Tuijin Jishu/Journal of Propulsion Technology
ISSN: 1001-4055
Vol. 44 No. 4 (2023)

The Impact of Digital Payments on Consumer Spending Habits

[1]Dr. G. Bhoopathy, [2]P. Kanagaraj

[1]Associate Professor, Department of Commerce, Rathnavel Subramaniam College of Arts and Science, Coimbatore, India.
[2]Research Scholar, Department of Commerce, Rathnavel Subramaniam College of Arts and Science, Coimbatore, India.

Abstract: The transition to digital payments has significantly transformed consumer spending habits. With the ease of mobile wallets, online banking, and contactless payments, consumers are increasingly embracing cashless transactions. This shift has not only streamlined the payment process but also encouraged more frequent and impulsive purchases. Additionally, the ability to track and manage expenses in real-time has led to greater financial awareness, promoting responsible spending. While digital payments offer convenience, they also raise concerns about privacy and security. In sum, the impact of digital payments on consumer spending habits is a complex interplay of convenience, financial management, and security considerations.

1. Introduction

The advent of digital payments has triggered a profound transformation in consumer spending habits, influencing how individuals manage their finances and engage in transactions. With the convenience of mobile wallets, online banking, and contactless payments, consumers are increasingly gravitating towards cashless options, streamlining the payment process and fostering a culture of instant gratification. This shift in payment methods has not only made purchases more accessible but has also encouraged impulsive spending. In addition to convenience, digital payments offer the benefit of real-time expense tracking, which enhances financial awareness and promotes more responsible spending. However, as these changes continue to gain traction, concerns related to privacy and security in the digital realm have also come to the forefront, underscoring the multifaceted impact of digital payments on consumer behaviour.

2. Review Of The Literature

Numerous studies have found that the convenience of digital payments, such as mobile wallets and contactless cards, often leads to increased consumer spending. For example, a study by Seneviratne et al. (2017) highlighted that the ease and speed of digital payments can encourage impulsive purchases.

Digital payment platforms often offer tools for tracking expenses in real-time. Research by Wilcox et al. (2019) has shown that these features can enhance consumer financial awareness and promote responsible spending habits.

Research, such as the work by Li and Liu (2018), has pointed out that the impact of digital payments on spending habits may vary across demographic factors, including age, income, and education.

Consumer concerns about the privacy and security of digital payments have been addressed in various studies. A study by Shyam et al. (2018) delved into these concerns and their potential impact on consumer trust and adoption of digital payment methods.

Some researchers, like Chen et al. (2020), have conducted longitudinal studies to track changes in consumer spending habits over time as they transition to digital payment methods.

3. Statement Of The Problem

The increasing adoption of digital payments presents both opportunities and challenges in understanding its impact on consumer spending habits. As traditional cash transactions give way to digital alternatives such as mobile wallets, online banking, and contactless payments, it is essential to investigate how these changes influence the frequency and impulsivity of consumer spending. Furthermore, the real-time

tracking and financial management features offered by digital payment platforms may be altering consumer financial awareness and responsible spending practices. Yet, concerns regarding the security and privacy of these digital methods persist. This study aims to address the complex problem of deciphering how digital payments are reshaping consumer spending behaviors and assess the implications for individuals, businesses, and policymakers.

4. Objectives Of The Study

1. To study about the demographic variables of the respondents.
2. To analyse the perception of consumers towards impact of digital payment on their spending habits.
3. To find the relationship between level of income and perception of consumers towards impact of digital payment on their spending habits.

5. Scope Of The Study

The scope of this study encompasses a comprehensive exploration of the influence of digital payments on consumer spending habits. It involves an examination of the various forms of digital payment methods, including mobile wallets, online banking, and contactless transactions, and their effects on consumer behavior. The study will investigate the extent to which digital payments have altered the frequency of transactions and the level of impulsivity in consumer spending. Additionally, it will delve into how the real-time tracking and management features of digital payment platforms affect financial awareness and the practice of responsible spending. Furthermore, the study will consider the evolving landscape of privacy and security concerns in the digital payment ecosystem. Through a combination of surveys, data analysis, and consumer behavior studies, this research aims to provide valuable insights into the multifaceted impact of digital payments on consumer spending habits.

