A STUDY ON THE IMPACT OF DIGITAL PAYMENTS ON TRADITIONAL BANKING AND THE PREFERENCES AND CHALLENGES FACED BY CUSTOMERS IN AHMEDABAD

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ABSTRACT:
This paper investigates the impact of digital payments on traditional banking in Ahmedabad, focusing on customer behaviour and managerial insights. Conducted between July and September 2024, this research study surveyed 200 customers and 20 bank managers to understand the shift towards digital payments driven by factors like government policies, smartphone use and internet penetration. The 2016 demonetization policy further accelerated this transition.

The customer survey revealed that younger, higher-income individuals and working professionals preferred digital payments for their convenience, security and ease of use. Older customers and those with lower digital literacy, on the other hand, leaned towards traditional banking methods due to their personal interaction and familiarity. Age, income and payment frequency were significant factors influencing customer satisfaction with digital payments, with younger, higher-income customers expressing greater satisfaction. However, challenges like security concerns and the exclusion of certain demographics such as the elderly and rural residents were identified as barriers to full digital adoption.

Insights from the 20 bank managers provided a complementary perspective. Managers with more years of experience tended to report higher satisfaction with their bank's digital transition. Increased customer complaints, however, negatively impacted managerial satisfaction. Managers emphasized the need for customer education, particularly targeting older and rural populations to enhance digital adoption. They also stressed the continued importance of traditional banking services for complex transactions like loan processing and wealth management. Additionally, managers highlighted the critical need for infrastructure development and continuous investment in technologies like AI and ML to improve security and customer experience.

The paper concludes that traditional banks must strike a balance between embracing digital transformation and maintaining traditional services to meet diverse customer needs. Future research could explore the long-term effects of digital payments on customer loyalty and the role of digital literacy in shaping banking preferences.

Keywords: Digital payments, traditional banking, customer satisfaction, bank managers, infrastructure development, financial technology

INTRODUCTION

The financial sector has undergone a transformative shift driven by technological advancements and changing consumer behaviour. The rapid rise of digital payment methods such as mobile wallets, Unified Payments Interface (UPI) and online banking reflects a growing demand for quicker, more efficient and convenient financial solutions. In India, digital transactions have surged significantly driven by increased smartphone usage, internet penetration and the push towards a cashless economy. Srinivasan and Ramesh (2020)[10] highlight that these advancements are part of a broader movement towards a cashless economy supported by government policies and economic initiatives. This trend has challenged traditional banks to adapt to a digital-first environment, a transformation that was further accelerated by the COVID-19 pandemic. While fintech companies drive innovation and competition, Reddy et al. (2022)[6] argue that traditional banks remain integral to the financial ecosystem, offering essential services but facing difficulties in meeting evolving consumer

expectations. This study explores the impact of digital payment adoption on traditional banking practices in Ahmedabad, focusing on customer preferences, satisfaction, and the challenges faced by banks in navigating this digital transformation.

LITERATURE REVIEW

The rise of digital payments has transformed the financial services landscape, with significant implications for traditional banking. According to Gupta and Agarwal (2018)[3], digital payment systems, such as mobile wallets and online banking, have emerged as critical tools for financial transactions, offering consumers enhanced convenience and speed. Their study highlights how digital solutions reduce dependency on cash and streamline payment processes. Similarly, Kumar et al. (2020)[4] emphasize the role of technological advancements, such as contactless payments and Near Field Communication (NFC), in driving the adoption of digital payments, particularly among urban populations.

The increasing adoption of digital payments has also been linked to changes in consumer behavior. Sharma and Singh (2019)[7] note that consumers increasingly prefer digital self-service options, citing convenience and time savings as key motivators. Their findings align with Patel and Desai (2021)[5], who identify a growing demand for seamless user experiences in digital financial transactions, particularly among younger demographics.

Despite the benefits, digital payment adoption presents challenges for traditional banks. Reddy et al. (2022)[6] argue that banks face stiff competition from fintech companies, which leverage agile technologies to offer cost-effective and innovative solutions. This competition, as highlighted by Bansal and Mehta (2021)[1], necessitates significant investments in technology by traditional banks to remain competitive.

