

# An Empirical Examination of Digital Banking Adoption among Rural Consumers in Dharwad

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**Abstract-** *Financial inclusion has garnered increased attention in recent times due to its crucial role in fostering economic growth, promoting equality, facilitating company expansion, and ensuring the sustainability of banking and financial institutions. This study seeks to comprehend the factors influencing the adoption of digital banking among rural populations, aiming to understand the effectiveness of technology in promoting financial inclusion. Employing the UTAUT Model along with additional components such as relative benefits and relative risks, the research utilized a self-administered questionnaire distributed in the rural areas of Dharwad. The collected data was then evaluated using the SPSS software. The results reveal that various factors, including performance expectations, effort expectancies, social influence, and facilitating conditions, significantly impact the intentions of rural customers to embrace digital banking. Interestingly, relative risks were found to be inconsequential in this context.*

**Indexed Terms-** *Digital Banking, Rural Customers, Financial Inclusion*

## I. INTRODUCTION

The success of any innovation hinges on its widespread adoption and effective use by a substantial portion of the general population. In recent years, both online and offline facets of the Indian banking sector have undergone significant transformations, encompassing online banking, mobile banking, and other innovations. India's well-organized banking industry includes public sector banks, private sector banks, and foreign banks. The increasing number of ATMs in India signals a rising trend of ordinary citizens embracing financial advancements, elevating their living standards and spending habits. Nowadays, even the average person regularly uses debit and credit cards.

Undoubtedly, the overall development of a nation relies on a sophisticated and modern banking culture. This electronic banking culture has already influenced the lifestyles and spending patterns of individuals, particularly the younger and middle-aged demographics. This positive development enhances the comfort and convenience of everyday life for ordinary people and significantly reduces the risks associated with handling physical currency. The government's digital India policy aims to further boost these financial transactions. Notably, banking industry employees benefit from reduced foot traffic in banks due to technological advancements, allowing clients to initiate financial transactions independently.

The success of any technology or invention is gauged by the benefits it brings to everyone, irrespective of their social or economic status. An electronic banking facility can only be considered truly beneficial to society if it is widely utilized by a diverse population. This study seeks to understand the factors influencing the acceptance of digital banking services among rural consumers.

## II. PROBLEM STATEMENT

One of the primary objectives of every financial institution is to provide services while simultaneously increasing earnings. To achieve this, banks must expand their customer base, regardless of geographic location. Service and profit maximization become unattainable if only a small fraction of consumers, particularly in E-banking services, utilize the bank's facilities. This study offers a comprehensive overview of how rural populations are utilizing digital banking services.

### III. NEED AND SIGNIFICANCE OF THE STUDY

While electronic banking is familiar to the majority in urban areas, its prevalence in rural sectors needs careful examination. To accurately assess the true extent of E-banking in rural areas, understanding the technology's adoption among rural populations in the Dharwad District is crucial. This study aims to explore the factors influencing rural customers' choices in adopting digital banking.

### IV. LITERATURE REVIEW

In their study, Tan & Teo (2000) found that behavioural control perceptions and attitudes significantly influenced the adoption of internet banking among Singaporean consumers. Polatoglu & Ekin (2001) discovered that customer trust in internet banking services tends to grow over time. Sohali & Shanmugham (2003) identified factors like internet accessibility and client reluctance that influence the frequency of electronic banking service usage. According to Rajeshwari (2019), the shift from conventional to digital banking has transformed customer interactions and understanding of services offered in rural areas by institutions like SBI.

### V. RESEARCH METHODOLOGY

This study employs a combination of qualitative and quantitative methods, targeting adults with smartphones and bank accounts in rural areas of Dharwad District. A structured questionnaire, measured on a 5-point Likert scale, was administered to customers of various banks in seven taluks of Dharwad. The non-probability convenient sampling method was utilized, with a total of 210 samples collected. SPSS 21.0 was employed for data analysis. The study aims to examine variables that significantly influence one another, using the UTAUT model and adding perceived trust as a fundamental construct. The conceptual model includes performance expectancy, effort expectancy, social factors, facilitating conditions, relative benefits, relative risks, and behavioural intention to use digital banking. Figure (a) depicts the proposed conceptual model for this research.

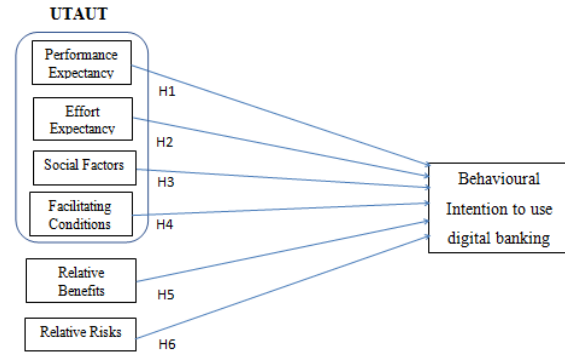


Figure (a): Proposed Conceptual Model

### VI. RESEARCH HYPOTHESIS

- H1: Performance expectancy has a positive significant relationship towards adoption of digital banking.
- H2: Effort expectancy has a positive significant relationship towards adoption of digital banking.
- H3: Social factors has a positive significant relationship towards adoption of digital banking.
- H4: Relative Benefits has a positive significant relationship towards adoption of digital banking.
- H5: Relative risks has a positive significant relationship towards adoption of digital banking.

