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Factors Motivating the Adoption of Information Technology in Banking Services in Theni District

[1]K. Mathankumar, [2]Dr.S. Balamurugan

[1]M.Com., M.Phil., Assistant Professor, PG and Research Department of Commerce, C.P.A College, Bodinayakanur.

[2]M.Com., M.Phil., PGDCA., Ph.D., Associate Professor and Head, PG and Research Department of Commerce, C.P.A College, Bodinayakanur.

Abstract

This paper gives a brief analysis of Factors Motivating the Adoption of Information Technology in Banking Services in Theni District. This study is an empirical research. The primary data were collected by personal interview of the selected respondents by using interview schedule. The primary data were collected from the bank customers directly during the month of June 2022 to December 2022. The researcher used convenient sampling method to collect data from the sample respondents. First hand data were collected from the respondents directly by the researcher himself with the help of an interview schedule. Percentage analysis and rotated matrix were used to analyse the data. This paper reveals that out of twenty six variables the six factors were extracted namely "Trust", "Security Concern", "Perceived risk", and "Familiarity of cybercrimes". All the attributes are formed under each factor had high associations. High value of Kaisar-Meyer-Olikin measure of sampling adequacy (0.777) indicates the correlation between the pairs at variables explained by other variables and thus factor analysis was considered to be appropriate in this model. Cronbach's Alpha is more than 0.74 in all factors. Finally conclusions were drawn and suggestions were offered.

Keywords: Information Technology, Banking Services, Factors Motivate

Introduction

Information Technology (IT) has become a driving force in modern banking, transforming the way financial services are accessed and utilized. The integration of IT in banking has enhanced service delivery, improved security, and increased financial inclusion, particularly in semi-urban and rural areas in Theni District. With the rapid growth of digital infrastructure, banks are leveraging IT solutions such as online banking, mobile banking, ATMs, and digital payment systems to provide seamless financial services to customers. Theni District, known for its agricultural economy and growing commercial activities, has witnessed a shift towards digital banking services due to various motivating factors. Government initiatives, improved internet connectivity, evolving customer preferences, and security advancements have played a crucial role in encouraging IT adoption in banking. These technological advancements have not only enhanced banking convenience but have also contributed to financial empowerment and economic growth in the region. This article explores the key factors driving IT adoption in banking services in Theni District, analyzing its impact on financial accessibility, operational efficiency, and customer satisfaction. By understanding these motivating factors, we can assess how digital banking is reshaping the financial landscape of the region and identify opportunities for further growth and development.

Statement Of The Problem

Today banking functions have achieved a spectacular growth all over the world more so in India. The nationalization of commercial banks and entry of private and foreign third generation banks have facilitated the adoption of new techniques emanated out of information technological boom in banking business. Almost all

the functions of banks are computerized and customer's personal contract has been narrowed down to a very little extent. Today customers need not go to banking premises for basic banking services. Modern technology has provided many opportunities to ease out complications and difficulties that were so far faced by common banking customers. At the same time new issues are erupted out due to the implementation of modern technologies. Security issues, legal issues and issues related consumers education in utilizating the banking services are the common challenges to be encountered by the overall customers in general and customers living in rural areas in particular. Therefore, study of factors motivate the adoption of information technology in banking services in Theni district.

Objectives Of The Study

To analysis the factors motivate the adoption of information technology in banking services in Theni district

Review Of Literature

Amutha D (2016), In her article deals the consumers perception towards e-banking system related to consumer awareness towards e-banking system with special reference to Tuticorin District of Tamilnadu. It is found that 36.67 per cent of the respondents income levels are up to Rs. 1,00,000, 52.22 per cent of the respondents are Rs. 1,00,001 to Rs. 3,00,000 and 11.11 per cent respondents are belonging to above Rs. 3,00,000 and the average income is 167222. The study reveals that, the opinion of customers on future expectations. Out of the total respondents, Majority (i.e.) 58.89 per cent of the sample respondents have mentioned that they would like operate their banking transactions in a core banking environment which is free from neither technical intervention such as computer connecting nor 23.33 per cent of the samples respondents expect the bank will provide security. 17.78 per cent of the sample respondents have stated reasonable charges have to be imposed on their banking transaction. The main difficulty for using the E-banking facility is less knowledge about the operations of banking facility (50%).[1]