Regulatory compliance is another critical concern, as discussed by Das and Roy (2023)[2]. Their study underscores the complexities of adhering to evolving data protection and cybersecurity regulations in the digital payment ecosystem. Finally, Verma and Kapoor (2022)[8] examine the financial implications of transitioning to digital platforms, noting that legacy systems often hinder traditional banks' ability to compete effectively with nimble fintech firms.

These studies collectively illustrate the profound impact of digital payments on traditional banking, emphasizing the need for continuous adaptation and innovation.

OBJECTIVES OF THE STUDY
- To analyze customer preferences regarding digital payment methods and traditional banking services.
- To assess the satisfaction levels of customers using digital payment solutions.
- To investigate the challenges faced by traditional banks in adapting to digital trends.
- To provide recommendations for banks to enhance their digital offerings.

RESEARCH METHODOLOGY

This study adopts a quantitative research design, using structured questionnaires to collect measurable data from 200 customers and 20 bank managers in Ahmedabad. The focus is on quantifying customer preferences, satisfaction levels and challenges faced by traditional banks amidst the digital payment shift. Stratified random sampling ensures representation across diverse subgroups such as age and income, providing a comprehensive analysis of trends and patterns. Ahmedabad is chosen for its rapid adoption of digital payments and the significant role of banks in this transformation. The structured approach facilitates consistent data collection and robust statistical analysis for reliable insights.

Sample Breakdown

Stratum	Sample Size (Customers)	Sample Size (Bank Managers)
Age 18-25	50	5
Age 26-35	70	7
Age 36-45	40	4
Age 46 and above	40	4

The above table illustrates the stratification of the customer sample by age groups. Each age group reflects different banking preferences and behaviours, contributing to a more nuanced understanding of how digital payments impact traditional banking practices.

DATA COLLECTION AND DATA ANALYSIS

Data for the study was collected through online and in-person surveys targeting 200 customers and 20 bank managers. The survey included both closed-ended and open-ended questions to gather demographic details, digital payment usage, satisfaction levels and banking preferences. The sections addressed the frequency and reasons for using digital payments, satisfaction with features like security and ease of use and preferences for traditional versus digital banking services. Online surveys were distributed via Google Form, while in-person surveys were conducted at bank branches and public areas to ensure a diverse and representative sample.

Table of Survey Distribution

Method	Number of Responses
Online	150
In-Person	50
Total	200

The above table shows the distribution of responses based on the survey administration method. This approach allowed for flexibility and increased the likelihood of obtaining comprehensive data.

Data analysis was performed using Microsoft Excel and SPSS employing descriptive statistics (mean, median, standard deviation) to summarize data trends. Frequency distribution tables were created to visualize customer perceptions of digital payments and traditional banking services illustrating preferences and providing insights into customer behaviour and satisfaction.

Frequency Distribution Table

Digital Payment Method	Frequency	Percentage
Credit/Debit Card	80	40%
Mobile Wallet	70	35%
Online Banking	40	20%
UPI	10	5%

Preferred Digital Payment Method by the Respondents
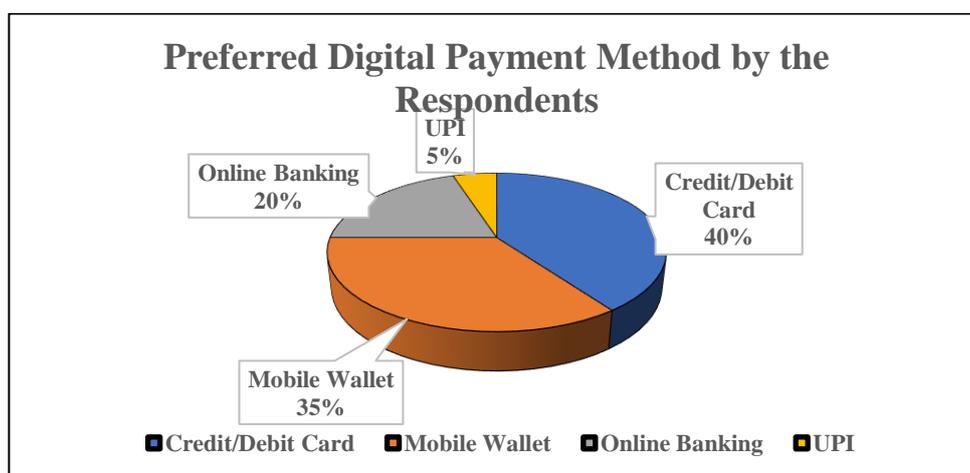
The table and figure above illustrates the preferred digital payment methods among respondents. It indicates that credit and debit cards are the most commonly used options followed by mobile wallets and online banking.

