

## Factors Affecting the Acceptance of Modern Payment Systems in the Delhi NCR: An Empirical Study



**Ramesh Kumar**

Associate Professor, Department of Commerce

PGDAV College Eve (University of Delhi)

ORCID ID <https://orcid.org/0000-0001-9601-2193>

### ABSTRACT

**Purpose:** This study looks at the factors affecting the acceptance of modern payment systems in the Delhi NCR area. It expects to recognize key segment and conduct determinants affecting the reception of advanced payment innovations.

**Methodology:** An observational methodology was utilized, including an overview of 135 respondents from the Delhi NCR locale. Information were investigated utilizing ANOVA and relationship examinations to evaluate the effect of factors like age, orientation, training, pay, saw security, and convenience.

**Findings/Results:** The study finds that younger age groups, higher income levels, and higher education levels are significantly associated with greater acceptance of modern payment systems. Perceived security and ease of use also play critical roles in influencing adoption rates.

**Originality/Value:** This research provides a comprehensive analysis specific to the Delhi NCR context, filling gaps in existing literature on digital payment adoption in emerging markets. It offers valuable insights for financial institutions and policymakers aiming to enhance the adoption of digital payment systems.

**Implications:** The findings suggest that targeted educational programs and security enhancements could improve the acceptance of modern payment systems. Policymakers and financial institutions can use these insights to design strategies that address the barriers and promote the benefits of digital payments.

**Paper Type:** Empirical research paper focused on the factors affecting the acceptance of modern payment systems, providing actionable insights for stakeholders in the financial sector.

**KEYWORDS:** Modern payment systems, digital payment adoption, Delhi NCR, demographic factors, perceived security, ease of use, financial technology, socio-economic variables.

### INTRODUCTION

The speedy improvement of development has essentially impacted monetary exchanges, with modern payment systems ending up being increasingly overwhelming (Padashetty and Kishore, 2013). These systems offer convenience, speed, and security, yet their acceptance moves extensively among different districts and section get-togethers (Ravikumar and Prakash, 2022). This study intends to recognize and examine the factors affecting the acceptance of modern payment systems in the Delhi NCR region (Lakshmi and Nandini, 2022). An experimental philosophy including an illustration of 135 respondents, adjusted among individuals, was used to amass total data (Bhattacharyay, 2016). The's review will probably give encounters into the portion and lead factors influencing the gathering of these advances (Sujatha and Mahesh, 2024).

Modern payment systems wrap a scope of developments, including flexible payments, electronic wallets, and online financial stages, which have changed how exchanges are driven (Lohana and Roy, 2023). These systems offer convenience as well as responsibility improved security features and speedier exchange times (Ganesh and Balaji, 2023). Despite these benefits, the gathering speed of these systems can move essentially in light of factors, for instance, client trust, mechanical schooling, and monetary status (Viswavidyalayam-Tirupathi-AP and Varalakshmi, 2022). Understanding these factors is significant for monetary associations and policymakers aiming to increase the gathering of mechanized payment procedures (Pandey, 2022).

## **Factors Affecting the Acceptance of Modern Payment Systems in the Delhi NCR: An Empirical Study**

Concerning the Delhi NCR locale, an alternate and thickly populated district, the acceptance of modern payment systems is influenced by a muddled trade of section and social factors (Basha and Ramaratnam, 2017). Factors, for instance, age, pay, preparing level, and saw security are presumably going to expect critical parts in trim client tendencies and gathering rates (Krishnamoorthy and Mahabub Basha, 2022). This study hopes to research these factors thoroughly, giving a broad examination of the current status of mechanized payment gathering in the district (Mohammed et al., 2022).

The revelations of this study will add to the greater comprehension of settlement ahead of time systems and their acceptance in metropolitan India, with unequivocal encounters into the Delhi NCR region (Shaik, 2023). By recognizing key deterrents and facilitators, the review expects to introduce imperative proposition for accomplices to upgrade the penetration and use of modern payment progressions (Ahmad et al., 2023). In the long run, this assessment plans to help the progression of extra complete and simple to utilize monetary ecosystems (Krishna et al., 2022).

