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Role of IT in Promoting Financial Inclusion Products (A Study with Reference to Commercial Banking Practices)

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Abstract

In the present global environment, the role of information technology has played a pivotal role in order to quicken the service of banking products at the doorstep of customers. The financial inclusion a practice is also required the apt utilisation of information communication technology. There are several models to measure the extent of utility and level of awareness of customers in terms of getting financial services. Technology Acceptance Model (TAM) is widely used model in describing the user acceptance of new technology for understanding information system acceptance. The Technology Acceptance Model is of recent origin in Indian context which exclusively measures the extent, utility and awareness of rural masses who have associated with financial inclusion products so as to improve their standard of living. The TAM measures the perceived usefulness, perceived ease of use and in association with banker's role in providing best possible services. The study pinpoints the three variables perceived usefulness, perceived ease of use and bank's role in order to measure acceptance level of customer's usage of ICT products. The outcome of the result would explain the role of ICT in promoting financial inclusion products.

Keyword: Technology Acceptance Model (TAM), Information Communication Technology (ICT), Financial Inclusion, Vulnerable Groups

Introduction

Technology has increased the volume of banking services drastically and at the same time, the utility of financial inclusion products have attracted customers phenomenally. Financial inclusion as a goal is gaining greater attention in government policy circles and is a key to continued socio-economic development. The banks with ICT products have to play a major role to attain such goal. Almost three billion people around the world lack of access to basic financial services that have the potential to transform economies and boost livelihoods (Aman Srivastava, 2011). Financial inclusion is a major challenge facing by the banks, particularly for those in the public sector. The main theme of financial inclusion is to bring the entire population, especially those in rural and semi-urban areas, under the banking fold. Most banks have gone about the task quite seriously and providing several products and services to the vulnerable groups through No Frill Account, Banking Correspondents (BCs) and technology etc. But, unfortunately, most of these products and services remain dormant. Financial inclusion can never be complete without financial literacy. This can be achieved only by making the rural folk aware of all the banking products and how they can benefit by them. Much more needs to be done in the area of inculcating financial literacy if the purpose of financial inclusion is to be served (T. S. Krishnamurthy, 2012).

Recently, banks in many Indian states claimed that financial inclusion is fully achieved successfully through no frill accounts, BCs and ICT products and services. The ICT products smart cards, ATMs, EFT, credit cards etc., are introduced by the banks at affordable costs to their customers to utilize the banking services effectively.

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The sole objective of the study is to analyse the acceptance of ICT products and services among the rural customers by using technology acceptance model (TAM).

Significance of the Study

In the present scenario, the information communication technology growth is remarkable and plays a vital part in every sector in commercial world including banking sector. With help of ICTs, the banks have introduced several products to serve their customers in every nook and corner quickly and effectively. Several ICT products help the banker's to provide financial services at an affordable cost to the doorstep of rural masses, which will motivate to access banking services frequently. The success of ICT products will be measured by the acceptance of those products by the customers. The present study proposed a Technology Acceptance Model, which is widely used model in describing the user acceptance of new technology for understanding information system acceptance.

Review of Literature

The behavioural aspects of the people play a vital role in utilisation of the products and services. Many people are not comfortable using formal financial services due to difficulty in understanding language and reading the document etc., (IDBI Gilts Report) that will not help to achieve the objective of 100 percent financial inclusion. Davis (1989) suggested that users' motivation can be explained by three factors: Perceived Ease of Use, Perceived usefulness and Attitude toward using the system. He hypothesized that the attitude of a user toward a system was a major determinant of whether the user will actually use or reject the system. According to Davis *et al*. (1989) perceived usefulness will directly influence the behavioural intention. New technology should increase the performance of people to get positive intention use it. In addition, perceived usefulness is influenced by perceived ease of use. Whenever the technology is free of effort, people will realise its usefulness.

Technology Acceptance Model (TAM)

Several socio-cognitive models have been proposed to predict and explain end user behaviour towards banking technology products. The most prevalent is the Theory of Reasoned Action (TRA) and it is derivatives, Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB). These models follow the attitude-behaviour paradigm that suggests that actual behaviour is declared through intention toward the behaviour. Intention is influenced by attitude and finally salient beliefs influence attitude. In the present study the researcher adopted TAM models in order to analyse the user's intention and actual use of the banking technology products provided by Bank'sunder financial inclusion.