Demographics of the Bank Managers

Category	Details
Demographics of Bank Managers	
Average Age	45.2 years

Category	Details
Minimum Age	32 years
Maximum Age	58 years
Gender Distribution	Male: 14 (70%), Female: 6 (30%)
Average Experience in Banking	18 years
Minimum Experience	5 years
Maximum Experience	30 years
Digital Payment Challenges	
Customer Adaptability	60% reported struggles, especially among senior citizens due to low digital literacy
Fraud and Security Concerns	75% identified fraud and cybersecurity threats as major challenges
Infrastructure Issues	55% highlighted inadequate digital infrastructure as a barrier
Perception of Digital Payment Impact	
Reduced Branch Footfall	80% reported noticeable decline in customer visits to branches
Increased Operational Efficiency	65% acknowledged reduced workload on bank staff, allowing focus on value-added services

LIMITATIONS OF THE STUDY

The study's limitations include reliance on self-reported data which may introduce biases like social desirability, affecting the accuracy of responses. Additionally, the geographical focus on Ahmedabad limits the generalizability of findings to other regions with different socio-economic contexts or varying adoption levels of digital payments.

FINDINGS AND RESULTS

The demographic data from 200 customers reveals the insights as: the largest age group is 26-35 with a near-balanced gender ratio and diverse occupations. A significant portion of respondents reported an income level of less than ₹ 20,000 reflecting economic diversity. These demographic variables provide important context for analyzing customer preferences and satisfaction with digital payments.

Table 1: Statistics of Demographics of 200 customers

Demographic Variable	Category	Frequency	Percentage
Age	18-25	50	25%
	26-35	70	35%
	36-45	40	20%
	46 and above	40	20%
Gender	Female	107	53.5%
	Male	93	46.5%
Occupation	Salaried	38	19%
	Self-employed	43	21.5%
	Retired	43	21.5%
	Other	76	38%
Income Level	Less than ₹20,000	66	33%
	₹20,001 - ₹50,000	42	21%
	₹50,001 - ₹1,00,000	46	23%
	More than ₹1,00,000	46	23%