6. Research Methodology

Type of research: Descriptive research has been used for the study.
Data Collection: Gather data through surveys, interviews, or transaction records to obtain insights into consumer spending habits before and after adopting digital payments.
Quantitative Analysis: Employ statistical tools and software to analyze the collected data, including regression analysis and correlation studies to identify patterns and relationships.
Qualitative Analysis: Conduct in-depth interviews or focus group discussions to gain a deeper understanding of consumer perceptions, motivations, and attitudes toward digital payments.
Comparative Analysis: Compare data across different regions, age groups, income levels, or other relevant factors to identify variations in the impact of digital payments.
Case Studies: Examine real-world cases of businesses or individuals successfully leveraging digital payments to encourage responsible spending or financial literacy.

7. Limitations Of The Study

1. The sample size of the study is limited to 150.
2. There may be a bias towards primary data collected from the respondents.

8. Analysis And Interpretation

Table 1: Demographic variables of the respondents

Demographic variables	Particulars	Frequency	Percent
Gender	Male	52	34.7
	Female	98	65.3
Age	18-24 Years	45	30.0
	25-34 Years	53	35.3

	35-44 Years	36	24.0
	45-54 Years	16	10.7
Educational Qualification	High School or Less	44	29.3
	Some College/Associate Degree	30	20.0
	Bachelor's Degree	43	28.7
	Master's Degree or Higher	33	22.0
Monthly Income	Less than Rs1,000	41	27.3
	Rs1,000 - Rs2,499	61	40.7
	Rs2,500 - Rs4,999	44	29.3
	Rs5,000 - Rs7,499	4	2.7
Total		**150**	**100.0**

The demographic data provides a comprehensive overview of the sample composition. In terms of gender, the sample is predominantly female, accounting for 65.3% of respondents, while males make up 34.7%. Regarding age, the largest group falls within the 25-34 years category, constituting 35.3% of the respondents, closely followed by the 18-24 years group at 30.0%. The 35-44 years and 45-54 years age groups make up 24.0% and 10.7%, respectively.

In the context of educational qualifications, respondents with a bachelor's degree are the most prevalent at 28.7%, closely followed by those with high school or less education at 29.3%. Respondents with some college/associate degrees represent 20.0% and those with a master's degree or higher make up 22.0% of the sample.

Regarding monthly income, the majority falls within the Rs1,000 - Rs2,499 income range, accounting for 40.7% of the respondents. Those with less than Rs1,000 monthly income constitute 27.3%, while the Rs2,500 - Rs4,999 and Rs5,000 - Rs7,499 income brackets make up 29.3% and 2.7%, respectively.

Table 2: Perception of consumers towards impact of digital payment on their spending habits

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.531
Bartlett's Test of Sphericity	Approx. Chi-Square	243.310
	df	36
	Sig.	.000

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is 0.531, and Bartlett's Test of Sphericity yielded an approximate chi-square value of 243.310 with 36 degrees of freedom and a significance level of 0.000. These results suggest that the data may be suitable for conducting factor analysis. A KMO value above 0.5 generally indicates that the data is moderately adequate for factor analysis, and the significant Bartlett's Test of Sphericity indicates that there are relationships among the variables that may be worth exploring. However, the specific factor structure and the quality of the analysis should be further evaluated by examining factor loadings and conducting a principal component analysis to better understand the underlying patterns within the data.

