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# Understanding the Role of Demographic Factors in the Adoption of Digital Payment Systems

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### ABSTRACT

The rapid growth of digital payment technologies, which are now playing a significant part in the cashless economy, has drastically altered the global financial landscape. This research, which focuses on the consumer behaviour of digital payments, looks at how digital payment systems are used. About the integration of these systems concerning customer engagement and operational efficiency that influence consumers' uptake of e-wallets, mobile banking, and contactless payment, this study intends to explore the psychological and demographic factors that influence consumer adoption of digital payments. Statistical methods are utilized to analyse the data; in this case, the chi-square test will be employed. The study concluded with suggestions to improve digital infrastructure and the finding that demographic demographics have a major impact on the adoption of digital payment systems.

## 1. Introduction

Technology's rapid advancement has transformed a number of sectors, including banking, where digital payment methods are now a necessary component of modern commercial transactions. including many others, it has seen a swift shift from traditional cash-based payment methods to digital payment platforms including e-wallets, mobile banking, and online transfers. These advancements offer several benefits, including convenience, speed, and enhanced security. Despite the potential advantages, digital payment systems are still not universally accepted, and some customer groups and businesses are reluctant to fully embrace new technologies.

This topic is important because it sheds light on the factors that motivate people to utilise digital payments, which promotes financial inclusion, increases economic efficiency, and eases the transition to a cashless society. In order to strengthen its digital economy, businesses, financial institutions, and regulators may find it helpful to understand the barriers to and enablers of digital payment acceptance when creating policies that encourage widespread usage. Furthermore, the global shift towards digitalisation has been accelerated by the COVID-19 pandemic, therefore closing the adoption gaps for digital payments is essential to ensuring long-term economic development.

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The purpose of this study is to look at how consumer behaviour and business integration interact to affect consumers' adoption of digital payment solutions. Company policies surrounding technological infrastructure and marketing strategies, as well as customer concerns about security, usability, and trust, all have a big influence on adoption rates. These relationships may also be lessened by demographic factors including age, location, and income. By examining these elements, I hope to provide guidance on how businesses and consumers might overcome these challenges and encourage a broader use of digital payment systems. With a better understanding of the digital payment ecosystem, this study will assist players in putting.

### *1.1 Literature Review*

The acceleration of digital payment adoption due to the COVID-19 pandemic, highlights how health concerns shifted consumer preferences towards contactless payments. The trend is likely to persist post-pandemic as consumers prioritize safety and convenience [1]. The pandemic has transformed consumer behaviour towards digital payments, emphasizing the rise in e-commerce and mobile wallet usage. The findings indicate that consumers are more willing to adopt digital payment methods due to increased familiarity during the health crisis [2]. The impact of the COVID-19 pandemic on the rapid adoption of digital payment methods in Pakistan. It emphasizes that changing consumer habits during lockdowns have created lasting effects on payment preferences [3]. The shift towards digital payments in the retail sector due to the pandemic, focusing on how businesses adapted their payment systems. The authors conclude that the adoption of digital payments has become a key component of business resilience [4]. The COVID-19 pandemic has changed consumer attitudes toward digital payment security and privacy. The findings suggest that increased online transactions have heightened consumer concerns regarding data protection [5].

The factors driving the adoption of digital payment systems in India during the pandemic. It highlights the role of government initiatives and incentives in facilitating this transition [6]. The role of mobile wallets in enhancing financial inclusion during the pandemic in rural India. It finds that mobile payments have become vital for unbanked populations to access essential services [7]. The consumer perceptions of digital payment systems in the aftermath of the pandemic, emphasizing the importance of user experience and customer service. The authors conclude that improving these aspects is essential for encouraging widespread adoption [8]. The long-term impacts of the pandemic on digital payment adoption in urban areas of India, highlighting the increased reliance on contactless payment methods. The findings suggest that these trends are likely to persist in the future [9]. The pandemic influenced consumer trust in digital payment systems, indicating a shift in consumer behavior towards more secure and efficient payment methods. The authors suggest that fostering trust is critical for the sustained growth of digital payments [10].

Comprehensive research on long-term behavioural shifts in consumer perceptions of security and trust across a range of demographic groups in both urban and rural situations.

### *1.2 Rationale of the Study*

Digital payment system use has accelerated recently, revolutionising how customers conduct financial transactions throughout the world. The degree of adoption varies greatly among customers, despite the increasing popularity and technical developments. Numerous factors, such as corporate integration, perceived usability, advertising tactics, and individual customer behaviours, frequently have an impact on this variety. Given the varied population and quickly evolving digital infrastructure,

it is imperative that companies and governments comprehend the factors that influence the adoption of digital payments.

Although variables impacting the adoption of digital payments have been found in previous research, these studies have either been restricted to industrialised nations or have lacked thorough study. By examining the effects of consumer initiative, company integration, promotional tactics, and simplicity of use on the uptake of digital payment systems, this study seeks to close this gap. This study will present empirical evidence on the interactions between these variables using statistical method Chi-Square testing. The results will not only add to the body of knowledge in academia but also provide useful advice for companies looking to improve their digital payment systems. Understanding the underlying issues surrounding adoption will enable stakeholders to devise effective strategies to encourage broader usage of digital payments, ultimately supporting the transition towards a cashless economy.