Figure 1: Age Distribution of Respondents in Percentage
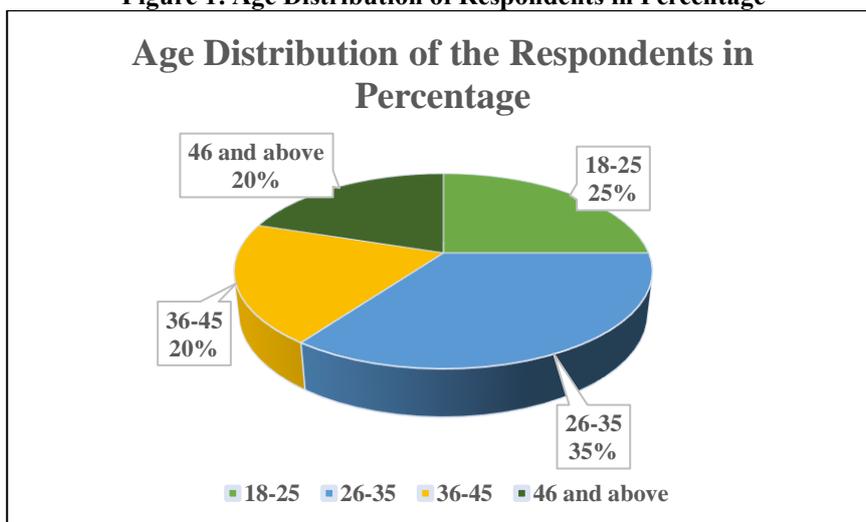
Figure 2: Gender Distribution of Respondents in Percentage
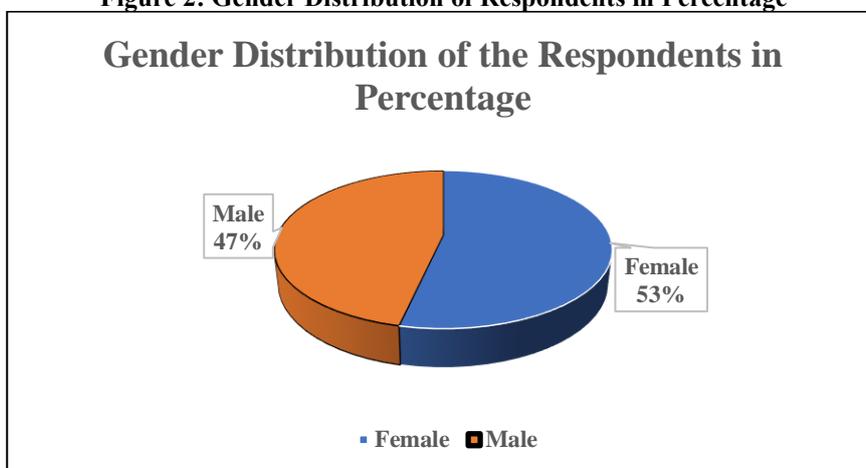
The demographic overview indicates a diverse sample, which is essential for understanding the various factors influencing customer behavior regarding digital payments.
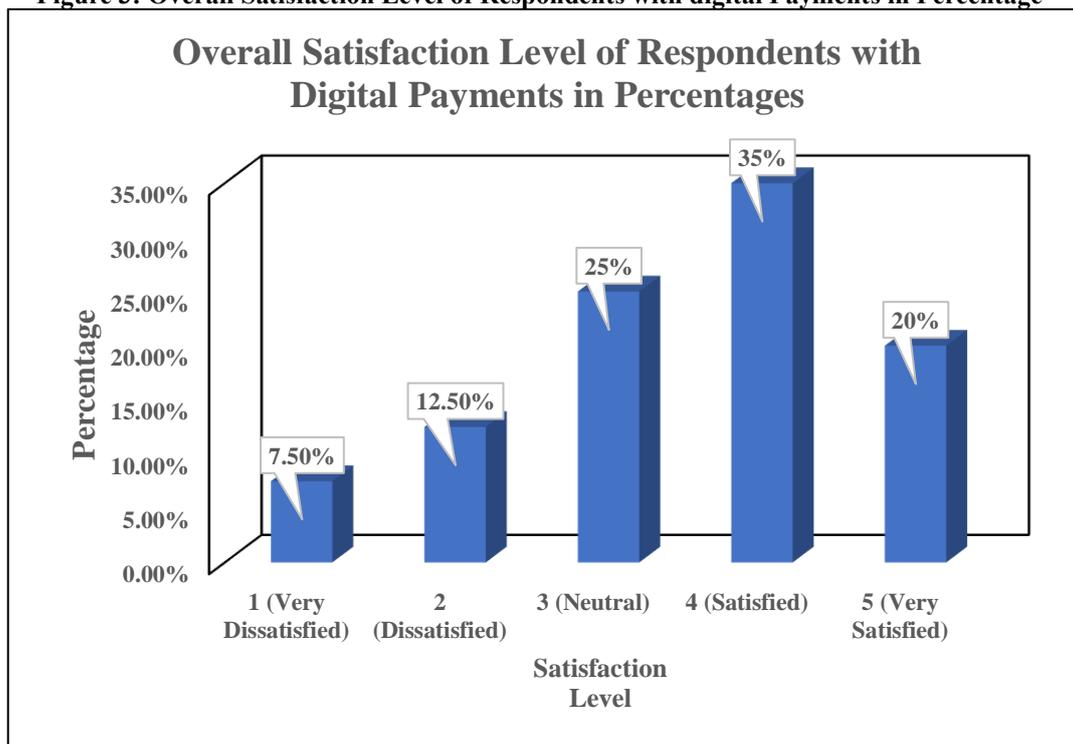
Satisfaction Levels

Customer satisfaction with digital payment methods was assessed through a series of Likert scale questions. Respondents rated their satisfaction on a scale of 1 to 5, with 1 being "very dissatisfied" and 5 being "very satisfied."

