



A Study On The Impact Of Cashless Transactions On Financial Behavior

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Abstract

This study, titled "A Study on the Impact of Cashless Transactions on Financial Behavior," investigates how the growing use of cashless payments influences financial habits across different demographic groups. The primary objective is to assess the impact of cashless payments on spending and saving behaviors. The research also explores public perception of cashless payments in economic contexts, examines associated financial behaviors, and identifies barriers and challenges that hinder broader adoption, such as security concerns and limited merchant acceptance. A descriptive research design was employed, utilizing surveys distributed via Google Forms to a diverse sample, primarily targeting individuals aged 18-25 with varied educational backgrounds and a balanced gender distribution. The results reveal that the Unified Payments Interface (UPI) is the most preferred cashless payment method, with a significant portion of respondents engaging in daily transactions. While many respondents reported increased spending due to the convenience of cashless payments, the impact on saving habits was mixed. Additionally, security risks and the limited acceptance of electronic payments by some merchants were identified as key barriers. The study's findings provide valuable insights into the changing financial behaviors driven by cashless transactions and highlight strategies to overcome the identified challenges for broader adoption.

Keywords: Perception, Cashless Payments, Financial Behavior, Barriers and Challenges.

1. Introduction

In today's digital era, the landscape of payment methods has evolved significantly, with cashless transactions becoming increasingly prevalent. The traditional reliance on cash is steadily giving way to various cashless payment options, driven by advancements in technology and efforts to promote a cashless economy. Credit and debit cards, the Unified Payments Interface (UPI), and net banking are at the forefront of this transformation, enabling individuals to conduct secure and efficient transactions without the need for physical cash. The purpose of this study is to examine how the rise of cashless transactions influences financial behavior across different demographics, focusing on changes in spending and saving habits. The hypothesis underpinning this research is that the adoption of cashless payments alters financial habits, leading to increased convenience and efficiency but also posing potential challenges related to security and accessibility. This shift is not only significant for understanding evolving consumer behavior but also for its broader implications on the economy and financial inclusion. The study's objectives are rooted in the observation that cashless transactions have become a key feature of the financial ecosystem, impacting day-to-day economic activities. The primary objective of this study is to analyze the impact of cashless transactions on financial behavior, while the secondary objectives include understanding perceptions of cashless transactions and their relation

to economic activities, analyzing financial behavior, and assessing the challenges and barriers faced by different demographics in adopting cashless payment methods. By exploring public perceptions, examining financial behavior, and identifying barriers to adoption, this research aims to provide insights into the benefits and challenges associated with cashless payments, making it a timely and relevant topic for understanding the financial habits of today's society.

2. Material and methods

2.1. Literature Review

2.1.1 Conceptual Framework

The conceptual framework for understanding the impact of cashless payment systems on financial behavior is based on the interactions between consumer perceptions, digital literacy, and economic activities. Research indicates that public perception plays a crucial role in the acceptance of cashless payment systems, with factors such as efficiency, convenience, and security being pivotal (Kumar, 2022). While many consumers view cashless payments as a faster and more convenient alternative to cash transactions, concerns regarding privacy and data security remain significant barriers to widespread adoption. Additionally, digital literacy significantly influences how various demographics perceive and utilize cashless payment methods, particularly among older generations and less tech-savvy individuals (Sharma, 2021). The framework also highlights the role of government policies and awareness campaigns in promoting cashless transactions, especially in emerging markets (Gupta, 2020). As urban populations become more receptive to cashless transactions due to better infrastructure, rural areas face challenges such as low digital literacy and lack of internet connectivity. This suggests that targeted initiatives are necessary to facilitate the transition to cashless systems, emphasizing the need for educational campaigns to enhance digital literacy.

2.1.2 Empirical Evidence

Empirical studies provide substantial insights into how cashless payment systems affect financial behavior. Desai (2022) investigates the influence of digital payments on users' spending and saving patterns, revealing that frequent use of cashless transactions tends to increase consumer spending due to the abstract nature of digital payments. However, this shift also encourages the use of financial tracking tools, leading to improved saving habits in some cases.

Patel (2021) explores the connection between a cashless economy and financial discipline, finding that the traceability of digital transactions promotes better budgeting and financial planning among consumers. Participants in the study reported feeling more in control of their finances due to the accessibility of their financial data.

Chandra (2019) analyzes changes in financial habits resulting from the shift to digital payments, noting a rise in online purchases among younger generations. The study highlights how digital platforms encourage automated savings, while also acknowledging the potential for increased impulse buying due to easier access to shopping.

