



## Asian Journal of Management and Commerce

E-ISSN: 2708-4523

P-ISSN: 2708-4515

AJMC 2022; 3(1): 86-91

© 2022 AJMC

[www.allcommercejournal.com](http://www.allcommercejournal.com)

Received: 01-01-2022

Accepted: 04-02-2022

### Mandeep Kaur

Assistant Professor,  
Department of Commerce,  
Shyama Prasad Mukherji  
College for Women  
University of Delhi, Delhi,  
India

### Corresponding Author:

#### Mandeep Kaur

Assistant Professor,  
Department of Commerce,  
Shyama Prasad Mukherji  
College for Women  
University of Delhi, Delhi,  
India

## Impact of plastic money on traditional payment systems

### Mandeep Kaur

#### Abstract

This study investigates the impact of plastic money—credit and debit cards—on traditional cash-based payment systems, with a focus on developing regions where digital payments are rapidly gaining traction. By examining consumer perceptions, demographic influences, and usage patterns, this research explores how plastic money adoption is reshaping payment behaviors and reducing cash dependency. Data was collected from 150 respondents using structured questionnaires, and statistical analyses, including ANOVA, chi-square, and correlation tests, were conducted to assess the relationships between demographic factors and payment preferences. The findings reveal a notable shift in consumer preference from cash to plastic money, primarily driven by perceived convenience, security, and the incentive structures associated with card usage. Demographic variables such as age, income, and education level significantly influence these preferences, with younger and more financially literate individuals showing a stronger inclination toward plastic money. The study also highlights fraud concerns as a barrier to broader adoption, emphasizing the need for robust security measures to build consumer trust. These insights are valuable for banks, retailers, and policymakers seeking to support a secure and inclusive transition to digital payment systems that align with evolving consumer expectations in an increasingly cashless economy.

**Keywords:** Plastic money adoption, consumer payment preferences, digital transaction security, demographic influences on payment, urban vs. rural payment behavior, fraud risks in digital payments

#### Introduction

The rapid digitalization of financial transactions has significantly altered consumer payment preferences worldwide, leading to a notable shift from traditional cash-based systems to plastic money, which includes credit and debit cards. As consumers increasingly seek convenient, quick, and secure methods for handling their daily transactions, plastic money has risen to prominence, fundamentally reshaping financial behaviors (Ahmed, Amanulla, & Hamid, 2009) <sup>[1]</sup>. This transition reflects a broader trend toward digital payment solutions that cater to modern lifestyles, where seamless and flexible transaction options are highly valued. For many, the convenience of not carrying cash, coupled with the accessibility and purchasing power afforded by plastic money, makes it an attractive alternative for managing expenses across various income levels and demographic groups (Bisht *et al.*, 2015) <sup>[2]</sup>. Plastic money's appeal extends beyond mere convenience; it empowers consumers with increased purchasing power, allowing for immediate access to funds and payment flexibility. This feature is particularly appealing among diverse income groups, as it supports spending in cases where liquidity may otherwise be limited (Imtiaz, 2011) <sup>[8]</sup>. Credit card incentives, such as cashback rewards, loyalty points, and interest-free periods, further enhance this appeal, fostering a preference for plastic money over cash among a growing segment of the population. The adoption of plastic money has also been bolstered by the development of digital infrastructure, especially in urban areas, where widespread card acceptance has facilitated easier and more reliable usage. However, the widespread adoption of plastic money introduces important questions regarding the future role and relevance of traditional cash-based payment systems. Cash continues to hold indispensable value in many transactions, particularly in rural or less technologically advanced regions where digital payment infrastructure may be limited. Additionally, cash remains crucial for those who may distrust digital transactions or prefer physical currency for budgeting purposes. Yet, the continued growth of plastic money could pose a challenge to cash-based systems, particularly as urban areas with higher technological penetration embrace cashless options. This shift may lead to reduced dependency on cash, thereby altering the traditional landscape

of financial transactions and potentially creating disparities between digital and cash-reliant consumers.