### VII. DATA ANALYSIS AND DISCUSSION

- Reliability Test:  
For a scale of higher than 0.7, Cronbach's Alpha coefficient is considered optimum. As a result, all of the reliability values in this research were greater than 0.7, which is higher than the permitted level. Table 1 displays the Cronbach's Alpha for all variables.

Table 1: Standardized Item Loadings and Cronbach's Alpha

Construct	Description	Items	Loading	Cronbach's Alpha
Performance Expectancy (A)	The degree to which a person thinks using digital	A1	.911	0.705
		A2	.790	
		A3	.839	

	banking service would improve his or her ability to succeed at work			
Effort Expectancy (B)	The degree to which a person thinks using a digital banking service will be simple	B1	.700	0.759
		B2	.879	
		B3	.841	
Social Factors (C)	The degree to which a user believes that influential individuals drive people to use technology improvements	C1	.865	0.943
		C2	.812	
		C3	.812	
Facilitating Conditions (D)	The degree to which an individual is convinced that a technological and organisational framework is in place to	D1	.916	0.899
		D2	.739	
		D3	.957	

	facilitate the use of the system			
Relative Benefits (E)	The identified merits of using a digital banking service	E1	.402	0.708
		E2	.832	
Relative risks (F)	Risks and costs about the outcome of the use of the innovation	F1	.880	0.862
		F2	.886	
Behavioural Intension (BI)	The degree to which a person intends to engage in a particular behaviour	BI1	.957	0.798
		BI2	.680	

• Normality Test of Data:

If the value of skewness and kurtosis is in between -2 and +2, and -7 and +7 respectively, the data is deemed normal (Hair, 2010). Table 2 shows that all of the factors'skewness and kurtosis values are within an accepted level, with values of skewness varies from -1.710 to 0.032 and values of kurtosis varies from -0.936 to 2.001 for the variables. These findings suggest that all of the items of the variables are appropriate with the study's sample.

Table 2: Normality Test

	A	B	C	D	E	F	BI
N	210	210	210	210	210	210	210
Kurtosis	-0.783	1.160	0.884	-0.805	2.001	-0.655	0.936
Std. Error of Kurtosis	0.334						

Skewness	0.032	-0.746	-0.990	-.0381	-	-	-
Std. Error of Skewness	0.168						

Source: Primary Data

- Validity Test:

According to the guidelines, KMO value should be more than 0.7. The value of KMO, which is 0.794, satisfies the acceptability criteria of sampling for factor analysis, as shown in Table 3. Likewise, Bartlett's test of sphericity was found to have significant with a  $p < 0.001$ , representing that the variables were sufficiently correlated.

Table 3: Results of Validity test

Kaiser-Meyer-Olkin Measure of Sampling Acceptance	0.794	
Bartlett's Test of Sphericity	Aprx. chi. -square	956.515
	Df	21
	Sig.	.000

Source: Primary Data

- Testing of Hypothesis:  
The analysis of Pearson's correlation was carried to test the significance between the independent and

dependent variables. Table 4 shows that, the path coefficients of hypotheses 1, 2, 3, 4 and 5 were significant at a level of significance,  $p < 0.01$ . But, path coefficient of hypothesis 6 was not supported.

Table 4: hypothesis result

Hypothesis	Path	Pearson Correlation	Sig. (2-tailed)	Comment
H1	BI -----> A	.336**	.000	Supported
H2	BI -----> B	.612**	.000	Supported
H3	BI -----> C	.590**	.000	Supported
H4	BI -----> D	.922**	.000	Supported
H5	BI -----> E	.506**	.000	Supported
H6	BI -----> F	-.030	.000	Not Supported

\*\* . Correlation is significant @ 0.01 levels (2-tailed).

- Interpretation: The above findings shows that there is a positive association between Performance Expectancy & Behavior Intention, effort expectancy & BI, Social factors & BI, facilitating conditions & BI and also between Relative benefits & BI to use digital banking. But, there is a negative significance between relative risks associated with digital banking and behavioral intention to use digital banking services.

factors, facilitating conditions and relative benefits in digital banking has a significant effect on forming the favourable intentions towards usage of digital banking services.

- It was found that, relative risks involved in digital banking has a negative significant effect on forming the favourable intention of rural customers towards usage of digital banking services.

Findings:

- From the study, it was found that rural customers' performance expectancy, effort expectancy, social

CONCLUSION

In fact, mobile banking is a very effective tool for providing the desperately needed financial services to

the unbanked masses in rural areas, as service providers can take advantage of the high mobile penetration in these areas for quick financial inclusion of the unbanked Dharwad rural communities. According to the results, the expanded UTAT can forecast a customer's propensity to utilise digital banking. In particular, user behaviour is significantly influenced by performance expectations, effort expectations, social factors, and relative advantages, which in turn affect users' intentions toward digital banking. However, associated risks discouraged users from using the service. Thus, this study has provided valuable information to banks, MNEs, service developers, and software engineers to enhance digital banking system adoption among rural customers for financial inclusion by considering influencing factors.

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