

CONSUMER USAGE FACTORS OF DIGITAL PAYMENTS IN RURAL AREAS OF RAMANATHAPURAM DISTRICT, WITH REFERENCE TO SWOT ANALYSIS

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ABSTRACT

The implementation of digital payment methods in rural areas is increasing, As more people become accustomed to these services and as the government and other organizations try to increase financial inclusion, the use of digital payment methods in rural areas is on the rise. This trend is anticipated to continue. Rural areas' access to financial services and financial inclusion could change as a result of digital payments. More consumers are having access to digital payment platforms as a result of the growing use of smartphones and the availability of unlimited data plans from internet service providers. It is important to address the challenges and ensure that Digital payment methods are accessible and easy to use for everyone. To analyze, these trends in rural areas especially in Ramanathapuram District, SWOT analysis is a framework used to evaluate the strengths, weaknesses, opportunities, and threats. The papers discuss the strength and weaknesses of the Digital payment trend specifically in rural areas of Ramanathapuram and help to identify the challenges and opportunities associated with digital payment services with the help of statistical tools, furthermore the paper also offers solutions to overcome challenges and improve the adoption of digital payment services.

Keywords- Financial inclusion, digital platforms, digital payments, SWOT Analysis, Challenges.

INTRODUCTION

Digital payments are electronic transactions that enable people to transfer money from one account to another without the need for cash. The use of digital payments has grown significantly in recent years, especially in urban areas. However, rural areas have been slower to adopt digital payments due to various challenges such as lack of internet connectivity, limited access to financial services, and low levels of digital literacy. Despite these challenges, digital payments have the potential to transform the lives of people in rural areas by providing them with greater financial inclusion, convenience, and security. With digital payments, people in rural areas can make and receive payments, access financial services, and save money more easily and efficiently.

To promote the adoption of digital payments in rural areas, various initiatives have been launched by governments, non-governmental organizations, and private sector companies. These initiatives include providing mobile banking services, promoting the use of digital wallets, and building digital payment infrastructure such as point-of-sale devices and ATMs. In addition to promoting digital payments, it is also important to address the challenges that prevent people in rural areas from adopting digital payments. This includes improving internet connectivity, providing digital literacy training, and increasing access to financial services.

OBJECTIVE OF THE STUDY

To find out factors of digital payments on its strength, weakness, opportunities and Challenges or threat factors.

METHODOLOGY

For the effective study Simple random sampling technique was applied. The primary data were collected from 82 respondents and secondary data are collected from journals, RBI portal, news articles, various bank official website, and internet. Statistical tools like Factor analysis and Regression analysis were applied.

LITERATURE REVIEW

Kunwar Singh Vaisla et al (2010) conducted a SWOT analysis of e-initiatives in Uttarakhand, India and found that strengths such as IT vision and strategy, were counterbalanced by weaknesses such as high cost of internet, lack of awareness, and lack of infrastructure. They recommend leveraging strengths through good governance and addressing weaknesses through policy interventions and infrastructure improvements, and capitalizing on opportunities such as increasing mobile phone penetration.

Mahima Suden (2017) conducted a SWOT analysis on Cashless Economy: SWOT Analysis From Indian Perspective found different facets of cashless economy and analyzed it in Indian context, that the strengths of India goes cashless, implementation as weaknesses, grabbing the opportunities by becoming cashless and finally the threats it face. To achieve the concept of cashless, necessary steps should to be taken. choosing few districts or sectors to go cashless rather going cashless for entire society few districts could have been chosen or few areas can be adopted for a testing purpose.

Mahesh A., et al., (2021) stated in their paper “Digital Payment Service in India - A Case Study of Unified Payment Interface” of digital payments UPI plays an important role and found that strengths such as the growth of smartphones users and internet infiltration facilitated in such situations to adopting for digital payment service were counterbalanced by weaknesses such as cybercrime, delayed transaction, and transaction limit. They recommend resolve consumer grievances, PSPs must build effective grievance redressal systems.

