Management and Finance Bulletin (MFB)
Online ISSN No. 3048-4502
July-December, 2024 [Vol.2, Issue 2], pg. 1-8, www.apricusjournals.com

Research Paper

Analysing Digital Transaction Awareness and Usage Pattern in Itanagar, Arunachal Pradesh

Shiwani Singh[1,*], Vinod Kumar Yadav[2]

Abstract

This study explores consumer awareness and usage patterns of digital transactions in Itanagar, Arunachal Pradesh, focusing on differences across urban and rural populations and between genders. It examines how aware people are of digital transaction modes, identifies key sources of awareness, assesses how often different payment methods are used, and compares digital transaction usage across various domains. The findings show that urban residents and men are more aware of digital transactions than rural residents and women. Among the most used digital transaction modes are UPI, mobile banking, and debit cards. Digital transactions are widely used for fund transfers, mobile recharges, online shopping, and retail payments, but urban respondents use them more frequently, especially in savings and investments. A significant association was found between place of residence and the use of digital transactions in saving & investment domain, with urban respondents engaging more. These results highlight the need for greater digital financial literacy in rural areas, particularly in promoting awareness of digital transactions and their role in savings and investments.

Keywords: Digital transaction, digital payments, Arunachal Pradesh, Consumer awareness, Consumer usage

Author for Correspondence* **shiwanisingh2023@gmail.com**

Cite as: Singh, S., Yadav, V., (2024), Analysing Digital Transaction Awareness and Usage Pattern in Itanagar, Arunachal Pradesh, Management and Finance Bulletin, 2(2), pg. 1-8.

Introduction

With the advent of mobile applications, digital wallets, and other electronic payment systems, the nature of transactions has changed throughout time, moving from the old-fashioned barter economy to a modern digital environment. This change has been especially noticeable in India, where the government's efforts to create a cashless economy have sped up the uptake of online shopping (Ranjith, 2021). The law of inertia, however, states that people are frequently hesitant to adopt new technology, particularly when it comes to their financial and personal affairs (Sharma & Agarwal, 2018). The emergence of digital transactions in India has put this idea to the test, nonetheless, as a sizable section of the populace is progressively switching from conventional cash-based payments to more contemporary, electronic alternatives (Mohd. & Pal, 2020) (Saha, 2016). The shift to a cashless economy is closely linked to India's overall economic transformation, as the nation looks to capitalize on the advantages of digital transactions, such as greater financial inclusion, lower expenses related to handling cash, and

[1] Research Scholar, Department of Commerce, Rajiv Gandhi University, Itanagar, Arunachal Pradesh, India

[2] Assistant Professor, Department of Commerce, Rajiv Gandhi University, Itanagar, Arunachal Pradesh, India

increased transparency in financial transactions. This research attempts to explore the customer awareness and usage patterns of digital modes of transactions in Itanagar, the capital city of Arunachal Pradesh, a state in Northeast India, to provide insights into this phenomenon.

Digital Transactions: An Overview

A number of factors, including the government's Digital India initiative, the growing use of smartphones and internet connectivity, and the rising acceptance of digital payment platforms like UPI, mobile wallets, and online banking, have contributed to the notable increase in digital transactions in the Indian economy in recent years. According to the Reserve Bank of India's 2019 report, the "Benchmarking India's Payment Systems," digital payments are those in which the payer and the payee transmit and receive money using electronic means. These transactions, often known as electronic payments, are totally conducted online and do not require any physical cash (RBI, 2019). Digital payments are those in which instructions and payment information are sent electronically using digital devices like smartphones or Personal Digital Assistants (Sahi et al., 2021). A digital transaction is when two parties trade value or money electronically via the Internet or other digital platforms, and both parties use digital modes to start and finish the money transfer (Malik et al., 2024). Bank cards, UPI (Unified Payments Interface), USSD (Unstructured Supplementary Service Data), mobile wallets, prepaid cards, point-of-sale (POS) systems, Internet banking, and mobile banking are among the many digital modes of payment. Even on low-end mobile phones without Internet connection, mobile banking transactions are made possible by the USSD channel's revolutionary payment service, *99# (Jain, 2018).