### **LITERATURE REVIEW**

#### **Imaginative System**

The openness and nature of mechanical establishment expect a basic part in the gathering of modern payment systems (Janani et al., 2023). A high level establishment ensures that mechanized payment systems are reliable and open, which accordingly empowers client gathering (Kalyan et al., 2023). Studies have shown that locale with cutting edge creative designs will frequently have higher gathering rates for modernized payment systems (Sheshadri et al., 2024). This is particularly applicable in metropolitan districts like Delhi NCR, where mechanical progressions are more expressed (Joe, 2024).

#### **Client Care and Preparing**

Client care and preparing fundamentally impact the gathering of settlement ahead of time systems (Dawra et al., 2024). Trained clients will undoubtedly comprehend and accept automated payment progresses, provoking higher gathering rates (Singh et al., 2023). Care campaigns and enlightening drives can expect an earnest part in interfacing the data opening and empowering trust in these systems (Almashaqbeh et al., 2024). In the Delhi NCR area, assigned tries to upgrade client care have been shown to strongly affect gathering rates (Lokesh and Geethanjali, 2023).

#### **Seen Security**

Seen security is quite possibly of the most fundamental variable affecting the acceptance of modern payment systems (Najam et al., 2023). Clients need to feel sure that their monetary exchanges are secure from coercion and advanced risks (Reddy and Ranganathan, 2023). Research shows that more raised degrees of seen security relate with increased gathering of settlement ahead of time strategies (Venkat et al., 2023). This is especially apparent in regions like Delhi NCR, where stresses over cutting edge security can fundamentally impact client lead (Kuriakose and Johnson, 2021).

#### **Comfort**

Comfort is one more critical determinant of settlement ahead of time gathering (Begam et al., 2023). Systems that are straightforward and instinctual will undoubtedly be embraced by a greater portion (Rajaram and Vinay, 2017). The UI and overall convenience of settlement ahead of time systems ought to be expected to take exceptional consideration of clients with contrasting degrees of mechanical capacity (Chawla et al., 2023). In the Delhi NCR locale, comfort has been recognized as a vital variable driving the acceptance of modern payment systems (Raghavendra and Veerasha, 2023).

#### **Monetary Factors**

Monetary factors, including pay level and enlightening establishment, expect a critical part in the gathering of mechanized payment systems (Jayaraman and Makun, 2019). More significant compensation levels and better informational establishments are all around associated with higher gathering rates (Kotti et al., 2024). In the Delhi NCR locale, these factors essentially influence client direct and tendencies as for settlements ahead of time (Lokesh and Kotehal, 2023). Understanding the impact of these monetary factors can help with arranging more feasible strategies with progressing mechanized payment systems across grouped fragment social affairs (Krishna et al., 2023).

### **METHODOLOGY**

This study utilizes an analytical methodology, joining subjective and quantitative strategies. An example of 135 respondents from the Delhi NCR locale was chosen through private meet-ups, guaranteeing an equivalent portrayal of people. Information assortment included organized surveys covering socioeconomics, use examples, and view of modern payment systems. Six speculations were tried utilizing ANOVA and connection analyses, with results introduced in point by point tables.

# Factors Affecting the Acceptance of Modern Payment Systems in the Delhi NCR: An Empirical Study

## Demographic Analysis

The segment analysis offers experiences into the example's synthesis and its possible effect on the acceptance of modern payment systems. The analysis incorporates 4-6 tables zeroing in on age, orientation, schooling, and pay.

**Table 1: Age Distribution of Respondents**

Age Group	Frequency	Percentage
18-25	45	33.33%
26-35	40	29.63%
36-45	25	18.52%
46-60	25	18.52%

The age dispersion of respondents gives bits of knowledge into the variety of the example as far as age gatherings. The table demonstrates that most of respondents are matured between 18-25 years, representing 33.33% of the complete example. This is trailed by the 26-35 age bunch, which makes up 29.63% of respondents. The 36-45 and 46-60 age bunches each address 18.52% of the example. This dissemination proposes a generally youthful segment, with a significant part of respondents being under 35 years old.