SWOT ANALYSIS OF DIGITAL PAYMENTS IN RURAL AREAS

Strengths:

- **Increased Access:** Digital payments have the potential to provide access to financial services to rural populations that may not have had access to traditional banking services.
- **Convenience:** Digital payments can be made from anywhere, at any time, and can reduce the need for cash transactions, which can be inconvenient and pose security risks.
- **Cost-effective:** Digital payments can be less expensive than traditional banking services, reducing costs for both consumers and merchants.

- Transparency: Digital payments can provide a clear record of transactions, reducing the potential for fraud and corruption.
- Improved security: Digital payments offer better security as compared to traditional payment methods like cash, as they are less prone to theft and fraud.

Weaknesses:

- Lack of Infrastructure: Rural areas may lack the necessary infrastructure, such as internet connectivity, to support digital payments.
- User Resistance: Some users may be hesitant to adopt Digital payment methods due to lack of trust or comfort with technology.
- Limited Acceptance: Merchants in rural areas may not have the necessary equipment or knowledge to accept digital payments, limiting their usefulness.
- Security Concerns: Digital payments may be vulnerable to fraud, hacking, or other security concerns, which may undermine trust in the system.
- Cultural barriers: Some people in rural areas may have cultural reservations towards using digital payment methods, preferring traditional payment methods like cash

Opportunities:

- Expanded use cases: There is potential for Digital payment methods to expand beyond traditional payment methods and be used for other transactions such as micropayments or peer to peer transactions.
- Investment in Infrastructure: Investments in infrastructure, such as internet connectivity and point-of-sale devices, can expand the reach of digital payments in rural areas.
- Government Support: Government policies and incentives can be put in place to promote the adoption of digital payments in rural areas.
- Partnering with Local Businesses: Partnering with local businesses can help to increase acceptance of digital payments and drive adoption.
- Rise of fintech startups: The rise of fintech startups that offer innovative digital payment solutions can help in promoting the adoption of digital payments in rural areas.

Threats:

- Cultural Resistance: Rural populations may have cultural or religious beliefs that discourage the use of digital payments, making it difficult to drive adoption.
- Competition: There may be competing payment systems, such as cash or mobile money, that are already established in rural areas.
- Dependence on third parties: Digital payments companies often rely on third-party providers for services such as payment processing or fraud prevention that leads to additional risks.
- Limited Digital Literacy: Rural populations may have limited knowledge of digital technologies, making it difficult to use and adopt digital payment systems.
- Cybersecurity risks: Digital payments can be vulnerable to cybersecurity risks like hacking and identity theft, which can discourage people from adopting these methods.

DATA ANALYSIS AND INTERPRETATION

Age of the respondents		
	Frequency	Percent
17-26 years	32	39
27-36 years	24	29
37-46 years	16	20
47-56 years	7	9
57 years and above	3	4
Total	82	100
Gender of the respondents		
Male	43	52
Female	39	48
Total	82	100
Marital status of the respondents		
Married	37	45
Un Married	45	55
Total	82	100
Educational Qualification of the respondents		
Professional Course	8	10
Post Graduate	14	17
Under Graduate	19	23
Higher Secodary	12	15
SSLC	13	16
Below SSLC	5	6

Others(ITI/Diploma)	11	13
Total	82	100
Occupation of the respondents		
Business	16	20
Professionals	10	12
Salaried	25	30
Student	18	22
Homemaker	13	16
Total	82	100
Family Income of the respondents		
Up to Rs.3,00,000	24	29
Rs.3,00,001 – Rs.3,50,000	18	22
Rs.3,50,001 – Rs.4,50,000	14	17
Rs.4,50,001 – Rs.5,00,000	15	18
Above Rs.5,00,000	11	13
Total	82	100

Source: Primary data

SWOT Analysis through Factor Analysis

Factor analysis is a statistical technique used to identify underlying patterns or factors among a set of observed variables. It aims to reduce the dimensionality of the data by identifying a smaller number of unobservable (latent) factors that explain the correlations among the observed variables. The EFA (Exploratory Factor analysis) is used to explore the structure of the data and identify the underlying factors.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.604
Bartlett's Test of Sphericity	Approx. Chi-Square	144.175
	df	66.000
	Sig.	0.000

For Sampling Adequacy Kaiser-Meyer-Olkin Measure is measured. With the help of KMO it is 0.604 which is more than 0.5, that can be considered as adequate and it is appropriate to conduct a data reduction technique. To continue the research Bartlett's Test of Sphericity is considered that helps to decide the results of factor analysis are significant. Bartlett's Test of Sphericity significant level is <0.001 which shows that there is a high level of correlation between variables, which makes it acceptable to apply factor analysis.