Table 3:

Total Variance Explained			
Component	Initial Eigenvalues	Extraction Sums of Squared Loadings	Rotation Sums of Squared Loadings

	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative %
1	2.004	22.262	22.262	2.004	22.262	22.262	1.897	21.073	21.073
2	1.839	20.438	42.701	1.839	20.438	42.701	1.882	20.912	41.984
3	1.219	13.549	56.250	1.219	13.549	56.250	1.254	13.930	55.914
4	1.106	12.283	68.533	1.106	12.283	68.533	1.136	12.619	68.533
5	.863	9.587	78.121						
6	.766	8.514	86.634						
7	.566	6.294	92.928						
8	.345	3.832	96.761						
9	.292	3.239	100.000						
Extraction Method: Principal Component Analysis.									

The table presents the results of a Principal Component Analysis (PCA) for the data. The "Initial Eigenvalues" represent the eigenvalues for each component, which indicate the amount of variance explained by each component. The "Extraction Sums of Squared Loadings" show the cumulative variance explained as more components are considered. In this analysis, the first component accounts for 22.262% of the variance, the second for 20.438%, the third for 13.549%, and so on. When looking at the "Extraction Sums of Squared Loadings," it's apparent that the first two components collectively explain 42.701% of the variance, the first three explain 56.250%, and the first four explain 68.533%. This suggests that the majority of the variance is explained by the first four components. It's important to note that the choice of how many components to retain should also consider the interpretability of the factors and the research objectives.

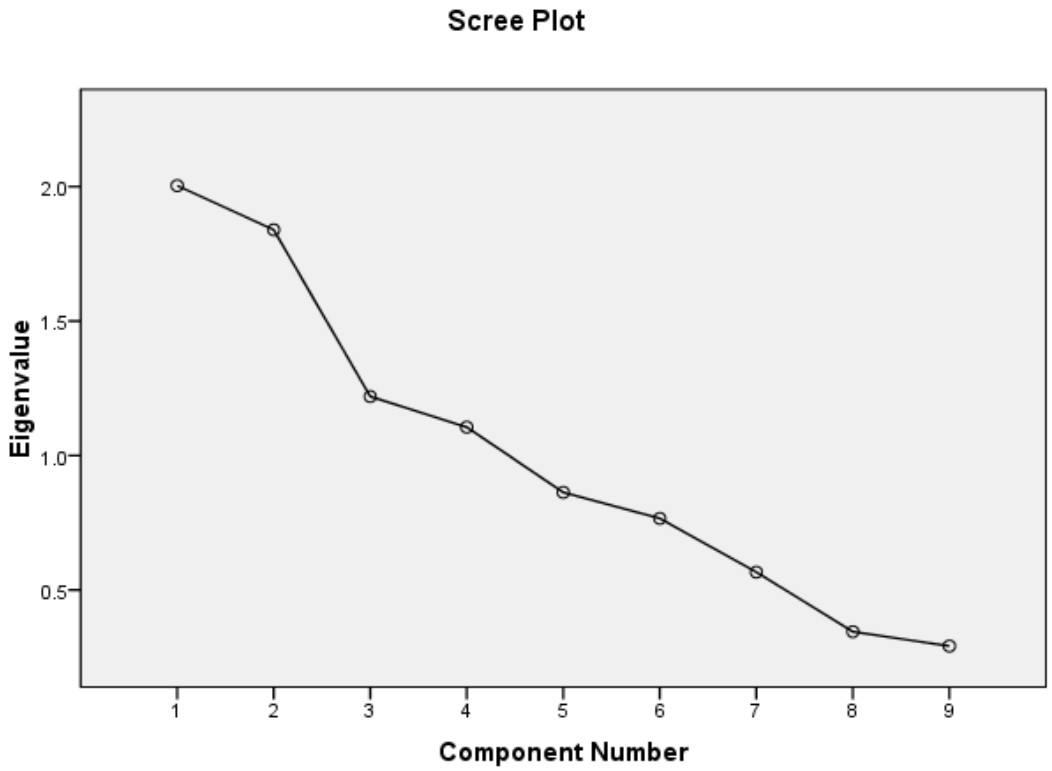

Fig 1: Scree plot for perception of consumers towards impact of digital payment on their spending habits

