Digital Payments in Residential Area of Surat District: A Consumer's Perspective

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Abstract:

The banking industry plays a vital role in the global economy by providing essential financial services. The industry is highly regulated to maintain financial stability and protect customers' interests. In recent years, there has been a trend towards digital payments. This is due to the convenience, speed of digital payment, ease of doing the transactions, and 24x7 availability of services inclusive of mobile banking services. The banking industry is also facing new challenges from FinTech companies. Digital payment in India has experienced many transitions in recent years. With the launch of the government's ambitious initiative, the demonetization drive in 2016, COVID-19 Pandemic, and Lockdown in the country witnessed the shifting of people of India towards a cashless economy significantly. The main focus of this study was perception of consumer for adopting digital payment. This study was mainly based on primary data. Respondents were taken through a convenient sampling method through a structured questionnaire. 1026 Sample size form the rural and urban areas of Surat District. Analysis indicates growing consumer awareness of digital payments, excluding point of sale. Operational knowledge gaps and limited rural accessibility impede adoption. Raising public awareness is crucial for widespread digital payment adoption.

1. INTRODUCTION:

In recent years, the global financial landscape has undergone a revolutionary change with the widespread adoption of digital payment methods. This shift not only redefines money management but also acts as a crucial catalyst for economic growth, financial inclusion, and technological advancement. The historical urban-rural divide in financial service access is now experiencing a transformative connection through the proliferation of digital payment technologies. In fast-paced urban areas with robust digital infrastructure, digital payment methods have become nearly instinctive, offering convenience, speed, and security in a variety of financial transactions, from everyday purchases to significant transactions.

In rural areas, historical challenges to financial inclusion, such as limited banking infrastructure and reliance on traditional cash transactions, are being overcome by transformative digital payment solutions. Mobile banking, digital wallets, and fintech innovations empower rural communities with enhanced financial access, fostering economic growth and diminishing longstanding geographical disparities.

This paper will delve into the unique dynamics shaping the use of digital payments in urban and rural area, examining factors for adopting and not adopting digital payment system. By understanding the distinctive challenges and opportunities in each context, policymakers,

financial institutions, and technology developers can work collaboratively to ensure a more inclusive and seamless transition to a digital economy for all.

As we navigate this digital frontier, it is essential to recognize the nuanced approaches required to bridge the urban-rural gap effectively. By harnessing the potential of digital payments, we have the opportunity to create a more equitable financial landscape, empowering individuals across diverse socio-economic backgrounds and contributing to the overall progress of society.

2. LITERATURE REVIEW:

Gourab Ghosh (2021) accomplished a study on **"Adoption of Digital Payment System by Consumer: A Review of Literature"**. This study is based on a review of the literature of several papers that discusses various forms of digital payments and the reasons why they are being adopted, how frequently they are used, and what is the future of digital payment, etc., The aim of the study is to identify the factors that various authors have considered when defining why people have adopted digital payments. Different literature reviewed from different papers suggests that digital payment is more convenient, is 24x7 available and such payment transactions can be done by anyone who used an internet connection and people don't need to wait in queues or visit banks. This study found that digital payments not only help individuals to pay and receive money but it also performs multiple functions. According to the government of India's initiative to create a digital India, the rise in smartphone sales and the availability of the internet at a high speed and an affordable price is one of the key factors for consumers to adopt the digital payment system as everything can be done at our fingertips and we don't have to leave the house to complete the task. The use of digital payment systems will increase further in the coming future, and the digital India mission will undoubtedly be a high success.