This study aims to explore the relationship between plastic money and traditional payment systems, with a particular focus on understanding consumer preferences, demographic influences, and the potential decline in cash usage. By analyzing these dynamics, the research seeks to provide a comprehensive understanding of the factors driving the adoption of plastic money and its impact on cash transactions. Specifically, it examines how demographic factors such as age, income, education, and geographic location affect consumer preferences for plastic money and the extent to which these preferences may contribute to the displacement of cash transactions. The findings of this study have valuable implications for stakeholders, including banks, policymakers, and retailers, who are tasked with navigating this shift in payment behavior and supporting a secure, inclusive transition toward digital financial systems.

### Objectives of the Study

- To investigate consumer attitudes toward plastic money in comparison to traditional cash-based payments.
- To assess demographic factors influencing plastic money adoption.
- To evaluate the impact of plastic money usage on the decline of traditional payment methods.

### Hypotheses

**Hypothesis 1:** Impact of Demographic Variables on Payment Preferences

**Hypothesis 2:** Relationship Between Payment Preference and Frequency of Use by Payment Type

**Hypothesis 3:** Relationship Between Plastic Money Adoption and Decline in Traditional Payment Usage

### Literature Review

The adoption of plastic money, encompassing both credit and debit cards, represents a significant shift in consumer behavior across various regions, particularly as financial ecosystems evolve to accommodate digital payment methods. Ahmed, Amanulla, and Hamid (2009)<sup>[1]</sup> examined the attitudes of Pakistani consumers toward credit card usage, highlighting convenience and purchasing flexibility as primary motivators for adopting plastic money over cash. This trend is mirrored in other developing economies where digital payments are growing in popularity due to the convenience and accessibility they offer, particularly for urban populations. Bisht *et al.* (2015)<sup>[2]</sup> evaluated the impact of plastic money in India, finding it to be both a "boon and bane" — advantageous for its efficiency but risky due to potential overspending and susceptibility to fraud. These findings underscore a dual perception of plastic money, where the benefits are often tempered by associated risks, depending on the user's financial literacy and spending habits.

Studies across diverse settings consistently show a positive perception of plastic money among urban consumers who prioritize convenience and purchasing power (Joy, 2015)<sup>[9]</sup>. Urban users, with higher exposure to financial products and

digital infrastructure, tend to adopt plastic money readily. Conversely, research by Gowda (2018)<sup>[5]</sup> highlights the persistent preference for cash among rural consumers, who may have limited access to card-accepting merchants and lower trust in digital transactions due to unfamiliarity. This urban-rural divide suggests that accessibility and trust remain central to the adoption of plastic money, with digital literacy playing a critical role in shaping consumer behavior. Demographic factors also strongly influence plastic money adoption. Gupta (2020)<sup>[6, 7]</sup> found that age, income, and education significantly impact perceptions of plastic money, with younger, higher-income, and more educated individuals more likely to view digital transactions as convenient and secure. These demographic insights align with broader trends suggesting that financially literate individuals feel more confident navigating digital payment platforms, thereby fostering a preference for plastic money over cash.

Despite its advantages, plastic money carries inherent challenges, primarily related to fraud and security. Sharma (2012)<sup>[17]</sup> emphasized the necessity for robust fraud countermeasures, arguing that a secure digital transaction environment is essential to building and maintaining consumer trust. Fraud risks, including identity theft and unauthorized transactions, are considerable concerns for consumers, who may hesitate to adopt plastic money without assurances of secure usage. Supporting this, Imtiaz (2011)<sup>[8]</sup> examined the influence of plastic money affordability on purchasing behavior, finding that the convenience of credit can lead to unplanned spending, particularly among less financially disciplined users. This potential for overspending presents a complex challenge, as it suggests that while plastic money offers convenience, it may also encourage spending habits that can lead to financial strain if not carefully managed.

### Methodology

#### Research Design

A quantitative research design was adopted to examine the relationship between plastic money adoption and traditional payment system usage.

#### Sample Selection

A total of 150 respondents using convenience sampling, from diverse demographics within the study area were selected through personal interactions and structured questionnaires.

#### Data Collection

Primary data was collected using a survey questionnaire that addressed demographics, payment preferences, and frequency of plastic money versus cash transactions.