**Table 2: Gender Distribution of Respondents**

Gender	Frequency	Percentage
Male	68	50.37%
Female	67	49.63%

The orientation conveyance is practically equivalent, with guys involving 50.37% of the respondents and females 49.63%. This close equivalent portrayal guarantees that the study's discoveries are not one-sided towards one orientation, giving a balanced viewpoint on the acceptance of modern payment systems. The equivalent orientation portrayal is urgent for understanding any orientation explicit contrasts in the reception of advanced payment strategies.

**Table 3: Education Level of Respondents**

Education Level	Frequency	Percentage
High School	25	18.52%
Undergraduate Degree	55	40.74%
Postgraduate Degree	55	40.74%

The schooling level appropriation shows that the respondents are generally accomplished. Significant extents, 40.74%, hold college degrees, and another 40.74% have postgraduate certifications. Just 18.52% of respondents have finished secondary school as their most elevated level of instruction. This elevated degree of schooling among respondents might impact their commonality and solace with modern payment systems, possibly prompting higher acceptance rates.

**Table 4: Income Level of Respondents**

Income Level	Frequency	Percentage
Low	30	22.22%
Medium	70	51.85%
High	35	25.93%

## Factors Affecting the Acceptance of Modern Payment Systems in the Delhi NCR: An Empirical Study

The pay level conveyance features that most of respondents fall into the medium-pay class, which is 51.85% of the example. Respondents with major league salaries make up 25.93%, while those with low wages address 22.22%. This conveyance is important for analyzing what pay levels mean for the reception of modern payment systems. Higher-pay people could have more admittance to and trust in computerized financial devices, while lower-pay people could confront boundaries like restricted admittance to innovation or financial administrations.

### Hypothesis Testing and Analysis

The speculation testing centers around the effect of different factors on the acceptance of modern payment systems, six theories were tried utilizing ANOVA and connection analyses, with results introduced in 6 tables.

#### Hypotheses

**H1:** There is a significant difference in the acceptance of modern payment systems between different age groups.

**H2:** Gender significantly influences the acceptance of modern payment systems.

**H3:** Higher education levels are associated with increased acceptance of modern payment systems.

**H4:** Income levels significantly impact the adoption of modern payment systems.

**H5:** Perceived security influences the acceptance of modern payment systems.

**H6:** Ease of use is a significant factor in the acceptance of modern payment systems.

### ANOVA Analysis

#### *Age and Acceptance of Modern Payment Systems*

**Table 5: ANOVA Analysis of Age and Acceptance of Modern Payment Systems**

Age Group	Mean Acceptance Score	F-Value	P-Value
18-25	4.2	5.67	0.002
26-35	3.8		
36-45	3.5		
46-60	3.0		

The ANOVA analysis for age and acceptance of modern payment systems uncovers significant contrasts among various age gatherings. The mean acceptance scores decline with increasing age, with the most youthful age bunch (18-25) having the most noteworthy mean acceptance score of 4.2. The F-worth of 5.67 and a P-worth of 0.002 demonstrate that these distinctions are measurably significant. This recommends that more youthful people are bound to acknowledge modern payment systems contrasted with more established people.

#### *Gender and Acceptance of Modern Payment Systems*

**Table 6: ANOVA Analysis of Gender and Acceptance of Modern Payment Systems**

Gender	Mean Acceptance Score	F-Value	P-Value
Male	3.9	4.32	0.015
Female	4.1		

The ANOVA analysis for orientation demonstrates a significant contrast in the acceptance of modern payment systems among guys and females. Females have a somewhat higher mean acceptance score of 4.1 contrasted with guys at 3.9. The F-esteem is 4.32 and the P-esteem is 0.015, it is measurably significant to demonstrate that the distinction.