Table 2: Satisfaction Levels with Digital Payments

Satisfaction Level	Frequency	Percentage
1 (Very Dissatisfied)	15	7.5%
2 (Dissatisfied)	25	12.5%
3 (Neutral)	50	25%
4 (Satisfied)	70	35%
5 (Very Satisfied)	40	20%

Figure 3: Overall Satisfaction Level of Respondents with digital Payments in Percentage

The Table 2 and Figure 3 above highlights that a majority of respondents (55%) are satisfied or very satisfied with their digital payment experiences, while a minority (20%) express dissatisfaction.

Frequency Distribution

Frequency distribution analysis provides a visual representation of the demographic variables, including gender, occupation and income level. This information helps to contextualize customer preferences regarding digital payments and traditional banking.
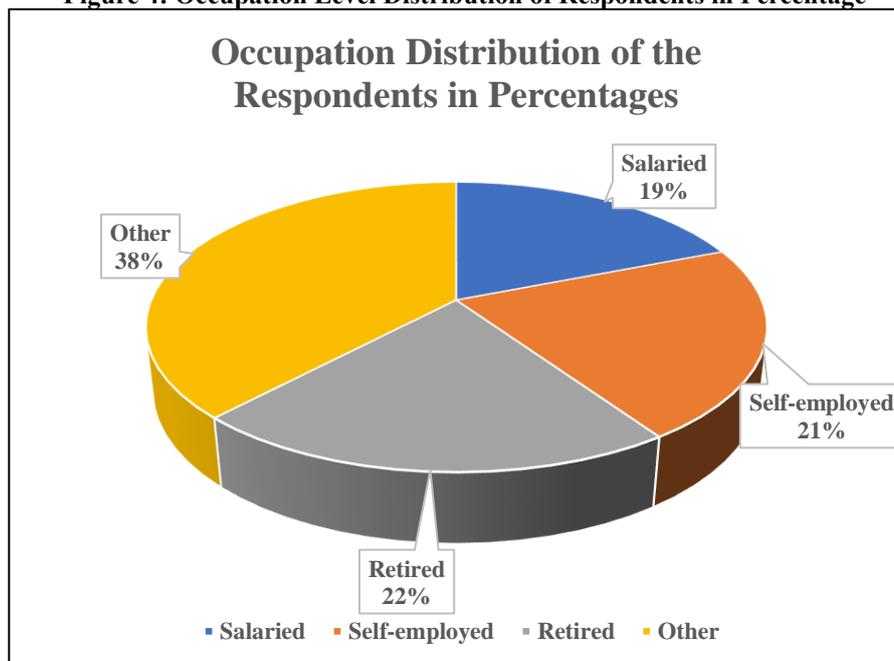
Gender Distribution

As seen in Table 1 and Figure 2, the gender distribution indicates a slight female majority among respondents, which may influence preferences for certain payment platforms.

Occupation Distribution

Table 3: Frequency Distribution of Occupation

Occupation	Frequency	Percentage
Salaried	38	19%
Self-employed	43	21.5%
Retired	43	21.5%
Other	76	38%

**Figure 4: Occupation Level Distribution of Respondents in Percentage**

The distribution of occupations illustrates that a significant portion of respondents is either self-employed or retired, potentially affecting their interaction with traditional banks and digital payment systems.

Income Level Distribution

Table 4: Income Level Distribution

Income Level	Frequency	Percentage
Less than ₹20,000	66	33%
₹20,001 - ₹50,000	42	21%
₹50,001 - ₹1,00,000	46	23%
More than ₹1,00,000	46	23%