Variables	Factors	Component				
		1	2	3	4	5
V5	Expediency	.758				
V4	Cost effective	.720				
V11	Traceability	.712	-.405			
V9	Improved Infrastructure	.654		.401		
V1	User Resistance		.786			
V7	Language Barriers		.645			
V10	Expanded use cases			.754		
V12	Increased adoption			.660		
V2	Increased financial literacy				.808	
V6	Network error/incomplete payments				.700	
V3	Dependance on third parties					.771
V8	Cybersecurity Threats					.768

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Inference

The rotated component matrix is a key output of factor analysis that summarizes the relationships between the observed variables and the underlying factors. In the above table, the factor loadings represent the correlation between each variable and each factor. However, these loadings may be complex and difficult to interpret. Therefore, factor rotation methods are used to simplify and clarify the factor structure and to make the reading easier and simple form the table was suppressed, with all loadings less than 0.4.

Factors	Component	Item Description	Rotated Loading	% of Variance	Eigen Value
I	Strength	Expediency	0.758	19.615	2.354
		Cost effective	0.720		
		Traceability	0.712		
		Improved Infrastructure	0.654		
II	Weakness	User Resistance	0.786	15.031	1.804
		Language Barriers	0.645		

III	Opportunities	Expanded use cases	0.754	12.188	1.463
		Increased adoption	0.660		
IV	Challenges	Need financial literacy	0.808	10.094	1.211
		Network error/incomplete payments	0.700		
V	Threat	Dependance on third parties	0.771	8.874	1.065
		Cybersecurity Threats	0.768		

Primary Data

Inference

The above table denotes consolidated Rotated component matrix, therefore the rotated component matrix is a useful tool for interpreting the factor structure and identifying the variables that are most strongly associated with each factor. so the five factors are discussed as follows:

Strength: Strength of Digital payments represented by four variables expediency, cost effective, Traceability and improved infrastructure with factor loading from 0.758 to 0.654, with the variance per cent of 19.615 and Eigenvalue 2.354.

Weakness: Two-factors like, User Resistance and language barriers with factor loading from 0.786 to 0.645, with the variance per cent 15.031 and Eigenvalue of 1.804.

Opportunities: Expanded use cases and increased adoption represents by two variables with the factor loading 0.754 to 0.660, the variance of 12.188 with Eigenvalue 1.463.

Challenges: Factors like need financial literacy and network error/incomplete payments is the challenging factors with the factor loading 0.808 to 0.700 with variance 10.094 and Eigenvalue 1.211.

Threat: Digital payments threat are represented by two variables dependance on third parties and cybersecurity threats with the factor loading 0.771 to 0.768 with variance 8.874 and Eigen value 1.065.

Factor Analysis to Multiple Regression

Factor analysis and multiple regression are both statistical techniques used to analyze the relationships between variables. Multiple regression is used to examine the relationship between a dependent variable and several independent variables. While factor analysis and multiple regression are different techniques, they can be used together in certain situations. For example, factor analysis can be used as a data reduction technique to reduce a large set of variables to a smaller set of factors that are more easily analyzed in a multiple regression

model. In this case, the factor scores obtained from factor analysis can be used as predictors in the multiple regression model.

Null hypothesis :There is no relationship between a linear combination of the variables and Factors of digital payments.

The table below denotes the Model Summary that provides the detail about the characteristics of the model. SWOT(Strength, Weakness, Opportunities and Threat analysis that includes challenges were the main variables considered.