Pavithra C.B. (2020) a Ph.D. thesis entitled **"An Empirical Analysis on the factors affecting Consumers' Perception towards digital payment systems (A study with Reference to Users of digital payment in Chennai City)"** Objective of this research was to study the demographic profile, banking detail payment patronage of the consumers using the digital mode of payment and to identify the factors affecting consumers' perception. Both Primary and secondary data sources are used. Primary data was collected through a structured questionnaire. The area of the study was Chennai city its metropolitan city in India. Convenient sampling techniques were used for the study. For statistical analysis, the researcher used the following statistical tools and tests such as Frequency and Simple percentage, Factor Analysis, Cluster Analysis, Chi-square test, On-way ANOVA, Conjoint Analysis, and Structural

Equation Model. This study found that Consumers are adopting new technologies but they are feared of security. The Government, Banks, and Digital Companies should satisfy the need of existing and potential consumers.

K. Suma Vally and K. Hema Divya (2018) undertook a study on **"Digital Payment in India with Perspective of Consumer's Adoption"**. The objectives of this study were to examine the age of respondent impact and to examine how customers' income and education levels affect their use of digital payments. The study is carried out in the Hyderabad region. Using convenience sampling, 200 people were chosen as the sample size. Out of which 183 responded. This indicates a 92% response rate. Use of structured questionnaires for data collection. The simple percentage analysis and Chi-square test were used to analyse the respondents' responses. The study findings show that the adoption of technology for digital payments has enhanced the performance of the banking industry and made it possible to realise the motive of a cashless society. The research gives emphasis to the percentage of awareness of maximum use of technology. Banks should take effective actions in creating awareness towards the effective usage of technology and security

3. STATEMENT OF THE PROBLEM:

Digital Payments are growing at the highest rate. Having a card has become the need of every person because in the era of High Technology cash strives to endure the competition with electronic money more and more. Also, people prefer to have virtual wallets. It has a variety of pros in comparison to traditional payment systems like as innovative ideas, reliable technology, effective business practices, smart marketing, good usability, time-saving, user-friendly, convenient, etc. Therefore, there is a need to explore and understand consumer perception towards digital payment systems to identify the challenges and barriers to their widespread adoption and to develop strategies to address these concerns. The present paper aims to know the awareness, perception, and satisfaction of respondents regarding the use of Digital Payment System within the Urban and Rural areas of Surat District.

4. OBJECTIVES OF THE RESEARCH:

The following are the objectives of the present paper:

- To study the socio-economic profiles of respondents.
- To study the perception of respondents regarding digital payment system.
- To measure which factors influence more for not using the digital payment system.
- To assess which factors influence more for adopting the digital payment system.
- To check the association between Residential Areas and the use of digital

payment system.

5. RESEARCH METHODOLOGY

5.1 Data Collection:

The study is analytical in nature and based on secondary and primary data both. Primary data have been collected through the structured questionnaire. Secondary data has been collected from reports of the Reserve Bank of India, Digital India Corporation, and other sources like books, magazines, journals, websites, research articles, theses, etc. For the collection of primary data, one structured questionnaire has been prepared. Modern Technology (Google form) is also used for the circulation and collection of data. Moreover, the researcher directly contacted the respondents and received a good response from them.

5.2 Sample Size and Sampling Method:

In this study, 1062 samples have been taken as per the Convenient Sampling Method which is a part of Non-Probability Sampling. It is a very useful method of collecting samples of respondents rapidly and it is also a time-saving method.

5.3 Tools and Techniques of Data Analysis:

The Statistical Analysis carried out in the study was done using MS-EXCEL and SPSS (Statistical Package for Social Science) Software. For Primary Data Analysis, Statistical techniques like Chi-Square Test, &, Mann-Whitney Test were used. Interpreted data have been presented in the form of tables and, charts.

6. LIMITATION OF THE STUDY:

- Primary study data relies on respondent-provided information. Accuracy hinges on comprehension and willingness, limiting objectivity. Despite efforts, biases may exist, but minimized for accurate data.
    - This study is focused only on specific modes of digital payment system, like (1) Banking Card, (2) Internet Banking, (3) Mobile Banking, (4) Point of Sale (Pos), (5) Unstructured Supplementary Service Data (USSD), (6) Unified Payment Interface (UPI), (7) Immediate Payment Service (IMPS), (8) Aadhar Enable Payment (AEPS),(9) Bharat Interface for Money (BHIM) App, (10) Mobile Wallets (11) NEFT and (12) RTGS only. Other modes of payment have not been included in this study.
- The inferences apply only to the respondents of Surat District and are not applicable to any other place and cannot be generalized.