#### *Education Level and Acceptance of Modern Payment Systems*

**Table 7: ANOVA Analysis of Education Level and Acceptance of Modern Payment Systems**

Education Level	Mean Acceptance Score	F-Value	P-Value
High School	3.2	6.78	0.001

## Factors Affecting the Acceptance of Modern Payment Systems in the Delhi NCR: An Empirical Study

Undergraduate Degree	3.9		
Postgraduate Degree	4.3		

The ANOVA analysis for schooling level shows significant contrasts in acceptance in view of the greatest training level accomplished. People with postgraduate certificates have the most noteworthy mean acceptance score of 4.3, trailed by those with college degrees at 3.9, and secondary school graduates at 3.2. The F-esteem is 6.78 and the P-esteem is 0.001, it are measurably significant to show that the distinctions.

### Correlation Analysis

#### *Income and Acceptance of Modern Payment Systems*

**Table 8: Correlation Analysis of Income and Acceptance of Modern Payment Systems**

Income Level	Correlation Coefficient	P-Value
Low	0.35	0.001
Medium	0.45	
High	0.60	

The correlation analysis for money level and acceptance of modern payment systems uncovers a positive relationship. The connection coefficient increases with higher pay levels, with low pay showing a coefficient of 0.35, medium pay at 0.45, and major league salary at 0.60. The P-esteem is 0.001, it is genuinely significant to show that the connection.

#### *Perceived Security and Acceptance of Modern Payment Systems*

**Table 9: Correlation Analysis of Perceived Security and Acceptance of Modern Payment Systems**

Perceived Security Level	Correlation Coefficient	P-Value
Low	0.25	0.010
Medium	0.50	
High	0.70	

The correlation analysis for saw security and acceptance shows areas of strength for a relationship. More significant levels of seen security relate with higher acceptance scores, with relationship coefficients of 0.25 for low, 0.50 for medium, and 0.70 for high saw security levels. The P-esteem is 0.010, demonstrating factual significance.

#### *Ease of Use and Acceptance of Modern Payment Systems*

**Table 10: Correlation Analysis of Ease of Use and Acceptance of Modern Payment Systems**

Ease of Use Level	Correlation Coefficient	P-Value
Low	0.30	0.005
Medium	0.55	
High	0.75	

The correlation analysis for ease of use and acceptance demonstrates a significant positive relationship. The correlation coefficients increase from 0.30 for low, to 0.55 for medium, and 0.75 for high ease of use levels. The P-value is 0.005, indicating that the relationship is statistically significant.

### Data Analysis and Discussion

The information analysis from this empirical study on the acceptance of modern payment systems in the Delhi NCR area gives a few basic bits of knowledge into the factors impacting client reception. These factors incorporate age, orientation, schooling level, pay level, saw security, and usability, each contributing interestingly to the general acceptance of computerized payment advances.

## Factors Affecting the Acceptance of Modern Payment Systems in the Delhi NCR: An Empirical Study

**Age:** The period of respondents assumed a significant part in their acceptance of modern payment systems. The ANOVA analysis showed that more youthful age gatherings, especially those between 18-25 years, displayed the most noteworthy mean acceptance scores. This partner's mean acceptance score was significantly higher contrasted with other age gatherings, recommending serious areas of strength for an and status to take on computerized payment techniques. As age increased, the mean acceptance scores would in general downfall, with the most established bunch (46-60 years) showing the least acceptance. This pattern demonstrates that more youthful people are all the more mechanically adroit and open to embracing new financial advancements, possible because of their more noteworthy openness to computerized conditions and their versatile utilization of innovation in day to day existence. This understanding is essential for focusing on procedures pointed toward increasing reception rates among more established populaces, which might require various methodologies, for example, designated training and worked on UIs to enhance solace and confidence in utilizing these systems.

**Orientation:** Distinctions in sexual orientation in the acceptance of modern payment systems were additionally measurably significant, however less articulated than age contrasts. The analysis uncovered that ladies showed marginally higher acceptance rates than men, with mean acceptance scores of 4.1 and 3.9, individually. This finding proposes that ladies might see advanced payment systems as more advantageous or easy to understand. Given the social and social elements in the Delhi NCR district, this understanding could be critical for financial organizations and policymakers to plan orientation explicit advertising efforts and instructive projects that address the special necessities and worries of male and female clients in an unexpected way. Enhancing the perceivability of ladies in limited time exercises and accentuating the security and usability of advanced payment techniques could additionally reinforce reception rates among female clients.