Table 1:Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.975 ^a	.951	.948	1.16847

Inference

- Model reveals that R(multiple correlation coefficient)value that represents the correlation between dependent and independent variable. A value greater than 0.4 is considered for analysis. The model reveals .975 so it was good and denotes that it measures the degree of relationship between the factors of digital payments and the variables.
- A value greater than 0.5 shows that the model is effective, here R Square (Coefficient of Determination) the value was 0.951 it means that about 95% of the variation in factors of digital payments is explained by the variation in the independent variables(Strength,Weakness,Opportunities,challenges and threats) which is good.
- Generalization of the results revealed through Adjusted R square value was 0.948.It adjusts the statistic based on the number of independent variables in the model .That is the desired property of a goodness of fit statistic.

Table 2: ANOVA

This table determines whether the model is significant enough to determine the outcome.

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2019.614	5	403.923	295.844	.000 ^a
	Residual	103.764	76	1.365		
	Total	2123.378	81			

A value greater than 1 for F ratio is efficient model. In the above table F ratio 295.844, that is good and P value was significant at 1 per cent level of significance. **Therefore the result is significant.**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	33.305	.129		258.106	.000
	Strength (X1)	3.445	.130	.673	26.538	.000
	Weakness(X2)	1.770	.130	.346	13.632	.000
	Opportunities(X3)	1.698	.130	.332	13.081	.000
	Challenges(X4)	1.650	.130	.322	12.708	.000
	Threats(X5)	2.079	.130	.406	16.015	.000

a. Dependent Variable: Factors of Digital payments

Inference Estimated Multiple Regression Equation

$$Y(\text{Factors}) = 33.305 + 3.445 X1 + 1.770 X2 + 1.698 X3 + 1.650 X4 + 2.079 X5$$

The Coefficient of X1+.....+X5 shows that 1 unit increase in the factors (Strength,Weakness,Opportunities,challenges and threats) of digital payments. Other variables being held constant. This coefficient value is significant at 1 per cent level and the t-statistics of all the factors accounted for **significant positive variation** in the dependent variable of digital payments. Therefore the null hypothesis is rejected and alternative hypothesis is accepted.

Findings and Suggestions

The key results and highlights are discussed in the findings and helps to make suggestion accordingly.

- Majority of the user of Digital payments were found those age groups of 17 years to 26 years. It shows that most of the consumers of Digital payments are from younger generations.

- Male respondents were slightly high when compared to female respondents. Like wise when compared to marital status majority of the respondents using Digital payments were from unmarried status.
- Under graduates are the majority users of Digital payments in rural areas and Salaried respondents are the major users of Digital payments in rural areas of Ramanathapuram District.
- Through factor analysis the study reveals that respondents from rural areas find expediency, cost effective, Traceability and improved infrastructure as strength. User Resistance and language barrier as the respondents weakness factor. Expanded use cases and increased adoption as their opportunities. Need financial literacy and Network error /Incomplete payments as their challenges in using Digital payments and further more dependence on third parties and security threats as their threat factor.
- From the regression analysis it was revealed that all the dependent and independent variables considered as factors of Digital payments are highly significant.
To overcome these weakness, threats and challenges,
- Government and the private sector organizations must invest in the necessary infrastructure to support Digital payments like improving power supply and internet connectivity and also the mobile network coverage.
- Training programmes, public awareness campaign and community outreach initiatives among rural people are to be done to increase Digital literacy and financial literacy.
- Digital payment solutions must be customized to meet the specific need and preferences of rural populations that includes low cost or no-cost options, providing support in local languages and ensuring the systems are user friendly and secure.

CONCLUSION

A SWOT analysis of Digital payments in rural areas highlights the various factors that can influence the adoption and implementation of Digital payment methods in rural areas. In conclusion, Digital payment has the potential to revolutionize the way financial transactions are conducted in rural areas. One of the key challenges is ensuring that the necessary infrastructure and connectivity are in place to support Digital payment systems. This includes access to reliable power supply, internet connectivity and mobile

network coverage. However there are several challenges that must be addressed to ensure that Digital payments can be adopted and used effectively in rural areas of Ramanathapuram District. Another challenge is that people need Digital literacy and awareness about the usage of Digital payment systems. So the Government ,financial institutions ,mobile network providers etc., must coordinate and collaborate to develop and implement effective Digital payment solutions for rural areas.

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