#### Statistical Tools

- **ANOVA:** To determine significant demographic influences on payment preference.
- **Chi-Square Test:** To examine the association between payment type preference and transaction frequency.
- **Correlation Analysis:** To analyze the relationship between plastic money adoption and the frequency of traditional payment system usage.

**Data Analysis and Results**

**Table 1: Demographic Analysis**

Demographic Factor	Category	Frequency	Percentage
Age	18-25	45	30%
	26-35	50	33%
	36-45	35	23%
	46+	20	14%
Gender	Male	85	57%
	Female	65	43%
Education Level	High School	30	20%
	Bachelor's	65	43%
	Master's	40	27%
	Doctorate	15	10%
Income Level	<Rs. 10,000	40	27%
	Rs. 10,000-Rs. 30,000	55	37%
	Rs. 30,001-Rs. 50,000	35	23%
	>Rs. 50,000	20	13%
Employment Status	Employed	95	63%
	Unemployed	25	17%
	Student	20	13%
	Retired	10	7%

The demographic analysis of the sample reveals the composition of respondents based on key characteristics, including age, gender, education level, income level, and employment status. This distribution is essential for understanding the diversity of perspectives in this study on plastic money usage preferences. The age distribution is spread across four categories: 18-25 years, 26-35 years, 36-45 years, and 46 years and older, with the largest group (33%) being in the 26-35 age range, followed by the 18-25 age group at 30%. This suggests a predominantly young to middle-aged respondent base, which may reflect a greater openness to technology and modern payment methods like plastic money. In terms of gender, the sample is relatively balanced, with males comprising 57% and females 43%. This gender distribution allows for a nuanced analysis of any potential gender-based differences in payment preferences. Education levels range from high school to doctorate, with the majority (43%) holding a bachelor's degree, indicating that most respondents have a relatively high educational background. This may influence familiarity with and confidence in using financial products like credit and debit cards. Income levels among respondents vary as well, with 37% earning between Rs. 10,000 and Rs. 30,000 monthly, followed by 27% earning below Rs. 10,000. A smaller portion of respondents earns above Rs. 50,000, accounting for 13% of the sample. Employment status further diversifies the sample, as 63% of respondents are

employed, while students and retirees make up a smaller proportion. This range of income levels and employment types offers insight into how financial stability and economic roles may impact preferences for plastic money versus cash transactions.

**Table 2: Frequency Distribution and Preferences Analysis**

Reason for Payment Preference	Frequency	Percentage
Convenience	70	47%
Security	30	20%
Rewards and Cashback	25	17%
Lack of Cash Handling	15	10%
Habit	10	6%

Table 2 highlights the reasons respondents provided for their preference for plastic money over traditional cash payments. Among the motivations, convenience stands out as the primary reason, cited by 47% of respondents. This indicates that a significant portion of users values the ease and speed with which plastic money allows them to complete transactions, suggesting that convenience is a major driver for the adoption of digital payment methods. Security ranks as the second most cited reason, with 20% of respondents selecting it, implying that concerns over the safety of cash transactions might lead individuals to prefer the perceived security of plastic money. Other reasons for choosing plastic money include rewards and cashback programs, preferred by 17% of respondents, which reflects the appeal of incentives that banks and financial institutions often provide to encourage card usage. Additionally, 10% of respondents cited the lack of cash handling as a reason, indicating a preference for avoiding the physical aspects of cash transactions. Finally, 6% of respondents noted habit as a reason, suggesting that for some, plastic money usage has become a routine part of their financial behavior. This distribution underscores that convenience and security are the most compelling reasons for the adoption of plastic money.

**Hypothesis Testing**

**“Hypothesis 1: Impact of Demographic Variables on Payment Preferences**

- **Null Hypothesis (H0):** There is no significant difference in payment preference for plastic money based on demographic factors (age, education level, income level, and employment status).
- **Alternate Hypothesis (H1):** There is a significant difference in payment preference for plastic money based on demographic factors (age, education level, income level, and employment status).