7. ANALYSIS & INTERPRETATION:

7.1 Demographic Profiles of Respondents:

Table No. 1.

Table showing Demographic Profile of Respondents

Particular	Classification	Frequency	Percent
Gender	Male	623	58.7
	Female	439	41.3
Age	Under 18	77	7.3
	18-35	710	66.9
	36-50	205	19.3
	51 & above	70	6.6
Education	12th or below	268	25.2
	Diploma	32	3.0
	Graduate	377	35.5
	Post Graduate	324	30.5
	Professional Degree	61	5.7
Occupation	Student	424	39.9
	Private Sector Employee	290	27.3
	Govt. employee	80	7.5
	Business	74	7.0
	Other	194	18.3
Annual Income	Below 1.5 Lacs	624	58.8
	1.5 Lac - 3 Lac	165	15.5
	3 Lac - 5 Lac	80	7.5
	Above 5 Lac	193	18.2
Residential Area	Urban	554	52.2
	Rural	508	47.8

*(**Source Data**: Primary Data)*

It is observed from the above table No.1 that 58.7% of the respondents are male and the remaining 41.3% of them are females. **This shows that the male and female respondent difference is not too large.**

It is observed from the above table No.1 clearly the picture of age group, that 7.3% of respondents are under 18, 66.9% are in the age group of 18-35 years, 19.3% of them are in the age group of 36-50 years, and remaining 6.6% of them are above 51 years. **It is observed that most of the respondents are in the age group of 18-35 years.**

It is observed from the above table No.1 give the idea about Education Qualification, that 25.2% of respondents are below 12th, 3% of respondents are Diploma holders, 35.5% of respondents are Graduates, 30.5% of respondents are Post Graduates and 5.7% are possessing professional Degrees. **It is observed that most of the respondents are educated.**

It is observed from the above table No.1 show the result of Occupation, that 39.9% of respondents are students, 27.3% of respondents are Private Sector Employees, 7.5% of respondents are Govt. employees, 7.0% of respondents are doing Business and 18.3% are doing other work. **It is observed that most of the respondents are earning people.**

It is observed from the above No.1 show the data regarding the Annual Income, that 58.8% of respondents are earning below 1.5 lacs, 15.5% of respondents are earning 1.5 Lac to 3 Lac, 7.5% of respondents are earning 3Lac to 5 Lac, 18.2% of respondents are earning above 5 Lacs. **Most of the respondent's annual incomes are below 1.5 lacs.**

It is observed from the above No.1 show the data regarding Residential Area, that 52.2% of respondents are from Urban area and 47.8% of respondents are from Rural area.

7.2 Use of Digital Payment System

Table No. 2

Table Showing Use of Digital Payment System.

Use of Digital Payment	Frequency	Percent
Yes	734	69.1
No	328	30.9
Total	**1062**	**100.0**

*(**Source Data**: Primary Data)*

It is observed from the above table about the use of the digital payment system, that 69.1% of respondents use digital payment system, and 30.9% of respondents not using digital payment system. **It is observed that the majority of the respondent (69.1%) use digital payment system.**

7.3 Influence of Residential Area on Awareness of Digital Payment System in Surat District .

H0: There is no difference in opinion of Residential Area on Awareness of Digital Payment System

H1: There is a difference in opinion of Residential Area on Awareness of Digital Payment System