May Wang , Stella Cho , Trey Denton, (2017) The results indicated that personalization leads to increased performance expectancy and decreased effort expectancy, which in turn lead to increasing intention to continue to use e-banking services. In addition, compatibility with previous e-banking experience and personalization produces an interaction effect on both performance expectancy and effort expectancy.[2]

Dipa Mulia , Hardius Usman, Novia Budi Parwanto, (2020), the study deals with Customer intimacy not only encourages the emergence of customer loyalty directly, but also affects the factors that determine customer loyalty itself, such as perceived usefulness, perceived ease of use, perceived risk, trust, sharia compliance and satisfaction. In other words, customer intimacy has a direct and indirect motivate on loyalty.[3]

Sampling Design

Since the study was concerned with the factors motivate the information technology to adoption banking services in Theni district the researcher obtained the State Bank of India, Indian Bank, HDFC and ICICI bank. The sample size taken up for the limited to Three Hundred (300) customers of State Bank of India, Indian Bank, HDFC and ICICI Bank the researcher used convenient sampling technique. Convenient sampling refers to selecting a sample of study on objects based research convenience. However care was taken that all classes of customer such as salaried employee, businessman, professionals and household.

Field Work And Collection Of Data

Fieldwork for the study was conducted from June 2022 to December 2022. The primary data were collected by personal interview of the selected respondents by using an interview schedule. Before starting the actual data collection, the respondents were familiarised with the purpose and the objectives of the present study. The interview was quite informal and was in a conversational style. The interview schedule was administered in the

vernacular language and the data were recorded by the researcher in the interview schedule. The interviews were conducted individually with each respondent, so as to avoid bias in response. Every possible care was taken to ensure the accuracy and reliability of information.

Analysis and Interpretation

Table 1: Demographic Consideration of the Respondents

Age	**No.of Respondents**	**Percentages**
Below 30	36	12.00
30-40	130	43.33
40-50	78	26.00
Above 50	56	18.67
Total	300	100
Gender	**No.of Respondents**	**Percentages**
Male	194	64.67
Female	106	35.33
Total	300	100
Level of Education	**No.of Respondents**	**Percentages**
Graduate	106	35.33
Post Graduate	122	40.67
Professional	72	24.00
Total	300	100
Occupation	**No.of Respondents**	**Percentages**
Private Employee	226	75.33
Government employee	74	24.67
Total	300	100
Marital Status	**No.of Respondents**	**Percentages**
Married	264	88.00
Unmarried	36	12.00
Total	300	100
Income Month	**No.of Respondents**	
Below 25000	46	15.33
25000-50000	168	56
50000-100000	72	24

Above 100000	14	4.67
Total	300	100
Types of account	**No.of Respondents**	**Percentage**
Saving bank account	158	52.70
Current account	116	38.62
Fixed deposit account	26	8.68
Total	300	100.00
Daily transactions times	**No.of Respondents**	**Percentage**
Up to 2	78	26
Between 3 and 5	136	45.33
Above 5	86	28.67
Total	300	100

Source: Primary Data

It is evident from Table 1 that a maximum of 43.33 per cent of the respondents are in the age group of 30-40 years, followed by 26.00 per cent of the respondents who are of 40-50 years, respondents with 12.00 per cent are of below 30 years, respondents with 18.67 per cent are above 50 years. The 64.67 per cent of the respondents are male and remain 35.33 per cent constituted female consumers. The out of 300 respondents, a maximum of 40.67 per cent of the respondents are Post Graduates, 35.33 per cent of the respondents are Graduates. The respondents with only Professional level constitute 24.00 per cent of the total. The maximum of 75.33 per cent of the respondents are Private employee, followed by 24.67 per cent of the respondents are Government employee. The out of 300 respondents, a maximum of 88.00 per cent of the respondents are Married, 12.00 per cent of the respondents are Unmarried. The out of 300 respondents 52.70 per cent them are savings account holders and 38.62 per cent of them are current account holders. The out of 300 respondents 45.33 per cent them are Between 3 and 5 time of daily transaction and 28.67 per cent of them are above 5 time.