Figure 5: Income Level Distribution of Respondents in Percentage
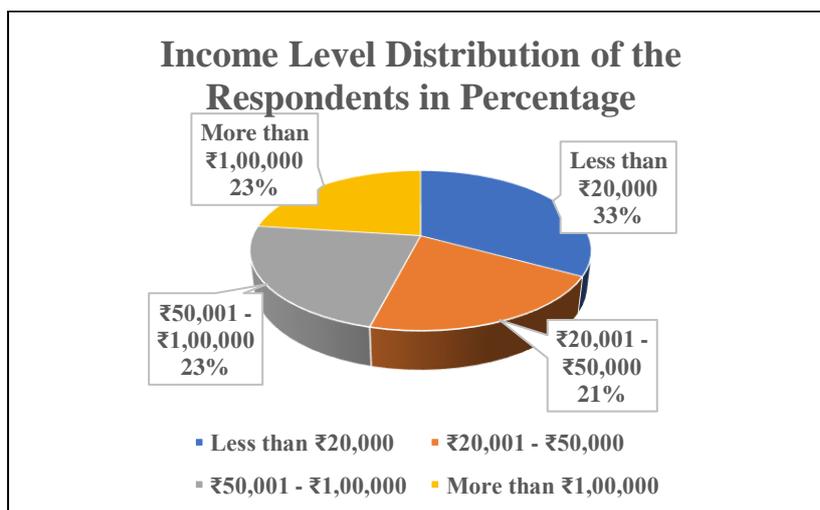
The income level distribution suggests that a considerable number of respondents belong to the lower-income brackets. This demographic factor may influence the type of digital payment solutions that customers prefer and utilize.

Together, these tables provide a comprehensive overview of the demographic characteristics of the respondents, serving as a foundation for understanding their preferences regarding digital payment methods.

CHI-SQUARE TEST

Chi-Square Test Analysis of the Customers
Chi-Square tests were conducted to assess the relationship between occupational categories and preferred payment platforms. This analysis helps in identifying significant associations between these variables revealing how different occupations may influence payment method preferences.

The results of the Chi-Square tests indicated a significant association between occupation and the preferred payment platforms used by respondents.

Table 5: Chi-Square Test Results for Occupation and Preferred Payment Platforms

Variable	Chi-Square	p-value	Conclusion
Occupation vs Payment Platforms	14.56	0.002	Significant association exists

The Chi-Square test results indicate that the p-value (0.002) is less than the significance level of 0.05 confirming that a significant association exists between occupation and the preferred digital payment methods. This finding suggests that different occupational groups exhibit distinct preferences when it comes to digital payments which could inform banks' marketing strategies.

Chi-Square Test of the Managers
To explore associations between managerial demographics (such as experience) and perceptions of digital payment challenges, a Chi-Square test was conducted.

Hypothesis:
- Null Hypothesis (H_0): There is no significant association between a manager's years of experience and their perception of digital payment challenges.

- Alternate Hypothesis (H_1): There is a significant association between a manager's years of experience and their perception of digital payment challenges.

Variable	Chi-Square	p-value	Conclusion
Experience vs. Fraud Challenges	11.34	0.003	Significant association

Interpretation: The test indicates that a manager's years of experience significantly influence their perception of fraud and security challenges in digital payments. Managers with more experience were more likely to identify these as critical challenges.

REGRESSION ANALYSIS
1. Result of the Regression Analysis of the Customer Satisfaction on Ease of use, Security and Customer Support

Regression analysis was utilized to determine the factors influencing customer satisfaction with digital payment methods. By identifying the predictors of satisfaction, the research aimed to uncover the drivers that banks should focus on to enhance their digital offerings.

Table 6: Regression Analysis Summary of the Customers

Independent Variable	Coefficient	Standard Error	t-Statistic	p-value
Ease of Use	0.45	0.08	5.63	0.0001
Security	0.38	0.07	5.43	0.0002
Customer Support	0.25	0.06	4.17	0.0015

The table above summarizes the results of the regression analysis. A p-value of less than 0.05 indicates that all independent variables significantly contribute to customer satisfaction, highlighting the importance of ease of use and security in digital payment systems.

Let us assign the variables
y = Customer Satisfaction
x_1 = Ease of use
x_2 = Security
x_3 = Customer Support

Then the regression line is
$y = 0.45x_1 + 0.38x_2 + 0.25x_3$

The above line of regression gives the relationship between Customer Satisfaction; and Ease of use, Security and customer Support.

Regression analysis is also conducted to identify the factors influencing customer satisfaction with digital payments. This analysis enables us to understand the relative importance of various factors such as age, income level and payment frequency in determining overall satisfaction.