Iyer (2021) focuses on the barriers to cashless payments in rural areas, identifying significant demographic challenges such as infrastructure deficits and low digital literacy that inhibit adoption. The study underscores the importance of addressing security concerns and mistrust of digital systems among older adults and those with limited educational backgrounds.

Banerjee (2020) delves into the digital divide within cashless payment systems, examining how age, income, and education impact the adoption of these methods. The findings reveal that younger, tech-savvy individuals with higher incomes are more likely to engage with cashless systems compared to older adults and lower-income groups.

These studies collectively emphasize the complex relationship between cashless payment systems and financial behavior, highlighting the need for tailored approaches that consider demographic factors, consumer perceptions, and infrastructural challenges in order to foster broader adoption of cashless transactions.

3. Research Methodology

Research methodology refers to the systematic approach used to address research problems. This study employs a structured methodology to investigate the impact of cashless transactions on financial behavior. The methodology encompasses various techniques for data collection and analysis, ensuring a comprehensive understanding of how cashless payment systems influence consumer behavior, perceptions, and the challenges faced in their adoption.

3.1. Research Design

This study employs a descriptive research design, which encompasses surveys, findings, and inquiries to gather comprehensive data. Specifically, a direct survey was conducted using a Google Form, allowing for efficient collection of responses from participants to explore the impact of cashless transactions on financial behavior. This approach facilitates a clear understanding of public perceptions, attitudes, and experiences related to cashless payment systems.

3.2. Data Collection

For this study, data were compiled from both primary and secondary sources.

3.2.1 Primary Data

Primary data is collected directly from firsthand sources through questionnaires, and similar methods. In this study, primary data were gathered using a structured questionnaire designed to assess consumer perceptions and behaviors regarding cashless transactions.

3.2.2 Secondary Data

Secondary data consists of information that has already been published. In this study, secondary data were collected from various sources, including internet resources, websites, existing research, and scholarly articles, to support the analysis of cashless payment systems and their impact on financial behavior.

3.3. Sample Design

The sample design for this study consists of a clear plan to obtain a sample from the infinite population, with respondents selected using convenience sampling; the target respondents are members of the public, and a total sample size of 121 individuals was utilized for the research.

3.4. Tools for Analysis

Correlation

Correlation is a statistical method employed to measure both the strength and direction of the relationship between two or more variables. This technique provides insights into how closely related the variables are, enabling researchers to understand potential associations and interactions.

Chi-Square Test

The chi-square test serves as a statistical method to determine whether a significant association exists between categorical variables. By comparing the observed frequencies of data to the expected frequencies under the null hypothesis (which assumes no relationship), this test assesses whether the differences in frequencies are due to chance or indicate a meaningful relationship.

One-Way ANOVA Test

One-Way Analysis of Variance (ANOVA) is a statistical test used to compare the means of three or more groups, assessing whether significant differences exist among them. This method evaluates the variation within groups against the variation between groups, providing valuable insights into the factors that may influence outcomes across multiple categories.

Regression Analysis

Regression analysis is a statistical technique that evaluates the relationship between a dependent variable and one or more independent variables. This method is instrumental in determining how factors, such as cashless transactions, influence financial behavior, enabling researchers to make predictions based on the identified relationships. By analyzing these interactions, regression analysis contributes to a deeper understanding of the dynamics at play in financial decision-making.

4. Results and discussion

4.1. Percentage analysis

Table 1 Duration of Using Cashless Transactions

Duration of Using Cashless Transactions					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Less than 1 Year	26	14.1	21.5	21.5
	1-2 Years	46	24.9	38.0	59.5
	3-5 Years	45	24.3	37.2	96.7
	6-10 years	3	1.6	2.5	99.2
	More than 5 Years	1	.5	.8	100.0
	Total	121	65.4	100.0	

INFERENCE

From the above table it shows that out of 121 Respondents 38.0% are between 1 to 2 years, 37.2% are 3 to 5 years, 21.5% are Less than 1 year, 2.5% are 6 to 10 Years and 0.8% are More than 10 Years.

Table 2 Agreement that Cashless Transactions Contribute to Economic Growth

Agreement that Cashless Transactions Contribute to Economic Growth					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Agree	23	12.4	19.0	19.0
	Agree	45	24.3	37.2	56.2
	Neutral	43	23.2	35.5	91.7
	Disagree	7	3.8	5.8	97.5
	Strongly Disagree	3	1.6	2.5	100.0
	Total	121	65.4	100.0	

INFERENCE

From the above table it shows that out of 121 Respondents, 19.0% strongly agree that cashless transactions contribute to economic growth, 37.2% agree, 35.5% are neutral, 5.8% disagree, and 2.5% strongly disagree.