Review of Literature

The adoption of digital payments has been a key focus area for the Indian government, with initiatives like the Digital India program and the Unified Payments Interface system leading the charge. But, for the adoption to happen, a good awareness about the various digital payment options available, their distinct features, and the potential benefits they offer consumers is crucial. There are various studies that have shown that consumer awareness of the features, benefits, and security aspects of digital payment modes is a key factor in the success of their widespread adoption (Saha, 2016; Tribhan, 2024; Chircu, 2015; Ranjith, 2021). Consumer awareness has a significant impact on interest in using mobile banking (Wadhe & Ghodke, 2013) and digital payment applications (Sharma et al., 2023). Lack of awareness and security concerns are the major obstacles to electronic banking adoption, and customer satisfaction with electronic banking is influenced by factors such as convenience, awareness, and responsiveness (Reddy & Reddy, 2015) in India. In another study by (Saha, 2016) it was found that despite government initiatives, a large portion of the population, especially in rural areas, still prefers cash transactions. This is because of a deep-rooted mindset of insecure transactions or illiteracy about digital banking (Sharma & Agarwal, 2018). People are accustomed to traditional cash-based transactions and find it difficult to switch to digital modes. There is a general resistance to change. And it is not the fault of the public that there is this resistance to change; it is the principle of inertia responsible for slower adaptation to new technology. Hence raising awareness, educating the masses, and addressing security concerns are crucial for faster adoption of digital payments.

The adoption of digital payments has been a central focus for the Indian government, driven by initiatives such as the Digital India program and the Unified Payments Interface system.

However, for widespread adoption to occur, consumers must possess a comprehensive understanding of the various digital payment options available, their distinct features, and the potential benefits they offer. Extant research has demonstrated that consumer awareness of the features, benefits, and security aspects of digital payment modes is a key determinant in the successful proliferation of these technologies. (Saha, 2016; Tribhan, 2024 Chircu, 2015; Ranjith, 2021). Furthermore, consumer awareness has been found to have a significant influence on the interest in utilizing mobile banking (Wadhe & Ghodke, 2013) and digital payment applications (Sharma et al., 2023). On the contrary, a lack of awareness and security concerns have emerged as the primary obstacles to the adoption of electronic banking in India, with customer satisfaction being shaped by factors such as awareness, convenience, and responsiveness (Reddy & Reddy, 2015). Additionally, despite government initiatives, a substantial portion of the population, particularly in rural areas, still exhibits a preference for cash transactions, often due to a deep-rooted mindset of insecure transactions or limited digital banking literacy (Saha, 2016; Sharma & Agarwal, 2018). This resistance to change is not attributable to the public, but rather a manifestation of the principle of inertia, which contributes to the slower adaptation of new technologies. But it is also worth noting here that principle of inertia would work even when the motion of adoption sets in. Therefore, raising awareness, educating the masses, and addressing security concerns are crucial for accelerating the adoption of digital payments.

Cash-dominated society and lack of awareness are factors that inhibit the adoption or usage of digital payment systems in India (Hussain et al., 2024). Further, (Chawla and Joshi, 2019) have stated that more than 70 percent of the Indian population resides in rural areas, and above 90% of people in rural India have not undertaken any digital transactions. Digital payments are becoming more popular as technology advances, but acceptance is constrained by issues such as ignorance, cybercrime, inadequate infrastructure, limited adoption in smaller cities, transaction costs, connectivity challenges, and security concerns (Kaur et al., 2021). There is a pressing need to educate people about the usability of digital payment methods and address concerns around security and privacy to facilitate rapid adoption. Language barriers also exist, as English is the primary language used for digital communication, while indigenous languages are spoken and understood in rural areas of India. Additionally, the majority of rural residents do not comprehend the language used on digital platforms and for technology (Trivedi & Sanchiher, 2023). The adoption rate of digital payments is low in India, with more than 70 percent of the population residing in rural areas, and above 90% of people in rural India having not undertaken any digital transactions. From the analysis and reviews of research papers, articles, and news, certain reasons have emerged as challenges in digital payment adoption. These include low digital literacy in India, especially in rural areas, (Trivedi & Sanchiher, 2023) lack of awareness about benefits, trust deficit, security concerns, transaction charges, poor internet connectivity, and lack of acceptance from merchants (Trivedi & Sanchiher, 2023; Sharma & Agarwal, 2018). Digital payment adoption is slower in smaller towns and cities due to a combination of factors, including limited infrastructure, lower awareness, and a stronger preference for cash.