Table 4:

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
Using digital payment methods is more convenient than using cash.	**.831**	.019	-.232	-.027
I often make impulsive purchases when using digital payments.	**.895**	-.053	.082	.040
Digital payment platforms help me keep better track of my expenses.	.542	.036	.516	-.187
I feel more financially aware when using digital payment methods.	.024	.310	.627	-.192
I trust that my financial information is secure when using digital payments.	-.093	**.816**	.142	-.208
Privacy concerns related to digital payments affect my choice to use them.	-.018	**.876**	.022	.054
I use digital payment methods (e.g., mobile wallets, online banking) regularly.	.256	.573	-.095	.515
I prefer using digital payments over traditional cash transactions.	-.096	-.083	.028	**.811**
I believe that digital payments have positively influenced my spending habits.	-.161	-.116	.710	.302
Extraction Method: Principal Component Analysis. Rotation Method: Quartimax with Kaiser Normalization.				
a. Rotation converged in 6 iterations.				

Component 1, which appears to capture the convenience and impulsive spending aspects of digital payments, is strongly associated with statements like "Using digital payment methods is more convenient than using cash" and "I often make impulsive purchases when using digital payments."

Component 2 reflects financial trust and privacy concerns, with high loadings on statements related to trust in the security of financial information and privacy concerns regarding digital payments.

Component 3 appears to be related to financial awareness and the positive influence of digital payments on spending habits. It is strongly associated with statements like "I feel more financially aware when using digital payment methods" and "I believe that digital payments have positively influenced my spending habits."

Component 4 is less straightforward but seems to capture a mix of preferences for digital payments over cash transactions.

These components provide a more structured view of how the surveyed variables relate to different aspects of digital payments and their impact on consumer spending habits. This information can help in understanding the underlying factors influencing consumer behavior in the context of digital payments.

Table 5: Descriptive Statistics for Perception of consumers towards impact of digital payment on their spending habits

	N	Mean	SD
Using digital payment methods is more convenient than using cash.	150	2.15	.839
I often make impulsive purchases when using digital payments.	150	2.03	.948

I trust that my financial information is secure when using digital payments.	150	2.63	.832
Privacy concerns related to digital payments affect my choice to use them.	150	2.57	.870
I prefer using digital payments over traditional cash transactions.	150	2.41	.545
Valid N (listwise)	150		

1. "Using digital payment methods is more convenient than using cash" has a mean score of 2.15, with a standard deviation of 0.839. This suggests that, on average, respondents find digital payments somewhat more convenient than cash.
2. "I often make impulsive purchases when using digital payments" has a mean score of 2.03, with a higher standard deviation of 0.948. This indicates that there is a moderate level of impulsive spending associated with digital payments, and responses vary more widely.
3. "I trust that my financial information is secure when using digital payments" has a mean score of 2.63, with a standard deviation of 0.832. On average, respondents tend to have a moderate level of trust in the security of their financial information when using digital payment methods.
4. "Privacy concerns related to digital payments affect my choice to use them" has a mean score of 2.57, with a standard deviation of 0.870. This suggests that privacy concerns have a moderate impact on respondents' decisions to use digital payments.
5. "I prefer using digital payments over traditional cash transactions" has a mean score of 2.41, with a lower standard deviation of 0.545. On average, respondents tend to moderately prefer digital payments over cash transactions.

These statistics offer insights into the central tendencies and variability in respondents' attitudes and behaviors regarding digital payments, convenience, trust, privacy, and preferences. The standard deviations indicate the degree of variability in the responses for each statement.