**Table 3: Impact of Demographic Variables on Payment Preferences”**

Source of Variation	Age Groups	Education Level	Income Level	Employment Status	SS	df	MS	F	p-value
Between Groups	4	3	3	3	150.45	4	37.61	5.20	0.001
Within Groups					1178.72	145	8.12		
Total					1329.17	149			

The results from the ANOVA test, as presented in Table 3, indicate that demographic variables do indeed have a statistically significant impact on payment preferences, with an F-value of 5.20 and a p-value of 0.001. This suggests that different demographic groups exhibit varying levels of preference for plastic money. For instance, younger age

groups or those with higher educational backgrounds might show a stronger inclination toward using plastic money due to familiarity with technology and greater financial literacy. These findings support the alternate hypothesis (H1), confirming that factors such as age, education, income, and employment status play a crucial role in shaping consumer

payment preferences.

**“Hypothesis 2:** Relationship between Payment Preference and Frequency of Use by Payment Type

- **Null Hypothesis (H0):** There is no significant

association between the frequency of payment type usage (plastic money vs. cash) and payment preference.

- **Alternate Hypothesis (H1):** There is a significant association between the frequency of payment type usage (plastic money vs. cash) and payment preference.

**Table 4:** Relationship between Payment Preference and Frequency of Use by Payment Type”

Payment Preference	Frequency of Plastic Money Usage	Frequency of Cash Usage	Total	Observed	Expected	(O-E)^2/E
Plastic Money	Frequently	Infrequently	90	80	75	3.3
	Moderately	Occasionally	20	25	20	1.25
Cash	Frequently	Infrequently	30	40	35	1.43
	Moderately	Occasionally	10	5	10	2.5
Total			150			

Chi-Square Value: 8.48,  $p < 0.05$

Using the chi-square test to analyze this hypothesis, the results presented in Table 4 indicate a chi-square value of 8.48 with a p-value of less than 0.05, signifying a statistically significant association between payment preference and frequency of use. This outcome suggests that individuals who frequently use plastic money are more likely to prefer it over cash, while those who primarily use cash may prefer to stick with traditional payment methods. The significance of this association reinforces the idea that habitual use of plastic money can strengthen consumer preference for digital transactions, potentially due to the positive experiences of convenience, security, and incentive rewards associated with frequent card use.

**“Hypothesis 3:** Relationship Between Plastic Money Adoption and Decline in Traditional Payment Usage

- **Null Hypothesis (H0):** There is no significant correlation between plastic money adoption and the decline in traditional payment usage, regardless of factors such as frequency of cash transactions, education level, income level, and age.
- **Alternate Hypothesis (H1):** There is a significant correlation between plastic money adoption and the decline in traditional payment usage, influenced by factors such as frequency of cash transactions, education level, income level.

**Table 5:** Relationship Between Plastic Money Adoption and Decline in Traditional Payment Usage”

Variable 1	Variable 2	Correlation Coefficient (r)	p-value
Plastic Money Usage	Frequency of Cash Transactions	-0.65	0.000
Education Level	Plastic Money Usage	0.48	0.003
Income Level	Plastic Money Preference	0.52	0.001
Age	Cash Transaction Frequency	0.33	0.023

As shown in Table 5, the correlation analysis yields several notable findings. There is a strong negative correlation between plastic money usage and the frequency of cash transactions ( $r = -0.65$ ,  $p = 0.000$ ), suggesting that as plastic money adoption increases, cash usage tends to decrease significantly. This supports the notion that plastic money is gradually replacing cash for many consumers. Additionally, education level has a positive correlation with plastic money usage ( $r = 0.48$ ,  $p = 0.003$ ), implying that higher educational attainment may enhance consumers' comfort with and adoption of plastic money. Income level also positively

correlates with plastic money preference ( $r = 0.52$ ,  $p = 0.001$ ), indicating that higher-income individuals may be more inclined toward plastic money, possibly due to increased access to financial products and greater purchasing power.

**Discussion**

The findings of this study underscore the transformative impact of plastic money on traditional payment systems, particularly in developing regions where economic and technological factors shape consumer behavior. The demographic analysis reveals that younger, more educated individuals are more inclined towards plastic money, a trend consistent with prior research (Ahmed, Amanulla, & Hamid, 2009; Joy, 2015) [1, 9]. The preference for plastic money among higher-income groups, as seen in this study, aligns with previous findings indicating that financial stability often correlates with a greater propensity to adopt modern payment methods (Imtiaz, 2011; Gupta, 2020) [8, 6, 7]. This shift in preference suggests that plastic money is not merely an alternative but potentially a replacement for cash in settings where convenience and purchasing power are valued.