**Instruction Level:** Training level arose as a significant component impacting the acceptance of modern payment systems. The analysis demonstrated a positive connection between's advanced education levels and more prominent acceptance. Respondents with undergrad and postgraduate certificates had higher mean acceptance scores contrasted with those with just a secondary school instruction. This connection highlights the job of training in cultivating mechanical education and trust in utilizing computerized payment stages. Instructed people are bound to understand and believe the advantages and security elements of modern payment systems, prompting higher reception rates. This finding features the importance of coordinating computerized proficiency programs inside instructive educational plans and leading public mindfulness missions to arrive at less taught portions of the populace, consequently advancing a more extensive understanding and reception of computerized financial administrations.

**Pay Level:** Pay levels were emphatically connected with the acceptance of modern payment systems. Higher-pay bunches displayed more prominent acceptance, with significant positive connection coefficients saw in the analysis. This pattern can be ascribed to higher-pay people having better admittance to mechanical gadgets and stable web availability, which are fundamental for using advanced payment systems. Furthermore, higher-pay gatherings might have more discretionary cashflow to explore different avenues regarding and take on new advances. Financial foundations ought to consider these experiences to foster comprehensive financial items and administrations that take care of lower-pay gatherings, possibly through endowments, minimal expense computerized arrangements, or associations with telecom companies to give reasonable web access. This approach could assist with spanning the computerized partition and guarantee that modern payment systems are open to a more extensive segment.

**Security:** The security factor recognized as a pivotal element impacting the acceptance of modern payment system. The analysis showed that more elevated levels of seen security were related with increased acceptance rates. This finding lines up with past examination that stresses the importance of trust and security in the reception of new advances. Clients who feel sure that their financial transactions are secure from misrepresentation and digital dangers are bound to take on computerized payment techniques. Financial establishments should focus on enhancing the security highlights of their computerized payment stages and impart these elements really to clients. Customary updates, powerful encryption techniques, and transparent security strategies can help fabricate and keep up with client trust, accordingly reassuring more extensive reception.

**Usability:** Convenience was another significant determinant of acceptance. The analysis showed that systems saw as easy to use and natural had higher acceptance rates. This highlights the importance of planning computerized payment stages that are open to clients with shifting degrees of mechanical capability. Straightforward, clear connection points, insignificant moves toward complete transactions, and far reaching client backing can significantly enhance the client experience and drive reception. Financial foundations and innovation suppliers ought to zero in on client focused plan standards and persistently assemble client criticism to refine and work on the convenience of their foundation.

All in all, this study gives an exhaustive analysis of the segment and conduct factors impacting the acceptance of modern payment systems in the Delhi NCR locale. The discoveries offer significant experiences for partners expecting to enhance the reception of advanced payment systems. By tending to the recognized boundaries and advancing the advantages of these innovations,

## Factors Affecting the Acceptance of Modern Payment Systems in the Delhi NCR: An Empirical Study

policymakers and financial foundations can work on the infiltration and use of modern payment innovations, eventually encouraging a more comprehensive and proficient financial biological system.

### CONCLUSION

This study gives an extensive analysis of the factors affecting the acceptance of modern payment systems in the Delhi NCR locale. Age, orientation, instruction level, pay, saw security, and convenience arose as significant determinants. The discoveries offer significant bits of knowledge for policymakers and financial foundations expecting to enhance the reception of computerized payment systems. By tending to the distinguished hindrances and advancing the advantages, partners can work on the infiltration and utilization of modern payment advancements.

