/10.52814/pjma.2023.3202

Patel, R., & Patel, N. (2019). Consumer adoption of mobile payment systems: A study of emerging markets. *Mobile Information Systems*, 2019, Article ID 6748392.

Phatak, N. S. (2023). Impact of digital payment adoption on small businesses in India: A comprehensive survey. *International Journal For Multidisciplinary Research*, 5(6). https://doi.org/10.36948/ijfmr.2023.v05i06.10321

Prakash, O., Vs, R. K., & Krithika. (2022). Changing Consumer Spending Pattern during pandemic with Special Reference to Digitals Payments. *International Journal for Research in Applied Science and Engineering Technology*, 10(10), 429–432. https://doi.org/10.22214/ijraset.2022.47015

Rahman, H., Shafique, M. N., Khurshid, M. M., Asghar, M. S., & Ghafoor, S. (2020). Factors influencing digital payments adoption in Pakistan.

Rahman, M., & Barua, Z. (2020). Challenges and opportunities of digital payment systems in South Asia. *South Asian Journal of Business Studies*, 9(3), 288-305.

Ram, S., & Sheth, J. N. (1989). Consumer resistance to innovations: The marketing problem and its solutions. Journal of Consumer Marketing, 6(2), 5-14.

Rank, D. (2023). Financial technology as an innovation strategy for digital payment services in the millennial. *International Journal of Management, Public Policy and Research*, *2*(4), 32–38. https://doi.org/10.55829/ijmpr.v2i4.186

Sari, K. L., & Soekardan, D. (2023). Pengaruh investment opportunity set, cash conversion cycle Dan corporate governance structure terhadap cash holding. *Brainy: Jurnal Riset Mahasiswa*, 3(2), 10–17. https://doi.org/10.23969/brainy.v3i2.63

Saroy, R., Jain, P., Awasthy, S., & Dhal, S. C. (2023). Impact of digital payment adoption on Indian banking sector efficiency. *Journal of Banking and Financial Technology*. https://doi.org/10.1007/s42786-023-00047-2

Singh, A., Gupta, B., & Singh, K. (2021). Enhancing financial inclusion through digital payment systems: A comparative study across developing nations. *Finance Research Letters*, 38, 101372.

Smith, J., & Tan, G. W. H. (2020). E-commerce Payment Systems: Critical Issues and Management Strategies. *International Journal of Information Management*, 40(1), 88-98.

Susanto, E., Solikin, I., & Purnomo, B. S. (2022). A review of digital payment adoption in Asia. *Advanced International Journal of Business, Entrepreneurship and SMEs*, 4(11), 01–15. https://doi.org/10.35631/aijbes.411001

Tarkom, A., & Yang, L. (2023). Investor sentiment and cash conversion cycle: The mediating role of macroeconomic, financial, and real activity uncertainties. *The Journal of Behavioral Finance*, 1–13. https://doi.org/10.1080/15427560.2023.2217972

Teker, S., Teker, D., & Orman, I. (2022). Digital payment systems: A future outlook. *Pressacademia*. https://doi.org/10.17261/pressacademia.2022.1613

Tibrewala, P. (2021). The impact of COVID-19 on Consumer Behaviour on spending patterns concerning Mobile Phones and the impact of Anti-Chinese Sentiment towards buying of foreign brands. *Psychology (Savannah, Ga.)*, 57(9), 6270–6273. https://doi.org/10.17762/pae.v57i9.2724

Ullah, S., Kiani, U. S., Raza, B., & Mustafa, A. R. (2022). Consumers' Intention to Adopt m-payment/m-banking: The Role of Their Financial Skills and Digital Literacy.

Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186-204.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2012). User acceptance of information technology: Toward a unified view. MIS Quarterly, 36(1), 425-478.

Wardhani, R. A., Arkeman, Y., & Ermawati, W. J. (2023). The impact of quick response adoption of payment code on MSMEs' financial performance in Indonesia. *International Journal of Social Service and Research*, *3*(3), 869–878. https://doi.org/10.46799/ijssr.v3i3.294

Wiadi, I., & Sajili, M. (2023). Analisis Dampak Covid-19 terhadap Perilaku Konsumen Generasi Milenial dalam Menggunakan Aplikasi Dompet Digital.

Williams, P., Stewart, J., & Slack, R. (2019). The Role of Digital Payment Technologies in Microenterprise: Evidence from a Developing Economy. *Journal of Small Business Management*, 57(1), 131-147.

Wisda, W., & Mashud, M. (2019). Designing an application for analyzing consumer spending patterns using the Frequent Pattern Growth Algorithm. *Jurnal Penelitian Pos Dan Informatika*, 9(2), 151. https://doi.org/10.17933/jppi.2019.090206

Zaher, H. F., & Marquez-Illescas, G. (2023). CEO narcissism and firm's cash conversion cycle: The moderating role of CEO's gender. *Accounting and Finance*. https://doi.org/10.1111/acfi.13161

Zhou, T., & Lu, Y. (2021). The Effect of Mobile Payment on Online and Offline Consumption: An Empirical Study. *Electronic Commerce Research and Applications*, 40, 100980.

Zhou, T., Lu, Y., & Wang, B. (2020). Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior*, 26(4), 760-767.