Table No.3

Test Statistics - Mann-Whitney Test

Test Statistics[a]				
Awareness of Digital Payment System	**Mann-Whitney U**	**Wilcoxon W**	**Z**	**Asymp. Sig. (2-tailed)**
Banking cards	135689.000	289424.000	-1.734	.083
Internet Banking	137213.000	290948.000	-1.187	.235
Mobile Banking	137442.000	291177.000	-1.296	.195
Point of Sale (PoS)	127371.000	281106.000	-3.088	.002
Unstructured Supplementary Service Data (USSD)	140453.000	294188.000	-.077	.939
Unified Payments Interface (UPI)	138839.000	292574.000	-.455	.649
Immediate Payment Service (IMPS)	136744.000	290479.000	-.920	.358
Aadhaar Enabled Payment System (AEPS)	135086.000	288821.000	-1.315	.189
Bharat Interface for Money (BHIM) app	140133.000	293868.000	-.139	.889
Mobile Wallets	136572.000	290307.000	-1.103	.270
NEFT	138056.000	291791.000	-.630	.529
RTGS	139212.000	292947.000	-.352	.725

The above table highlights the result of the Mann-Whitney Test on the basis of Residential Area regarding awareness of digital payment system.

The ***P-Value*** in relation to "Awareness of digital payment system" for **Point of Sale (PoS)** is 0.002 which is less than 0.05, it means the null hypothesis has been rejected at a 5% level of significance for the awareness of digital payment system which means that there is a difference in opinion of Residential area on awareness of digital payment system.

7.4 Influence of Residential Area on Frequently usage of Digital Payment System in Surat District .

H0: There is no difference in opinion of Residential Area on the frequently usage of Digital Payment System

H1: There is a difference in opinion of Residential Area on the frequently usage of Digital Payment System

Table No. 4

Test Statistics - Mann-Whitney Test

Test Statistics[a]				
Frequently use of a Digital Payment System	**Mann-Whitney U**	**Wilcoxon W**	**Z**	**Asymp. Sig. (2-tailed)**
Banking cards	67213.000	132554.000	-.042	.967
Internet Banking	63758.500	129099.500	-1.279	.201
Mobile Banking	66309.500	131650.500	-.370	.711
Point of Sale (PoS)	65202.500	134953.500	-.775	.438
Unstructured Supplementary Service Data (USSD)	65810.500	131151.500	-.603	.547
Unified Payments Interface (UPI)	65169.500	130510.500	-.775	.439
Immediate Payment Service (IMPS)	64086.500	129427.500	-1.170	.242
Aadhaar Enabled Payment System (AEPS)	64238.500	129579.500	-1.202	.229
Bharat Interface for Money (BHIM) app	64151.500	129492.500	-1.147	.251
Mobile Wallets	66980.500	132321.500	-.123	.902
NEFT	67257.000	132598.000	-.025	.980
RTGS	66188.000	131529.000	-.422	.673

The above table indicates the results of the **Mann-Whitney Test** regarding the frequently use of different digital payment system. It has been observed from the above table that the ***P-values*** of all the digital payment system are greater than 0.05 which means that there is no difference in opinion of Residential area on the frequently usage of digital payment system.

7.5 Influence of Residential Area on Satisfaction level of Digital Payment System in Surat District .

H0: There is no difference in opinion of Residential Area on Satisfaction level of the Digital Payment System

H1: There is a difference in opinion of Residential Area on Satisfaction level the Digital Payment System

Table No.5

Test Statistics - Mann-Whitney Test

Test Statistics[a]				
Digital Payment system on the basis of the Satisfaction Level	**Mann-Whitney U**	**Wilcoxon W**	**Z**	**Asymp. Sig. (2-tailed)**
Banking cards	63884.000	129225.000	-1.329	.184
Internet Banking	65620.000	135371.000	-.635	.525
Mobile Banking	63586.500	133337.500	-1.437	.151
Point of Sale (PoS)	61995.000	127336.000	-1.934	.053
Unstructured Supplementary Service Data (USSD)	65843.500	131184.500	-.545	.586
Unified Payments Interface (UPI)	65748.500	135499.500	-.571	.568
Immediate Payment Service (IMPS)	64235.000	133986.000	-1.114	.265
Aadhaar Enabled Payment System (AEPS)	64913.500	134664.500	-.874	.382
Bharat Interface for Money (BHIM) app	66316.000	131657.000	-.364	.716
Mobile Wallets	67052.500	136803.500	-.099	.921
NEFT	66787.000	136538.000	-.195	.846
RTGS	65279.000	135030.000	-.734	.463

The above table highlights the result of the Mann-Whitney Test on the basis of Residential Area on the satisfaction level of using the digital payment system.