Ho1: No relationship exists between monthly income and Perception of consumers towards impact of digital payment on their spending habits

Table 6: Comparison between monthly income and Perception of consumers towards impact of digital payment on their spending habits

		N	Mean	SD	F	Sig
Monthly Income	Less than Rs1,000	41	2.20	0.359	4.586	.004
	Rs1,000 - Rs2,499	61	2.35	0.485		
	Rs2,500 - Rs4,999	44	2.47	0.337		
	Rs5,000 - Rs7,499	4	2.80	0.673		
	Total	150	2.36	0.433		

Respondents with a monthly income of less than Rs1,000 have a mean score of 2.20, which is slightly lower than the overall mean score of 2.36 for the entire sample. This suggests that individuals with lower income tend to find digital payments somewhat less convenient than the average respondent.

Conversely, respondents with higher income levels, such as those earning between Rs5,000 and Rs7,499, have a higher mean score of 2.80, indicating that they perceive digital payments as more convenient.

The analysis also reveals a statistically significant difference in the perceptions of convenience across income groups, as indicated by the F-statistic of 4.586 and a significance level of .004. This implies that income

does play a role in how individuals view the convenience of digital payments, with higher income groups finding them more convenient, and lower income groups finding them somewhat less convenient.

9. Findings

1. The majority of respondents are female, making up 65.3% of the total, while males constitute 34.7%.
2. The largest age group falls within the 25-34 years category, representing 35.3% of the respondents.
3. Educational qualifications, the largest segment has a bachelor's degree, accounting for 28.7% of the sample
4. Monthly income, the majority falls within the Rs1,000 - Rs2,499 category, making up 40.7% of the respondents
5. The convenience of digital payments, with higher income groups finding them more convenient and lower income groups finding them somewhat less convenient
6. The central tendencies and variability in respondents' attitudes and behaviors regarding digital payments, convenience, trust, privacy, and preferences

10. Suggestions

To further enhance the depth and applicability of your study, consider conducting a follow-up survey or research to delve deeper into the specific reasons behind the varying perceptions of digital payments among different demographic groups. Qualitative research, such as in-depth interviews or focus groups, can provide valuable insights into the underlying motivations, concerns, and preferences that drive consumer behaviors in the context of digital payments. This qualitative approach can complement the quantitative data, offering a richer understanding of the nuances in consumer attitudes and behaviors. It can be particularly useful for businesses and financial service providers seeking to tailor their services to meet the diverse needs of their target audience effectively.

By integrating both quantitative and qualitative research methods, your study can offer a more comprehensive and actionable understanding of the impact of digital payments on consumer spending habits, while also providing specific insights that can guide businesses in developing strategies and solutions that resonate with their customers.

11. Conclusion

In conclusion, this study provides valuable insights into the demographics and attitudes of respondents regarding digital payments. The majority of participants were female, with the largest age group being 25-34 years, and a significant portion holding a bachelor's degree. The study revealed that the convenience of digital payments varies among income groups, with higher income individuals finding them more convenient. The analysis also highlighted the central tendencies and variations in respondents' attitudes and behaviors related to digital payments, trust, privacy, and preferences. These findings underscore the importance of considering the diverse needs and preferences of different demographic groups when developing and marketing digital payment solutions. Businesses and financial service providers can use this information to offer more tailored and customer-centric services in the ever-evolving landscape of digital payments.

References

[1] Ching, A., & Wood, D. (2019). The Impact of Digital Payment Innovations on Personal Finance. In International Conference on Internet Computing (pp. 68-73).
[2] Statista. (2021). Impact of Digital Payment Usage on Personal Finance in the United States as of 2021.
[3] Hayashi, F., Jagtiani, J., & Manuszak, M. D. (2019). Innovations in Digital Payments. Federal Reserve Bank of Philadelphia Research Department Working Paper No. 19-22.
[4] Bhattacharyya, D., & Bhowmik, S. K. (2017). Digital Payment Systems and Their Impact on Financial Inclusion in India. International Journal of Finance & Banking Studies, 6(2), 54-61.

[5] World Bank. (2017). Digital Dividends: World Development Report 2016. Washington, DC: World Bank.