User acceptance of technology has been an important field of study for over two decades now. Although many models have been proposed to explain and predict the use of a system, the Technology Acceptance Model has been the only one which has captured the most attention of the information systems community. TAM is indeed a very popular model for explaining and predicting user acceptance for technologies.

Banks can also influence their customers to adopt their services. Good image, reputation, relationships and communication channels, skills, abilities, well trained employees, and forward integration with customers, influence customers to adopt the Bank's' services like e-banking (Shah & Siddiqui, 2006). Banks can spread technology products and services by adopting appropriate marketing and advertising strategies. In addition, banks can encourage their customers to use e-banking technology by introducing incentives and discounts for technology products. Good customer service can influence the attitude and utilisation of customers by explaining the usage mechanism of technology products and the security mechanism that banks use to protect technology systems. The banks also had to play an important role to provide literacy to their customers effectively, which will promote their customers to increase the utilisation level of technology products.

Research Model and Hypotheses

The acceptance of an information system or new technology products is significantly influenced by the antecedents: perceived usefulness, perceived ease of use and bank's role. The previous researches empirically found that perceived usefulness and perceived ease of use are the critical factors that influence on the use of e-banking (Adams *et al.*, 1992; Poon, 2008; Rahmath Safeena *et al*., 2013). Based on the earlier literature the following hypotheses have been framed:

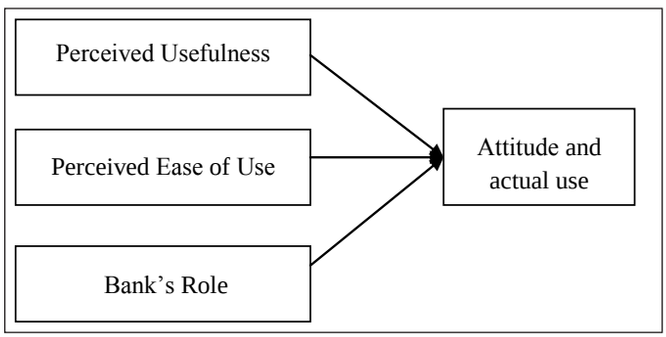
Table 1: Reliability Analysis

Factors	*No. of Items*	*Reliability for this sample(α)*
PU	7	.733
PEOU	8	.786
BR	6	.820

Table 2: Rotated Factor Loadings

	Factor loadings	
BR 1	.683	
BR 2	.702	
BR 3	.724	
BR 4	.693	
BR 5	.640	
BR 6	.580	
PEOU1	.589	
PEOU2	.542	
PEOU3	.561	KMO =.817
PEOU4	.569	
PEOU5	.559	Bartlett's Test of Sphercity
PEOU6	.546	
PEOU7	.568	Appox.Chi Square=1662.684
PEOU8	.594	Df=435
PU1	.506	Sig=.000
PU2	.721	
PU3	.582	
PU4	.636	
PU5	.513	
PU6	.539	
PU7	.511	

Fig 1: Research Model for the Present Study



Source: Compiled based on the light of literature

H1: Perceived Usefulness (PU) have a positive effect on attitude and actual use of ICT products.

H2:Perceived Ease of Use (PEOU) has a positive effect on attitude and actual use of ICT products.

H3: Bank's Role (BR) has a Positive Effect on Attitude and Use of ICT Products.

Research Method

The present study is descriptive and empirical in nature. Purposive sampling technique is used for the present study in order to collect data from the customers in

order to achieve the objectives of the study. Primary data have been collected from the 150 customers from rural areas in Coimbatore district which covered under financial inclusion program through interview schedule with help of structured questionnaire. The first section of the questionnaire consists of demographic profile of the respondents; the next section consists of responses regarding the important factors of this study namely, Perceived Usefulness, Perceived Ease of Use, Bank's Role and Attitude towards to use ICT products. The respondents rate the questionnaire items by the extent to which they agreed with each statement by giving score on five-point likert scale (1=Strongly disagree; 2=disagree; 3=neutral; 4=agree; and 5=strongly agree). Factor analysis is performed to assess the validity of the construct and regression analysis is used in order to analyse the factors influence the use of ICT products.