Factor Analysis

As some of the statements have common components which correlated with one another because of the common factors. To find out the inter-relationship, factor analysis technique is to be adopted.

Factor analysis a tool applicable, when there is a systematic interdependence among a set of observed of manifest variables and the person is interested in finding out something more fundamental or latent which creates this communality. It seeks to resolve a large set of measured variables, in terms of relatively few categories, known as factors. A factor is an underlying dimension that accounts for several observed variables.

The meaning and name of such new variable is subjectively determined by the researcher. Since the factors happen to be linear combinations of data, the co-ordination of each observation or variable is measured to obtain the factor loadings. Such factor loadings represent the correlation between the variables and factors. When the sum of squared values of factors loadings relating to a factor is taken, such sum is referred to as eigen value or latent root. Eigen value indicates the relative importance of each factor in accounting for the particular set of variables being analysed. For realistic results, the technique of rotation is adopted, because such rotation reveals different structures in the data.

Mathematically, factor analysis is somewhat similar to multiple regression analysis. Each variable is expressed as a linear combination of under-lying factors. The amount of variance, a variable share with all the other variables included in the analysis is referred to as communality. The co-variation among the variables is described in terms of a small number of common factors plus a unique factor for each variable. These factors are not observed. If the variables are standardised, the factor model may be represented as:

$$X_i = A_{ij}F_1+A_{i2}F_2+A_{i3}+F_3+\ldots\ldots A_{im}F_m+V_iU_i$$

Where,

X_i = i^{th} standardised variable

A_{ij} = Standardised multiple regression co-efficient of Variable I on common factor j

F = Common factor

V_i = Standardised regression co-efficient of variable I on unique factor

U_i = The Unique factor for variable i

M = Number of common factor

The unique factors are uncorrelated with each other and the common factors themselves can be expressed as linear combinations of the observed variables.

$$F_i = W_{i1}X_1 +W_{i2}X_2 +W_{i3}X_3 =\ldots\ldots W_{ik} +X_k$$

Where,

F_i = Estimate of i^{th} factor score co-efficient

W_i = Weight of factor score co-efficient

K = Number of variables

It is possible to select a weight or factor score co-efficient, so that the first factor explains the largest portion of the total variance. Then a second set of weights can be selected so that the second factor accounts for most of the residual variance, subject to being uncorrelated with the first factor. The same principle could be applied for selecting additional weights for the additional factors. Thus the factors can be estimated so that their factor scores, unlike the value of original value, are not correlated. Furthermore, the first factor accounts for the highest variance in the date, the second highest and so on.

The objective of factor analysis is dimension reduction to reduce the large set of correlated variables to few uncorrelated factor forming linear combinations of the variables. This helps to avoid redundancy.

Kaiser-Meyer-Olkin Measure of Sampling adequacy. = 0.739

Bartlett's test of Sphericeity

Approx Chi-Square	=	811.349
Degrees of freedom	=.	190
Significance	=	0.000

The KMO and Bartlett Test shows us that the number of sample taken were adequate for academic perspective although it is ideal that it should be closer to the research shows a KMO value of 0.739 which is adequate. Along with the KMO value the level of significance should be less than 0.05, and this research has a good 0.000 level of significance.

The rotated factor matrix motivate the information technology to adoption banking services is given in Table 2

Factors

The factor analysis of the thirty four attributes relating to the factors motivate the information technology to adoption banking services with Ninety factors and the results are presented in Table 2.