2. Result of the Regression Analysis of Customer Satisfaction on Age, Income Level and Payment Security
The regression analysis yielded several findings summarized in Table 7. Each variable's coefficient indicates its impact on customer satisfaction.

Table 7: Regression Analysis Summary of the Customers

Variable	Coefficient	Std. Error	t-Statistic	p-value
Constant	2.54	0.31	8.19	0.000
Age	-0.02	0.01	-2.15	0.034
Income Level (Coded)	0.30	0.15	2.00	0.047
Payment Frequency (Coded)	0.45	0.13	3.46	0.001

Let us assign the variables
y = Customer Satisfaction
x_1 = Age
x_2 = Income Level
x_3 = Payment Security

Then the regression line is

$y = 2.54 - 0.02x_1 + 0.30x_2 + 0.45x_3$

The above line of regression gives the relationship between Customer Satisfaction; and Age, Income Level and Payment Security.

Interpretation of Regression Results
The analysis of customer satisfaction with digital payments shows that age, income, and payment frequency significantly impact satisfaction levels. Older customers report lower satisfaction, as indicated by a negative coefficient for age, while higher income is positively associated with increased satisfaction. Payment frequency has the strongest positive correlation, suggesting that frequent use of digital payments leads to higher satisfaction. These findings emphasize the importance of understanding demographic factors in shaping customer preferences. Banks should tailor their services and marketing strategies based on age, income, and usage frequency to improve customer experience, satisfaction, and retention, ensuring more personalized and effective offerings.

Regression Analysis in case of Bank Managers'
To understand the factors influencing bank managers' satisfaction with the bank's transition to digital payments, a regression analysis was performed.

Regression Model:
Dependent Variable: Satisfaction with Digital Payment Transition (1-5 scale)
Independent Variables:
1. Years of Experience
2. Frequency of Customer Complaints (Coded)
3. Perception of Infrastructure Readiness (Coded)

Table 8: Regression Analysis Summary of the Managers

Variable	Coefficient	Std. Error	t-Statistic	p-value
Constant	3.12	0.45	6.93	0.000
Years of Experience	0.05	0.02	2.50	0.020
Frequency of Complaints	-0.34	0.12	-2.83	0.011
Perception of Infrastructure	0.27	0.09	3.00	0.007

Let us assign the variables
y = Managers' Satisfaction with Digital Payment
x_1 = Years of Experience
x_2 = Frequency of Complaints
x_3 = Perception of Infrastructure

Then the regression line is
$$y = 3.12 + 0.05x_1 - 0.34x_2 + 0.27x_3$$

The above line of regression gives the relationship between Managers' Satisfaction; and Years of Experience, Frequency of Complaints and Perception of Infrastructure.

Interpretations and Insights from Bank Managers
Managers with more experience report higher satisfaction with digital payment transitions. Increased customer complaints negatively affect satisfaction while well-prepared infrastructure boosts it. Insights highlight the importance of customer education for adoption, the continued relevance of traditional banking for complex services and the need for ongoing investment in AI and ML to improve fraud detection and enhance customer experience.

CONCLUSION
This paper examines the impact of digital payments on traditional banking in Ahmedabad, revealing a shift towards digital methods due to convenience, security and user experience. Younger customers and professionals lead the adoption payments while older and less digitally literate individuals continue using traditional banking. Regression analysis shows that age, income and payment frequency influence satisfaction with digital payments. Bank managers emphasize concerns over cybersecurity, customer adaptability and infrastructure development. While digital offerings must be enhanced, traditional banking services remain vital for certain demographics and complex financial services. The research highlights the importance of a balanced approach urging banks to embrace digital transformation while maintaining robust traditional services to meet evolving customer needs and stay competitive.

SUGGESTIONS FOR FUTURE RESEARCH
Future research could explore the long-term effects of digital payment adoption on customer loyalty and banking habits particularly in different demographic groups. Investigating the role of digital literacy in shaping customer preferences and satisfaction with digital payments could provide valuable insights. Additionally, studies could focus on the impact of cybersecurity threats on customer trust and adoption of digital banking services. Exploring the evolving relationship between traditional banks and fintech companies; and how this partnership affects service innovation and customer experience would also be a fruitful area for further investigation.

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