It has been observed that the ***P-values*** of all the factors are greater than 0.05, so the null hypothesis has been accepted at 5% level of significance which means that there is no difference in opinion of the Residential area on the digital payment system to consumer satisfaction.

7.6 Influence of Residential area on Factor for not using the Digital Payment System in Surat District .

H0: There is no difference in opinion of Residential areas on Factor for not using the Digital Payment System

H1: There is a difference in opinion of Residential areas on Factor for not using the Digital Payment System

Table No.6

Test Statistics - Mann-Whitney Test

Test Statistics[a]				
factors for not using the digital payment system	**Mann-Whitney U**	**Wilcoxon W**	**Z**	**Asymp. Sig. (2-tailed)**
Difficult to Access	12099.500	22977.500	-1.448	.148
Security	12555.000	23433.000	-.914	.361
Lack of Operational Knowledge	12019.000	22897.000	-1.552	.121
Privacy	12791.500	23669.500	-.625	.532
Hidden Cost	12410.500	23288.500	-1.094	.274
No Internet Connectivity	12941.500	23819.500	-.433	.665
Satisfied with the Traditional Banking	12471.500	23349.500	-1.008	.314
Not Trustworthiness	10696.000	21574.000	-3.151	.002
Insufficient Awareness	12583.500	23461.500	-.872	.383

The above table highlights the result of the Mann-Whitney Test on the basis of Residential Areas for not using the digital payment system. The **P-Value** in relation for not using the digital payment system for the factor **"Not Trustworthiness"** is 0.002 which is less than 0.05, it means the null hypothesis has been rejected at a 5% level of significance for not using the digital payment system which means that there is a difference in opinion of Residential area on factor for not using the digital payment system.

7.7 Influence of Residential Area on Factor for Adopting Digital Payment System in Surat District .

H0: There is no difference in opinion of Residential Ares on Factors for Adopting the Digital Payment System

H1: There is a difference in opinion of Residential Areas on Factors for Adopting the Digital Payment System

Table No.7

Test Statistics - Mann-Whitney Test

Test Statistics[a]				
Factors for adopting the Digital Payment system	**Mann-Whitney U**	**Wilcoxon W**	**Z**	**Asymp. Sig. (2-tailed)**
Time Saving	67016.000	136767.000	-.159	.873
Privacy	66687.000	132028.000	-.238	.812
Safe and Secured Transaction	66086.000	131427.000	-.460	.646
Lower Transaction Cost	64459.500	129800.500	-1.047	.295
24x 7 availability (Access)	66515.500	136266.500	-.376	.707
Convenience	65091.500	134842.500	-.848	.396
Pay Anytime Anywhere	66676.000	132017.000	-.284	.776
User friendly	66417.000	136168.000	-.350	.727
Trustworthiness	64359.000	134110.000	-1.082	.279
Discounts and offers (Discount/Cashback)	66382.500	131723.500	-.349	.727
Reduce corruption	62815.500	132566.500	-1.639	.101
Reliability	64273.000	134024.000	-1.116	.265

The above table highlights the result of the Mann-Whitney Test on the basis of Residential Areas on factor for adopting digital payment system.