Table 3 Proportion of Total Transactions That Are Cashless

Proportion of Total Transactions that are Cashless					
		Frequency	Percent	Valid Percent	Cumulative Percent
	0-20%	17	9.2	14.0	14.0
	21-40%	26	14.1	21.5	35.5
	41-60%	34	18.4	28.1	63.6
	61-80%	31	16.8	25.6	89.3
	81-100%	13	7.0	10.7	100.0
	Total	121	65.4	100.0	

INFERENCE

From the above table it shows that out of 121 Respondents 14.0% of respondents make 0-20% of their transactions cashless, 21.5% make 21-40% cashless, 28.1% make 41-60% cashless, 25.6% make 61-80% cashless, and 10.7% make 81-100% of their transactions cashless.

Table 4 Effect of Cashless Payments on Spending Habits

Effect of Cashless Payments on Spending Habits					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Increased spending	73	39.5	60.3	60.3
	Decreased spending	11	5.9	9.1	69.4
	No change	27	14.6	22.3	91.7
	Unsure	10	5.4	8.3	100.0
	Total	121	65.4	100.0	

INFERENCE

From the above table it shows that Among 121 respondents, 60.3% said cashless payments increased their spending, 9.1% reported decreased spending, 22.3% noted no change, and 8.3% were unsure.

Table 5 Perception of Security of Cashless Payment Methods

Perception of Security of Cashless Payment Methods					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Very Secure	13	7.0	10.7	10.7
	Secure	44	23.8	36.4	47.1
	Neutral	61	33.0	50.4	97.5
	Insecure	2	1.1	1.7	99.2
	Very Insecure	1	.5	.8	100.0
	Total	121	65.4	100.0	

INFERENCE

From the above table it shows that out of 121 Respondents, 10.7% of respondents feel cashless payment methods are very secure, 36.4% feel they are secure, 50.4% are neutral, 1.7% feel insecure, and 0.8% feel very insecure,

4.2. REGRESSION ANALYSIS

1. Null Hypothesis (H_0): There is no significant relationship between the duration of using cashless transactions and the perception that cashless transactions contribute to economic growth.
2. Alternative Hypothesis (H_1): There is a significant relationship between the duration of using cashless transactions and the perception that cashless transactions contribute to economic growth.

Table 6 Regression**ANOVA^a**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.670	1	1.670	1.910	.170 ^b
	Residual	104.049	119	.874		
	Total	105.719	120			

The p-value of 0.170 indicates that the relationship between the Duration of Using Cashless Transactions and the Agreement that Cashless Transactions Contribute to Economic Growth is not statistically significant at the common significance level of 0.05. P value is $0.170 > 0.05$ so, Null Hypothesis Accepted and There is no significant relationship between the duration of using cashless transactions and the perception that cashless transactions contribute to economic growth. This indicates that the length of time using cashless transactions does not significantly influence the belief that they contribute to economic growth.

4.3. CORRELATION

1. Null Hypothesis (H_0): There is no significant relationship between the proportion of total transactions that are cashless and the types of purchases made using cashless payments.
2. Alternative Hypothesis (H_1): There is a significant relationship between the proportion of total transactions that are cashless and the types of purchases made using cashless payments.

Table 7 Correlation Analysis

		Correlations					
		Proportion of Total Transactions that are Cashless	Daily Essentials	Regular bills	Online Shopping	One Time Purchases	Travel Entertainment
Proportion of Total Transactions that are Cashless	Pearson Correlation	1	.189 [*]	.033	.172	.294 ^{**}	.240 ^{**}
	Sig. (2-tailed)		.038	.721	.059	.001	.008
	N	121	121	121	121	121	121
Daily Essentials	Pearson Correlation	.189 [*]	1	.089	.076	.251 ^{**}	.123
	Sig. (2-tailed)	.038		.334	.408	.005	.179
	N	121	121	121	121	121	121
Regular bills	Pearson Correlation	.033	.089	1	.145	.404 ^{**}	.242 ^{**}
	Sig. (2-tailed)	.721	.334		.111	.000	.007
	N	121	121	121	121	121	121
Online Shopping	Pearson Correlation	.172	.076	.145	1	.440 ^{**}	.437 ^{**}
	Sig. (2-tailed)	.059	.408	.111		.000	.000
	N	121	121	121	121	121	121
One Time Purchases	Pearson Correlation	.294 ^{**}	.251 ^{**}	.404 ^{**}	.440 ^{**}	1	.421 ^{**}
	Sig. (2-tailed)	.001	.005	.000	.000		.000
	N	121	121	121	121	121	121
Travel Entertainment	Pearson Correlation	.240 ^{**}	.123	.242 ^{**}	.437 ^{**}	.421 ^{**}	1
	Sig. (2-tailed)	.008	.179	.007	.000	.000	
	N	121	121	121	121	121	121