### *1.3 Research Objectives*

The objectives of the study are to examine the key factors influencing the initial adoption of digital payment systems among consumers and to assess in driving the continued use of digital payment systems.

## **2. Methods**

### *2.1 Data Collection*

A structured questionnaire was used to gather data from 150 respondents who were randomly selected and engaged in online digital payments around the state. This process is further supported by the employment of specialised tools, which advances our understanding of the relevant topic. The statistical method Chi-Square was employed in this study to close the gap between gathering data and making well-informed decisions.

## **3. Findings**

The research is mainly based on primary data collected through a structured questionnaire containing 6 factors describing the behavior of the respondents aligning with digital payments.

- i. **Perceived Ease of Use:** This refers to how easy and intuitive users find a digital payment system. If a platform is straightforward and user-friendly, individuals are more likely to adopt it, as they feel confident navigating it without significant barriers.
- ii. **24/7 Accessibility:** Accessing digital payment systems anytime is crucial for users. This round-the-clock availability ensures that individuals can make transactions whenever it suits them, enhancing convenience and flexibility in their financial activities.
- iii. **Perceived User Experience:** This encompasses the overall satisfaction and enjoyment users derive from interacting with the digital payment platform. A positive user experience, characterized by a seamless interface, fast transaction processing, and helpful customer support, encourages users to continue using the service.
- iv. **Perceived Security:** Trust in the security of digital payment systems is vital. Users are more likely to adopt these systems if they believe their personal and financial information is protected from fraud and cyber threats, fostering confidence in the payment process.

- v. Social Influence: This factor reflects how the behavior and opinions of peers, family, or social networks impact an individual's decision to use digital payment methods. When people see others using and endorsing these systems, they may be more inclined to adopt them themselves.
- vi. Multiple Payment Methods: The availability of various payment options (credit/debit cards, e-wallets, bank transfers, etc.) within a digital payment system enhances user convenience. When users can choose their preferred payment method, they are more likely to find the service accommodating to their needs, leading to increased usage.
- vii. Null Hypothesis (H0): There are no significant differences in the perceived ease of use, accessibility, user experience, security, social influence, and availability of multiple payment methods for digital payments based on demographic factors such as age, location, income, and education.

**Table 1**

Chi – square

Factors	Age		Location		Income		Education	
	Chi Square	Significance	Chi Square	Significance	Chi Square	Significance	Chi Square	Significance
Perceived Ease of Use	21.326	0.046	11.705	0.008	21.023	0.050	39.213	0.000
24/7Accessibility	21.487	0.044	7.714	0.052	21.935	0.038	29.373	0.003
Perceived User Experience	16.434	0.172	6.488	0.090	21.006	0.050	19.787	0.071
Perceived Security	25.919	0.011	6.813	0.078	21.066	0.047	22.807	0.029
Social Influence	19.621	0.075	8.185	0.043	17.509	0.131	24.269	0.019
Multiple Payment Methods	18.873	0.092	7.866	0.049	16.013	0.191	26.334	0.010

### 3.1 Interpretation

The study examines how demographic variables such as age, location, and income impact various aspects of e-service quality. The significance levels indicate which factors are notably affected by these demographics, while others show no considerable influence.

- i. Perceived ease of use (0.046), 24/7 (0.044), and perceived security (0.011) are significant factors influenced by age, while perceived user experience (0.172), social influence (0.075) and multiple payment methods (0.092) are not significantly affected by age.
- ii. Location significantly influences perceived ease of use (0.008), social influence (0.043), and availability of multiple payment methods (0.049), while perceptions of accessibility (0.052), user experience (0.090), and security (0.078) show no significance.
- iii. Income significantly influences perceived ease of use (0.050), 24/7 accessibility (0.038), perceived user experience (0.050), perceived security (0.047) and in contrast, social influence (0.131), and multiple payment methods (0.191) show no significance.
- iv. Educational qualification significantly influences perceived ease of use (0.000), 24/7 accessibility (0.003), social influence (0.019), perceived security (0.029) multiple payment methods (0.010) except Perceived user experience (0.071) show no significance

#### 4. Conclusions

Significant correlations between demographic characteristics—more especially, age, location, income, and education—and different opinions on digital payment systems are revealed by the chi-square results analysis. These demographics have a significant impact on factors like perceived security, accessibility, and simplicity of use, indicating that user experiences differ among various populations. These findings highlight how crucial it is to modify digital payment systems to accommodate consumers' various demands. According to the results, views are significantly shaped by social factors, technological accessibility, and financial knowledge. All things considered, in order to increase adoption rates, policymakers should strengthen financial literacy initiatives and expand access to digital payment systems, especially in underprivileged areas. Strong security laws and awareness-raising initiatives can also contribute to increased user confidence in digital payment systems.

As technology advances, future studies should examine the long-term impacts of demographic characteristics on the adoption of digital payments. Further understanding of user behaviour may be obtained by examining the influence of regional and cultural differences in perception. Furthermore, evaluating how financial literacy initiatives affect users' trust in digital payments may help identify ways to increase adoption rates. A wider variety of payment platforms might be included in the study to improve comprehension of consumer preferences. Lastly, qualitative research techniques like focus groups and interviews may provide deeper understanding of the driving forces behind users' attitudes and actions around digital payments.

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