Therefore, on this backdrop, it can be concluded that awareness and usage of digital payments can vary significantly across different population segments in India based on factors like urbanity, literacy levels, age, and other demographic variables. Given that Arunachal Pradesh is a predominantly rural state (census, 2011), as evident from the literature review, understanding the ground realities regarding awareness and usage patterns of digital modes of

transactions are crucial for devising effective strategies to increase their penetration and acceptance. This study aims to analyse the current state of consumer awareness and usage patterns of digital transactions in Itanagar, the capital city of Arunachal Pradesh, based on primary data.

Objectives

- To compare the level of digital transaction awareness between urban and rural people.
- To compare digital transaction usage between urban and rural people across different domains of usage.
- To analyse gender based digital transaction awareness gap.
- To figure out factors leading to digital transaction awareness.
- To compare digital transaction usage across domains in urban and rural populations.

Hypotheses (H_0)

H_{01}: There is no significant difference between rural and urban digital transaction awareness levels.
H_{02}: There is no significant difference between male and female digital transaction awareness levels.
H_{03}: Residential location does not impact digital transaction usage with regard to saving and investment.

Research Methodology

This is a working paper and is exploratory cum descriptive in its nature. This study employs a primary data collection approach to investigate the consumer awareness and usage patterns of digital transactions in Itanagar, the capital city of Arunachal Pradesh, India. The primary data was collected through a structured questionnaire from a sample of 150 respondents, 100 urban and 50 rural residing in Itanagar circle. The questionnaire comprised questions related to the respondents' awareness of digital payment modes and their usage patterns. The respondents were selected using convenience sampling technique. The data collected through the questionnaire survey was analysed using statistical tools like t-Test, frequency distribution, Chi-square test and cross-tabulation to derive meaningful insights.

Data Analysis and Findings

The reliability of the data on awareness was tested using Cronbach's Alpha to see if it was suitable for performing the statistical analysis. A Cronbach's Alpha value of 0.835 suggests that the data is reliable and suitable for further analysis.

Reliability Statistics

Cronbach's Alpha	N of Items
.835	10

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
AW	.072	150	.058	.987	150	.189

a. Lilliefors Significance Correction

To determine whether the data follows normal distribution or not, a test of the data's normality was also conducted. The results of the Shapiro-Wilk and Kolmogorov-Smirnov tests for normalcy showed a p-value > 0.05. To determine whether there is a significant difference in the awareness levels of male and female participants as well as urban and rural respondents, t-test was conducted.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AW	Equal variances assumed	4.079	.045	2.473	148	.015	.25400	.10272	.05101	.45699
	Equal variances not assumed			2.583	110.314	.011	.25400	.09832	.05915	.44885

Levene's test for equality of variances confirmed that the variances are not equal between the two groups that is Urban and the Rural respondents' awareness levels, being the p-value (0.045) less than 0.05. With **p = 0.011** (< 0.05), the null hypothesis ($\mathbf{H_{01}}$) is rejected, indicating a significant difference between the urban and rural respondents' level of awareness of various modes of digital transactions in Itanagar. Urban respondents' mean awareness score (3.06) is significantly higher than rural respondents' mean awareness score (2.81).

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AW	Equal variances assumed	.018	.893	-2.725	148	.007	-.26623	.09769	-.45928	-.07317
	Equal variances not assumed			-2.719	132.635	.007	-.26623	.09792	-.45991	-.07255

Levene's test for equality of variances confirmed that the variances are equal between the two groups that is male and female respondents' awareness levels, being the p-value (0.893) greater than 0.05. Additionally, with **p = 0.007** (< 0.05), $\mathbf{H_{02}}$ is rejected, indicating a significant difference in digital transaction awareness between male and female respondents. The average awareness score was 2.86 for women and 3.13 for men. These results show that males and urban residents in Itanagar are more knowledgeable of digital transactions than are females and rural residents.