Daily Essentials: Significant relationship ($p = 0.038 < 0.05$). Regular Bills: No significant relationship ($p = 0.721 > 0.05$). Online Shopping: No significant relationship ($p = 0.059 > 0.05$). One-Time Purchases: Significant relationship ($p = 0.001 < 0.05$). Travel and Entertainment: Significant relationship ($p = 0.008 < 0.05$). So, Null Hypothesis Rejected and There is a significant relationship between the proportion of total transactions that are cashless and the types of purchases made using cashless payments. The analysis revealed significant relationships between the types of purchases and the use of cashless transactions. Specifically, daily essentials showed a significant correlation ($p = 0.038$) with cashless payment usage, indicating that

individuals frequently use cashless methods for everyday purchases. One-time purchases also demonstrated a strong significant relationship ($p = 0.001$), suggesting that people are more inclined to use cashless payments for non-recurring expenses. Additionally, cashless transactions were significantly associated with travel and entertainment expenses ($p = 0.008$), reflecting a preference for digital payments in this category as well. These findings highlight that cashless transactions are widely adopted across various purchase types.

4.4. ONE WAY ANOVA

Effect of Cashless Payments on Spending Habits:

1. Null Hypothesis (H_0): There is no significant difference in the effect of cashless payments on spending habits across the different proportions of cashless transactions.
2. Alternative Hypothesis (H_1): There is a significant difference in the effect of cashless payments on spending habits across the different proportions of cashless transactions.

Agreement that Cashless Transactions Improve Saving Habits

1. Null Hypothesis (H_0): There is no significant difference in the agreement that cashless transactions improve saving habits across the different proportions of cashless transactions.
2. Alternative Hypothesis (H_1): There is a significant difference in the agreement that cashless transactions improve saving habits across the different proportions of cashless transactions.

Table 8 ANOVA

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Effect of Cashless Payments on Spending Habits	Between Groups	6.544	4	1.636	1.484	.212
	Within Groups	127.870	116	1.102		
	Total	134.413	120			
Agreement that Cashless Transactions Improve Saving Habits	Between Groups	22.268	4	5.567	6.135	.000
	Within Groups	105.269	116	.907		
	Total	127.537	120			

so, null hypothesis (H_0) is Rejected. This indicates that there is a significant difference in the agreement that cashless transactions improve saving habits across the different proportions of cashless transactions. The One-Way ANOVA results revealed no significant difference in the effect of cashless payments on spending habits across different proportions of cashless transactions ($p = 0.212$). This suggests that the frequency of cashless transactions does not significantly influence how individuals alter their spending behavior. However, a significant difference was found in the perception that cashless transactions improve saving habits across different usage levels ($p = 0.000$). This indicates that individuals with varying frequencies of cashless payment usage perceive its impact on their saving habits differently, highlighting that the more frequently cashless transactions are used, the greater the perceived benefit in saving.

4.5. CHI-SQUARE

Challenges in adapting cashless payment methods

1. Null Hypothesis (H_0): Different Education level groups do not face significant challenges in adapting cashless payment methods.
2. Alternative Hypothesis (H_1): Different Education level groups face significant challenges in adapting cashless payment methods.

Perception of the security of cashless payment methods

1. Null Hypothesis (H_0): Null Hypothesis (H_0): There is no significant association between age group and perception of the security of cashless payment methods

2. Alternative Hypothesis (H_1): There is a significant association between age group and perception of the security of cashless payment methods.