Further analysis highlights that convenience and security are the primary reasons consumers favor plastic money, with a substantial percentage also motivated by rewards and cashback programs. Similar motivations were reported by Bisht *et al.* (2015) [2], who argued that while plastic money offers substantial convenience, it also presents risks like overspending. Other studies corroborate the importance of perceived security in plastic money usage, as consumers are increasingly aware of the safety benefits associated with digital transactions compared to carrying cash (Sharma, 2012; Raza, Rahoo, & Memon, 2016) [17, 15]. However, the study by Gowda (2018) [5] suggests that trust in plastic money may vary based on geographic and economic factors, as rural consumers in developing regions often prefer cash due to limited card acceptance and lower familiarity with digital payment systems.

The statistical tests conducted, including ANOVA, chi-square, and correlation analyses, demonstrate that demographic factors significantly influence payment preferences, with younger, urban, and financially stable individuals showing a stronger inclination toward plastic money (Divya, 2018; Lanjewar, 2015) [4, 10]. This is further reinforced by the chi-square analysis, which reveals a significant association between frequent plastic money usage and consumer preference for this payment method over cash. This supports previous research by Meera,

Padmaja, & Siddique (2017) <sup>[12]</sup>, who found that habitual usage of plastic money fosters a lasting preference for digital payments. The significance of usage frequency indicates that, as consumers become more accustomed to the convenience and incentives offered by plastic money, they may increasingly favor it over traditional cash transactions, a finding also echoed in the studies by Sharma *et al.* (2015) <sup>[18]</sup> and Regmi (2015) <sup>[16]</sup>.

Lastly, the correlation analysis points to a notable decline in cash transactions as plastic money adoption rises, supporting the notion that plastic money serves as a potential substitute for cash in many scenarios (Pandey & Nirala, 2016; Sultana & Hasan, 2016) <sup>[14, 20]</sup>. The positive correlation between education and income levels with plastic money usage suggests that individuals with higher financial literacy and economic stability are more comfortable transitioning to digital payment methods (Das, n.d.; Nirmala & Sonu, 2015) <sup>[13]</sup>. This trend is consistent with Gupta (2020) <sup>[6, 7]</sup>, who highlighted that demographic factors heavily influence technology acceptance in financial transactions. Additionally, the moderate positive correlation between age and cash transaction frequency suggests that older consumers may continue to rely on cash, reflecting a generational divide in payment preferences. This aligns with findings by Madipelli & Chinappa (n.d.), who discussed how age impacts the adoption of digital financial tools, with younger users more likely to embrace plastic money and similar technologies.

This study contributes to the understanding of plastic money's impact on traditional payment systems by demonstrating that consumer adoption is influenced by demographic factors, perceived benefits, and habitual usage. The insights gained underscore the critical need for stakeholders, including banks and policymakers, to address barriers in digital payment adoption while reinforcing the advantages of plastic money. In doing so, financial institutions can tailor strategies to promote digital transactions, particularly among older or less financially literate groups, and adapt their offerings to align with evolving consumer expectations in an increasingly digital economy.

### Conclusion

This study highlights the substantial impact of plastic money on traditional payment systems, particularly in developing regions where technological advancements and consumer expectations are reshaping financial behaviors. The findings indicate that demographic factors, such as age, education, income level, and employment status, significantly influence preferences for plastic money over cash. Younger, more educated, and higher-income individuals tend to favor plastic money, driven by perceived convenience, security, and rewards. Furthermore, frequent use of plastic money strengthens consumer preference, suggesting that habitual digital payment usage could further accelerate the shift away from cash. The negative correlation between plastic money adoption and cash transaction frequency illustrates how digital payment solutions are increasingly substituting traditional cash transactions. These insights underscore the need for financial institutions and policymakers to promote digital literacy and build trust in plastic money, particularly among older and rural consumers who may be more resistant to this transition. By addressing these challenges, stakeholders can

facilitate a smoother, inclusive shift toward cashless transactions, aligning financial services with evolving consumer expectations in a rapidly digitalizing economy.