Data Analysis

The reliability analysis (see Table 1) which is determined by Cronbach's alpha in order to find the internal consistency of the scale. The reliability score of the model construct is above the .60 which is sufficient for this sample and suggesting the consistency of scale for measuring the construct favouring the use of ICT products among the customers.

Factor analysis (see Table 2) is used to construct the factors that will help to examine factors that will influence the customers' use of ICT products. Before applying factor analysis the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity were performed in order to identify whether the variables are used for further analysis. The K-M-O test and Bartlett's Test of Sphericity found that all extractions value are as per the expected values, therefore all items were used to further analysis. Item communalities also found good in the data set. Item communalities are considered "high" if they are all .8 or greater (Velicer & Fava, 1998) although this is unlikely to occur in the social sciences therefore low to moderate communalities of more than .50 is acceptable.

In this study K-M-O test is significant because test value is greater than .700 at .831and Bartlett's Test of Sphericity also found significant $\chi 2 = 833.369$ $P < .000$. Hence, it indicates that the dataset was adequate to perform factor analysis and there exists a significant relationship between the factors. In the process of factor analysis of the scale, the Varimax Rotation technique was employed to examine the obtained factors and all items with loadings above .50. Table 2 shows the factor with their variable constituents and factor loadings.

The regression analysis was conducted in order to examine the factors influence the attitude and use of the ICT products. The dependent variable was formed by referring to the attitude and usage of ICT products by the rural customers. The predictor variables included Perceived Usefulness, Perceived Ease of Use and Bank's Role. The result found that all the three factors PU (β=.273, t=3.448, $p<0.05$), PEOU (β=.452, t=6.172, $p<0.05$) and BR (β=.331, t=4.270, $p<0.05$) are statistically significant, overall model of the study is also significant R^2=.451.

Discussion and Findings

The present study examines the factors Perceived Usefulness, Perceived Ease of Use and Bank's Role, which influence the attitude and use of ICT products by the rural customers. The result from the regression analysis clearly shows that, as expected the hypothesis that PU, PEOU and Bank's role have a positive and significant effect on the attitude and use of ICT products. Moreover, the regression analysis found all three factors PU, PEOU and Bank's Role are most influential factors that determine the attitude and use of the ICT products. Perceived Ease of Use (β= .452) plays a most primarily predictor that influence the rural customers attitude to use the ICT products. As indeed, Perceived Ease of Use as a basic requirement of a system design (Chau, 2001; Davis *et al*., 1989) Most of the rural customers are recognised that ICT products are convenient to do banking because of user friendly, security, clear instructions from their banking correspondents and accurate performance influence to use of the products. As expected, Bank's Role (β= .331) determines and significantly influences the attitude to use of products with which promote the rural customers by giving financial literacy through literacy programmes and delivering doorstep services by banking correspondents. Perceived Usefulness (β= .273) also has a significant effect on the attitude to use the products, that earlier literature on technology found perceived usefulness as a primarily factor to determine the attitude and intention to use the products (Davis *et al*., 1989; Hajri & Tatnall, 2008). But, the rural customers are not much aware of benefits and viability of the ICT products that provided by their banks. By elucidate

the usefulness of the products; banks can motivate and boost the rural customer's literacy and level of utilisation of the ICT products.

Conclusion

The result of the study shows that Perceived Usefulness, Perceived Ease of Use and Bank's Role are most important determinants of attitude and use of ICT products by the rural customers. As far as financial inclusion is concerned, ICT plays a major part that takes banking to their doorsteps and makes everyone to come into the banking fold. Further, the banks have to conduct literacy programmes to elucidate about the usefulness and viability of the ICT products that will boost up the utilisation of the rural customers to make use of it. Thus the present study meets the desired objective, but it suffers from one limitation thatthe sample of the study is small in size that limits the generalisation of the outcome of the study. Further, more investigation with help of large scale of sample and with identifying and analyzing of other latent factors may help to further generalisation of the findings.

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