Table 9 Chi-Square

Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)
Pearson Chi-Square	43.500 ^a	39	.286
Likelihood Ratio	37.613	39	.533
N of Valid Cases	121		

Test Statistics

	Age Group	Perception of Security of Cashless Payment Methods
Chi-Square	213.041 ^a	119.950 ^b
df	2	4
Asymp. Sig.	.000	.000

The Chi-Square Test results showed no significant association between education level and the challenges faced in adopting cashless payment methods ($p = 0.286$). This implies that individuals with different levels of education do not face significantly different challenges when it comes to adopting cashless payment methods. On the other hand, there is a significant association between age group and the perception of security in cashless payment methods ($p = 0.000$). This indicates that concerns about the security of cashless transactions vary significantly across different age groups, suggesting that younger and older individuals may have differing levels of trust in the security of these payment methods.

5. Conclusion

This study examined the impact of cashless transactions on individual financial behavior, revealing significant trends in spending and saving habits associated with these payment methods. The findings indicate that the convenience of cashless transactions has led many respondents to report increased spending and decreased savings, marking a shift in financial behavior influenced by these options. Statistical analyses, including regression, correlation, ANOVA, and Chi-Square tests, provided valuable insights into the relationships between cashless payment usage and consumer behavior. Notably, while the duration of cashless transaction usage did not show a significant relationship with perceptions of economic contributions, strong correlations were identified concerning the types of purchases made using these methods. Cashless payments were found to be particularly prevalent for daily essentials, one-time purchases, and travel expenses. Furthermore, perceptions of cashless transactions improving saving habits varied with usage frequency, suggesting that increased adoption may foster better financial behaviors over time. Demographic factors also played a role in shaping perceptions of cashless transactions, with age emerging as a crucial influence on security perceptions. This highlights the need for targeted educational initiatives to address concerns among older individuals regarding cashless payments. The study emphasizes the importance of addressing the challenges and barriers to cashless payment adoption through efforts by stakeholders, including financial institutions, policymakers, and businesses. By developing educational campaigns, providing incentives, and improving accessibility, there is potential to cultivate a financially literate society that embraces cashless transactions responsibly. In summary, while cashless transactions show promise in positively influencing financial behavior, it is essential to ensure users receive adequate education and support during this transition. Through targeted interventions and ongoing engagement, the benefits of cashless payments can be maximized, contributing to a more inclusive and economically empowered society.

Recommendations

To address the findings of this study, several suggestions can be made. First, developing educational campaigns aimed at older individuals is crucial, focusing on the security features of cashless transactions to alleviate their concerns. Additionally, offering incentives such as cashback, discounts, or savings-linked rewards can promote responsible spending and assist users in improving their saving habits through cashless payments. Collaborating with local businesses to provide cashless payment options for daily purchases will enhance convenience and encourage adoption.

Tailored financial products, like student wallets or pre-paid cards, should be introduced to support non-income groups such as students and homemakers in embracing cashless transactions. Moreover, enhancing the user experience by simplifying payment interfaces, incorporating features like one-tap payments, and providing tutorials for less tech-savvy users can facilitate smoother transitions to digital payments.

Increasing the availability of digital payment options at small retail outlets is essential to encourage diverse demographics to adopt cashless transactions. Organizing community workshops or training sessions will educate users about the benefits and functionalities of cashless payment methods. Lastly, partnering with educational institutions to integrate financial literacy programs focusing on cashless transactions and responsible spending habits for students will help cultivate a financially savvy future generation.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

References

- [1] Kumar, A., & Jain, P. (2020). Adoption of cashless payment systems: A study of Indian consumers. **International Journal of Bank Marketing**, 38(3), 643-660.
- [2] Sahu, P., & Sahoo, M. (2019). Impact of cashless transactions on consumer spending behavior: A study of Indian consumers. **Journal of Economic Policy and Research**, 14(1), 50-67.
- [3] Rai, A., & Singh, R. (2021). The role of digital payments in economic growth: Evidence from India. **Journal of Financial Services Research**, 60(2), 211-225.
- [4] Choudhury, D. (2020). Factors influencing the adoption of mobile wallets in India: An empirical study. **Journal of Business Research**, 112, 187-195.
- [5] Bansal, S., & Kaur, H. (2022). Understanding consumer perception towards cashless transactions in India: A study. **International Journal of Research in Marketing Management and Sales**, 13(2), 75-88.
- [6] Patel, V., & Patel, P. (2021). Financial inclusion and cashless economy: An analysis of Indian context. **Financial Inclusion Review**, 4(1), 24-30.
- [7] Soni, A. (2023). The future of cashless transactions in India: Opportunities and challenges. **Global Business Review**, 24(1), 92-106.
- [8] Mukherjee, A., & Saha, S. (2019). Consumer behavior towards cashless transactions: An analysis of urban consumers in India. **International Journal of Business and Management**, 14(5), 1-10.