$AW_SOURCES Frequencies

		Responses N	Responses Percent	Percent of Cases
$AW_SOURCES[a]	on my own	69	17.5%	46.0%
	family	59	15.0%	39.3%
	friends	75	19.0%	50.0%
	bank staff	40	10.2%	26.7%
	advertisement	40	10.2%	26.7%
	internet	67	17.0%	44.7%
	tv	25	6.3%	16.7%
	other sources	19	4.8%	12.7%
Total		394	100.0%	262.7%

a. Dichotomy group tabulated at value 1.

$Usage Frequencies

		Responses N	Responses Percent	Percent of Cases
$Usage[a]	using debit card	101	18.1%	67.3%
	using credit card	16	2.9%	10.7%
	using internet banking	61	10.9%	40.7%
	using mobile banking	100	17.9%	66.7%
	using UPI	124	22.2%	82.7%
	using mobile wallets	31	5.6%	20.7%
	using USSD	7	1.3%	4.7%
	using AEPS	8	1.4%	5.3%
	using MICRO ATM	45	8.1%	30.0%
	using PoS	65	11.6%	43.3%
Total		558	100.0%	372.0%

a. Dichotomy group tabulated at value 1.

When asked where they gained information about digital transactions, the respondents cited friends as their primary source, followed by their own curiosity and internet. In terms of usage, 124 out of 150 people utilized UPI, whereas 100 out of 150 people used mobile banking, and 101 out of 150 people used debit cards.

$Domain_of_use*Domicile_Category Crosstabulation

			Domicile_Category Urban	Domicile_Category Rural	Total
Domain_of_use[a]	domain of use - Funds transfer	Count	97	48	145
		% within Domicile_Category	97.0%	96.0%	
	domain of use - Merchant Payment at Physical stores	Count	70	32	102
		% within Domicile_Category	70.0%	64.0%	
	domain of use - Utility Bills Payment	Count	40	16	56
		% within Domicile_Category	40.0%	32.0%	
	domain of use - Recharges	Count	75	38	113
		% within Domicile_Category	75.0%	76.0%	
	domain of use - Finance and Tax related payments	Count	22	11	33
		% within Domicile_Category	22.0%	22.0%	
	domain of use - Entertainment Subscriptions	Count	39	19	58
		% within Domicile_Category	39.0%	38.0%	
	domain of use - online shopping	Count	72	34	106
		% within Domicile_Category	72.0%	68.0%	
	domain of use - ticket booking	Count	44	21	65
		% within Domicile_Category	44.0%	42.0%	
	domain of use - savings and investment related payments	Count	39	9	48
		% within Domicile_Category	39.0%	18.0%	
	domain of use - gifts, donations, etc.	Count	31	19	50
		% within Domicile_Category	31.0%	38.0%	
	domain of use - none of the above	Count	3	0	3
		% within Domicile_Category	3.0%	0.0%	
Total		Count	100	50	150

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

A closer look at their usage patterns showed that they primarily used digital methods for transferring funds (145 out of 150), recharging (113 out of 150), online shopping (106 out of 150) and for paying for goods in retail stores (102 out of 150). Interestingly, 98 of the 145 individuals using digital means of money transfer are from urban areas, while 47 are from rural ones. There are 75 urban and 38 rural in recharge domain of use. Finally, of the respondents that purchase online, 72 are from urban areas and only 34 are from rural areas.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.756[a]	1	.009		
Continuity Correction[b]	5.825	1	.016		
Likelihood Ratio	7.172	1	.007		
Fisher's Exact Test				.010	.007
Linear-by-Linear Association	6.710	1	.010		
N of Valid Cases	150				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.00.

b. Computed only for a 2x2 table

The chi-square test of association revealed no statistically significant relationship between respondents' place of residence (urban or rural) and their use of digital transactions across various domains, as indicated by p-values greater than 0.05. However, a significant association was found in the savings and investment domain (**$p = 0.009, p < 0.05$**). Hence, **H_{o3}** is rejected. A higher proportion of urban respondents engaged in digital transactions for savings and investment compared to their rural counterparts.