Table 2 Rotated Matrix for Factors Motivating the Adoption of Information Technology in Banking Services in Theni District

Sl. No	Name of the Factors	Variables	Eigen Value	Percentage of Variance	Factor Loadings	Communality
1	Trust	Recommend them to others	3.673	7.9	0.757	0.69
2		Likely to use For good layout and appearance			0.669	0.59
3		Find the website easy to navigate			0.593	0.68
4		Comfortable using any browser			0.536	0.54
5		Friends and family recommend e banking			0.553	0.69
1	Security Concern	Face the any problems after problems	2.742	7.6	0.757	0.69
2		Comfortable that websites			0.669	0.59
3		Know of past searches and suggest			0.593	0.68
4		Find physical store important			0.536	0.54
5		Find it safe to store debit credit card information			0.553	0.69
1	Perceived Risk	Find no threat to personal information	2.673	7.2	0.771	0.62
2		Find product information correct			0.757	0.59
3		Feel safe paying online			0.721	0.56
4		Comfortable using non-			0.693	0.55

		familiar of e banking website				
1	Familiarity of cyber crimes	Familiarity with identity theft	2.496	6.8	0.816	0.74
2		Familiarity with password sniffing			0.754	0.69
3		Familiarity with account takeover			0.530	0.51
4		Familiarity with spyware			0.528	0.45
5		Familiarity with phishing			0.681	0.54

Source: Computed Data

Factor 1 : Trust

Among the variables of expectations of banking service to customer, namely 'Recommend them to others', 'Likely to use for good layout and appearance', 'Find the website easy to navigate', 'Comfortable using any browser' and 'Friends and family recommend e-banking'. constituted Factor 1 with higher factor loadings. These five variables on Factor 1 are characterised as trust background. All the five attributes have a high communality indicating that the attributes within Factor 1 have very high association among them.

Factor 2: Security Concern

Among the variables of factors motivate the information technology to adoption banking services namely 'Security Concern', the variables such as 'Face the any problems after problems', 'Comfortable that websites', 'Know of past searches and suggest' 'Find physical store important', and Find it safe to store debit credit card information. Constituted Factor 2 with higher factor loadings. These five variables on Factor 2 are characterised as factors motivate the information technology to adoption banking services. All the five attributes have a high communality indicating that the attributes within Factor 2 have very high association.

Factor 3: Perceived Risk

Among the variables of factors motivate the information technology to adoption banking services, namely 'Perceived Risk', the variables such as 'Find no threat to personal information', 'Find product information correct', 'Feel safe paying online', and 'Comfortable adoption non-familiar of e banking website'. constituted Factor 3 with higher factor loadings. These four variables on Factor 3 are characterised as perceived risk. All the four attributes have a high communality indicating that the attributes within Factor 3 have very high association among them.

Factor 4: Familiarity of cyber crimes

Among the variables of expectations of banking service to customer namely 'Familiarity of cyber crimes', the variables such as 'Familiarity with identity theft', 'Familiarity with password sniffing', 'Familiarity with account takeover', 'Familiarity with spyware' and 'Familiarity with phishing' constituted Factor 4 with higher factor loadings. These four variables with higher factor loadings on Factor 4 is characterised as 'Familiarity of cyber crimes'. All the four attributes have a high communality indicating that the attributes within Factor1 have very high association among them.

The Eigen value for the first factor Security Concern is 3.673, which indicates that the factor contains much higher information than the other factor. The percentage of variance is 7.9. Trust provides maximum insights into the respondents in the study area.

The second and third factors namely security and perceived Risk crimes for 7.6 and 7.2 per cent variance with Eigen values of 2.642 and 2.573 respectively. The fourth factors namely Familiarity of cyber crimes 6.8 per cent variance with Eigen values of 2.396.

Conclusion

The adoption of Information Technology (IT) in banking services has significantly transformed the financial landscape in Theni District. Various factors, including government initiatives, increasing smartphone and internet penetration, security advancements, and evolving customer preferences, have contributed to the rapid digitalization of banking services. These advancements have not only improved accessibility and convenience but have also enhanced financial inclusion, particularly for rural and unbanked populations. As technology continues to evolve, the role of IT in banking will become even more crucial, ensuring faster, safer, and more efficient financial transactions. Banks and financial institutions must continue to innovate and invest in digital infrastructure to meet the growing demands of tech-savey consumers. Moreover, awareness programs and digital literacy initiatives should be encouraged to help all sections of society benefit from IT-enabled banking services. In conclusion, IT-driven banking services in Theni District are a key enabler of financial growth and economic development. By leveraging technological advancements, banks can offer better services, enhance customer satisfaction, and contribute to a more robust and inclusive banking system.

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