### REFERENCES

- 1) Begam, M., Arpana, D., & Radha, P. (2023). Adoption and usage of innovative techniques: A study on mobile banking in Bangalore city.
- 2) Bhattacharyay, Biswa Nath. and Bhattacharyay, Biswa Nath., Determinants of Financial Inclusion of Urban Poor in India: An Empirical Analysis (September 29, 2016). CESifo Working Paper Series No. 6096, Available at SSRN: <https://ssrn.com/abstract=2866853> or <http://dx.doi.org/10.2139/ssrn.2866853>
- 3) Ganesh, S. R., & Balaji, M. (2023). A study on the perception of select IT employees towards digital payment in Bengaluru. *The Online Journal of Distance Education and e-Learning*, 11(1).
- 4) Janani, S., Sivarathinabala, M., Anand, R., Ahamad, S., Usmani, M. A., & Basha, S. M. (2023). Machine learning analysis on predicting credit card forgery. In International Conference on Innovative Computing and Communication (pp. 137-148). Springer Nature Singapore.
- 5) Jayaraman, T. K., & Makun, K. (2019). Digitisation as a contingent factor in India's financial sector development-growth nexus: An empirical study. *Margin: The Journal of Applied Economic Research*, 13(3), 306-326..
- 6) Kuriakose, M. O. N. C. Y., & Johnson, J. (2021). An empirical study on the awareness of payment banks among peoples in Kottayam district, Kerala. *Indian Journal of Economics and Business*, 20(1), 117-128.
- 7) Lakshmi, S., & Nandini, R. G. (2022). A study on usage of digital payment interface with special reference to working women in Bangalore city. *Traditional and Modern Approach towards Social Well-Being in India*, 93.
- 8) Lohana, S., & Roy, D. (2023). Impact of demographic factors on consumer's usage of digital payments. *FII Business Review*, 12(4), 459-473.
- 9) Lokesh, G. R., & Kotehal, P. U. (2023). A study on the effect of electronic payment systems on small business in urban Bengaluru. *International Journal of Finance Management and Economics*, 5(1), 110-114.
- 10) Padashetty, S., & Kishore, K. S. (2013). An empirical study on consumer adoption of mobile payments in Bangalore city-A case study. *Researchers World*, 4(1), 83.
- 11) Pandey, S. K. (2022). A study on digital payments system & consumer perception: An empirical survey. *Journal of Positive School Psychology*, 6(3), 10121-10131.
- 12) Raghavendra, V., & Veerasha, P. (2023). Analysing the market for digital payments in India using the predator-prey mode. *An International Journal of Optimization and Control: Theories & Applications (IJOCTA)*, 13(1), 104-115.
- 13) Rajaram, G. M., & Vinay, S. (2017). Customer perception of mobile banking adoption in Bengaluru city. *International Journal of Advanced Research in Management and Social Sciences*, 6(4), 182-199.
- 14) Ravikumar, T., & Prakash, N. (2022). Determinants of adoption of digital payment services among small fixed retail stores in Bangalore, India. *International Journal of Business Innovation and Research*, 28(3), 319-346.
- 15) Reddy, K. S., & Ranganathan, S. (2023). Factors influencing customer satisfaction in Bangalore shopping malls: Before & during COVID-19 pandemic. *RVIM Journal of Management Research*, 26.
- 16) Sujatha, S. L., & Mahesh, K. (2024). Demystifying the drivers influencing on the usage of digital wallets in Bangalore. *Forum for Linguistic Studies*, 6(1), 484-500.
- 17) Venkat, M. V. V., Khan, S. R. K., Gorkhe, M. D., Reddy, M. K. S., & Rao, S. P. (2023). Fostering talent stability: A study on evaluating the influence of competency management on employee retention in the automotive industry. *Remittances Review*, 8(4).
- 18) Viswavidyalayam-Tirupathi-AP, S. P. M., & Varalakshmi, C. (2022). An empirical study on users perception towards adoption of digital payment methods with reference to Vijayawada city, Andhra Pradesh.

## Factors Affecting the Acceptance of Modern Payment Systems in the Delhi NCR: An Empirical Study

### Author Biography

Ramesh Kumar is working as Associate Professor in department of commerce, PGDAV College Eve, University of Delhi since January 2006. His teaching interest is finance and investment management. He was Principal Investigator of two research project. His primary research interest is finance, banking, security valuation and digital payment system. He has presented more than 30 papers in national and international conference and published more than 35 research papers in reputed journal. He has authored and co-authored of 6 books and 9 chapters published in various edited books.



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.