Conclusion

The current study aimed to investigate the consumer awareness and usage patterns of digital transactions in Itanagar, the capital city of Arunachal Pradesh. The study found that the level of awareness regarding digital transactions is significantly higher among urban residents and male respondents compared to rural residents and female respondents. The study also reveals that UPI, mobile banking, and debit cards are the most widely used digital payment modes. While the usage of digital transactions is observed across various domains like funds transfer, recharges, online shopping, and retail payments, the usage is comparatively higher among urban respondents, especially in the domain of savings and investment. there was a significant association between the place of residence and the usage of digital transactions for savings and investment. The rural masses need to be made aware more about the various modes of digital transactions and their benefits to increase their adoption and usage. moreover, they need to be educated about saving and investment options through digital modes. The government and the financial institutions should take appropriate measures to increase the digital financial literacy among the rural population to bridge the gap between urban and rural areas in the adoption and usage of digital transactions.

References

- Chawla, D., and Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India – An empirical study. *International Journal of Bank Marketing*. doi:10.1108/ijbm-09-2018- 0256
- Chircu, A. M. (2015). Digital Payments. In Wiley Encyclopedia of Management (p. 1). https://doi.org/10.1002/9781118785317.weom070017
- Hussain, S., Gupta, S. and Bhardwaj, S. (2024), "Determinants inhibiting digital payment system adoption: an Indian perspective", *Qualitative Research in Financial Markets*. https://doi.org/10.1108/QRFM-09-2023-0223
- Kaur, S. J., Ali, L., Hassan, M. K., & Al-Emran, M. (2021). Adoption of digital banking channels in an emerging economy: exploring the role of in-branch efforts. *Journal of Financial Services Marketing,26(*2), 107. Palgrave Macmillan. https://doi.org/10.1057/s41264-020-00082-w

- Mohammad, S., & Pal, R. (2020). Moving from cash to cashless: a study of consumer perception towards digital transactions. Pragati Journal of Indian Economy, 7(1), 1-13. doi:10.17492/pragati.v7i1.195425
- Ranjith, S. K. Dr. (2021). A Literature Study of Consumer Perception Towards Digital Payment Mode in India. *Psychology and Education Journal*, *58*(1), 3304. https://doi.org/10.17762/pae.v58i1.1270
- RBI. (2019). Benchmarking India's Payment Report.
- Reddy, D. N. V., & Reddy, M. (2015). A Study on Customer's Perception and Satisfaction Towards Electronic Banking in Khammam District. *IOSR Journal of Business and Management, 17(*12), 20-27.
- Saha, A. (2016). Transition to cashless economy in north east India: a study on Kamrup (rural) district of Assam. *International Research journal of Management Science and Technology, 7(*11), 79-87. http://www.irjmst.com/abstractview/5740
- Sharma, A., & Agarwal, H. (2018). Study of Recent Developments Related to Cashless Commerce in India. *Journal of Commerce & Trade, 13(2*) https://doi.org/10.26703/jct.v13i2-10
- Sharma, D., Panchal, A., Arora, A. K., & Gupta, V. P. (2023). Digital payment apps: perception and adoption - a study of higher education students. *International Journal of Enterprise Network Management*, *14(*1), 122-138. Inderscience Publishers. https://doi.org/10.1504/ijenm.2023.10055886
- Tribhan, A. S. (2024). Adoption of Digital Payment Systems and its Influence on Consumer Behaviour in India. International Journal of Scientific Research in Engineering and Management, 8(4), 1-20. https://doi.org/10.55041/ijsrem30181
- Trivedi, H., & Sanchiher, S. (2023). CHALLENGES IN DIGITAL PAYMENT ADOPTION IN INDIA. International Journal of Modern Management, Applied science & Social Science, 5(2I), 32-38.
- Wadhe, A. P., & Ghodke, S. (2013). A study on consumer awareness & perception towards usage of Mobile Banking. *IBMRD's Journal of Management & Research, 2*(1), 121-122. doi:10.17697/ibmrd/2013/v2i1/47389