It has been observed that **P-values of all the factors are greater** than 0.05, so the null hypothesis has been accepted at 5% level of significance which means that there is no difference in opinion of Residential areas for factors for adopting digital payment system

7.8 Residential Area and Use of Digital Payment System in Surat District .

H0:There is no association between Residential area and the Use of a Digital payment system

H1:There is an association between the Residential area and the Use of a Digital payment System

Table No.8

Residential Areas and the Use of a Digital Payment System

Residential Areas		Do you use Digital Payment System?		Total
		Yes	No	
Urban	Count	373	181	**554**
	%	67.3%	32.7%	**100.0%**
Rural	Count	361	147	**508**
	%	71.1%	28.9%	**100.0%**
Total	Count	**734**	**328**	**1062**
	%	**69.1%**	**30.9%**	**100.0%**

As per the above table, 67.3% of respondents who are living in Urban area are using digital payment system and 32.7% of respondents in urban area are not using digital payment system. 71.1% of respondents who are living in Rural area are using digital payment system and 28.9% of respondents in rural area are not using digital payment system.

Table No.9

Chi-square test - Residential Area and the Use of a Digital Payment System

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.731[a]	1	.188
Likelihood Ratio	1.734	1	.188
Linear-by-Linear Association	1.730	1	.188
N of Valid Cases	1062		

As per the above table the **P- value** is .188 which is greater than 0.05, we accepted the null hypothesis at a 5% level of significance which means that there is no association between Residential area and the Use of Digital payment system

8. FINDINGS & CONCLUSION:

- There is a difference in opinion of respondents who lives in Urban and Rural area in Surat District on Awareness of Digital Payment Mode regarding **Point of Sale (PoS).**
- There is no statistically significant difference in the opinions of residents in the residential area concerning the frequent usage of different digital payment systems. This suggests that residents in the residential area generally hold similar opinions on the frequency of using various digital payment systems.
- There is no significant difference in opinion based on the area of respondents on

consumer satisfaction, which means that people from different areas have been satisfied with Digital Payment Systems.

- It has been determined that according to the area, **"Not trustworthiness"** is the main reason for not using digital payment systems, which means that people living in that area have concerns about the safety and security of digital payment systems. This lack of trust in digital payment systems can be due to a variety of factors such as a lack of familiarity with the technology, concerns about fraud or hacking, or a general distrust of the financial system.
- There is no significant difference observed in opinion of respondents living in urban and rural area regarding factors influencing adopting digital payment system. This indicates that the factors influencing the adoption of digital payment systems are generally similar across different areas. This suggests that factors are likely to be important for consumers of different areas for deciding whether to use or not to use digital payment systems.
- While using chi-square analysis, there is no association between Residential Area and the Use of the Digital payment system which means that there is no significant association between these two variables, which means that Area does not appear to have a direct influence on the use of digital payment system.

After analysis all the facts, it is concluded that consumers are increasingly becoming aware of the various modes of digital payments except point of sale. The lack of operational knowledge among consumers is a significant hurdle in the adoption of digital payment systems. Limited accessibility is a challenge, particularly in rural areas. While urban areas may have better digital payment infrastructure, rural areas still lack the necessary facilities. In order to foster greater adoption of digital payment systems, raising awareness among the general public is crucial.

9. SUGGESTIONS:

- Banking Industry and Digital Payment companies should focus on the Non-User group of Consumers. They felt that the Digital payment system is “Not Trustworthiness” which is why they are not using this payment system. Banking companies should build trust with customers by strengthening security measures and providing assurances that their digital payment systems are safe and secure.
- In rural areas, some digital payment modes are not used by the consumer. Banks should launch awareness campaigns and provide education and training on how to use digital payment systems. Many people in rural areas may not have access to a desktop or laptop computer. The banking Industry and Digital Payment companies should Offer mobile-

based solutions, such as mobile apps or USSD codes, which can make it easier for people to use digital payment systems.

- Government should build the necessary infrastructure, such as internet connectivity, to support digital payment systems in Rural areas. Building infrastructure and providing access to affordable internet services can help to improve digital payment adoption.
- Use of digital payment systems as a way to reduce the use of cash. By promoting digital payment system use of cash can be minimized and it will also help in curbing black money

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