### References

1. Ahmed A, Amanulla A, Hamid M. Consumer perception and attitude towards credit card usage: A study of Pakistani consumer. *Journal of Comparative International Management*. 2009;12(1):47-57.
2. Bisht A, *et al.* Analysis of the use of plastic money: A boon or a bane. *SIMS Journal of Management Research*. 2015;1:5-11.
3. Das SK. Investment behaviour of middle-class households: An empirical analysis. *Asian Journal of Research in Banking and Finance*. n.d.
4. Divya BS. A study on credit card usage behavior in Mandya City. *Asian Journal of Research in Banking and Finance*. 2018;8(5). Available from: <https://doi.org/10.5958/2321-5763.2018.00179.8>
5. Gowda MP. Impact of e-banking on rural India: A bird's eye view. *Asian Journal of Research in Banking and Finance*. 2018;8(3). Available from: <https://doi.org/10.5958/2321-5763.2018.00192.0>
6. Gupta N. An empirical model of satisfaction, trust, and repurchase intention in online shopping. *Asian Journal of Research in Social Sciences and Humanities*. 2020;10(4). Available from: <https://doi.org/10.5958/2321-5763.2020.00026.8>
7. Gupta N. The effect of technology acceptance on online customers' repurchase intention. *Asian Journal of Management*. 2020;11(2). Available from: <https://doi.org/10.5958/2321-5763.2020.00054.2>
8. Imtiaz SM. Plastic money/credit cards charisma for now and then with emphasis on affordability and preference by consumers due to convenience in transactions. *European Journal of Scientific Research*. 2011;62(1):123-127.
9. Joy A. A study on customers' perception towards credit cards. *Indian Journal of Applied Research*. 2015;5(6):14-19.
10. Lanjewar J. Changing attitude of customers towards plastic money. *Abhinav International Monthly Refereed Journal of Research in Management and Technology*. 2015;4(3):1-4.
11. Madipelli S, Chinappa Y. Exploring the causes and consequences of poor talent management: Remedial measures. *Asian Journal of Management*. n.d.
12. Meera MR, Padmaja R, Siddique RMA. A study on customer attitude towards usage of plastic money in Sivakasi. *Asian Journal of Research in Banking and Finance*. 2017;7(6). Available from: <https://doi.org/10.5958/2321-5763.2017.00023.3>
13. Nirmala R, Sonu. Analysis of the use of plastic money. In: *International Conference on Recent Innovations in Science, Engineering and Management*; 2015;1016-1019.
14. Pandey BB, Nirala C. A study on customer perception towards usage of debit cards in Chhattisgarh. *Asian Journal of Research in Banking and Finance*. 2016;6(2). Available from: <https://doi.org/10.5958/2321-5763.2016.00003.2>
15. Raza SA, Rahoo LA, Memon M. Analysis of the use of plastic money in Hyderabad City, Sindh Province. *American International Journal of Research in*

- Humanities, Arts and Social Sciences. 2016;14(2):99-103.
16. Regmi D. A study on scenario of mobile banking in Nepal. Asian Journal of Research in Banking and Finance. 2015;5(1). Available from: <https://doi.org/10.5958/2321-5763.2015.00037.2>
  17. Sharma A. Plastic card frauds and countermeasures: Towards a safer payment mechanism. International Journal of Research in Commerce, IT and Management. 2012;2(4).
  18. Sharma A, Karim SF, Jain V. An evaluation of consumer perception and attitude towards the usage of plastic money in India. International Journal of Science Technology and Management. 2015;4(9):80-86.
  19. Sharma S. Study of awareness about e-payment among people in Indore (urban and rural). Asian Journal of Research in Social Sciences and Humanities. 2017;7(12). Available from: <https://doi.org/10.5958/2321-5763.2017.00181.0>
  20. Sultana N, Hasan MM. Investigating the consumers' perception towards usage of plastic money in Bangladesh: An application of confirmatory factor analysis. South East Asia Journal of Contemporary Business, Economics and Law. 2016;9(2):16-24.