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Analysing behavioural intentions of Indian consumers towards Digital banking

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Abstract:
Background: Thanks to the liberalisation, privatisation and globalisation measures initiated by Government of India under its new economic policy regime, India is witnessing a boom in the global market. This scenario has enhanced the need for understanding the product adoption behaviour that would enable the marketers to arrive at strategies corresponding to the target markets socio, economic, political, cultural and competitive setting at the macro level and adopter-centred approach at the micro level. Adoption is the decision of prospective buyer to become a regular user of the product.

Aims: Indian consumers too have access to many new channels to interact with their bank. Banks race against each other in bringing the latest technology for the benefit of their customers and themselves. But not many studies have been conduced to evaluate if "Digital Banking" channel is utilised properly by the customers in India. Reasons for customer apathy towards Digital banking channel, if that exist, have also not been analysed in an Indian context earlier.

Methodology: An exploratory and descriptive both research designs were used in this research paper which included a field survey where the researcher went to the population of interest for them to describe and interrupt problem that are typical of normal conditions, attitudes, beliefs, practices and targets/aims about internet banking usage to establish the status of the problem under investigation.

Results/Findings: Multiple regression model will test the assumptions required to ensure validity of its significance test. This will help us check a statistically significant relationship. Other statistical techniques used for analysing the data collected will also be discussed. In the context the findings of the study, data analyses will be reported.

Conclusions: Most consumers form expectations of the service product, Banking Service provider, service, and quality of the product that they patronise before engaging in banking activities. These expectations influence their attitudes and intentions to get facilitated banking services through a certain bank and consequently their decision-making processes, purchasing behaviour and loyalty as well.
Keywords: Digitisation, Consumer Expectations, Consumer satisfaction, Banking Service Quality

I. INTRODUCTION

Thanks to the liberalization, privatization and globalization measures initiated by Government of India under its new economic policy regime, India is witnessing a boom in the global market. This scenario has enhanced the need for understanding the product adoption behaviour that would enable the marketers to arrive at strategies corresponding to the target markets socio, economic, political, cultural and competitive setting at the macro level and adopter-centred approach at the micro level. Adoption is the decision of prospective buyer to become a regular user of the product.

August 15th, 1995 marked a new dawn in India's communications history, when Videsh Sanchar Nigam Ltd. (VSNL) then a Government owned Telecom Company started Internet services for commercial use. VSNL launched its "Gateway Internet Access Services" (GIAS) to Indian public in the form of shell and TCP/IP dial-up connections with a modest estimate of 20,000 connections in the first year of operations(Ghosh, 1995).

The useability of Internet also increased many fold and the user needed a software tool named "Web browser" to access any content anywhere in the world. The number of computers connected to Internet increased enormously from 2000 which is a result of the introduction of new user friendly technological innovation in that sphere. Various commercial activities carried out using Internet included showcasing of products or services, allowing buying or selling of products/services using electronic mechanisms. It could be observed that Internet users nearly three times between 2010 and 2014 in India. As of 2015, approximately 3.07 billion people were online around the world, North America and Western Europe account for nearly 30% of the world Internet users. Even though Asia has half the world's population, its share in Internet users is 48.2% of total Internet users. The penetration of Internet is low for countries in Africa, the Middle East and Australia mainly due to lack of access to new technologies.

II. DIGITAL BANKING SERVICES FOR INDIAN CONSUMERS

E-banking initiatives by the Reserve Bank and the deployment of Core Banking Solutions had allowed Indian banks to offer a new banking "experience" for their customers. Gone are the days of branch only banking – computerisation allowed banks to

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offer many new channels of delivery. Indian banks, especially the new generation banks which started their operations after 1990-92, were the pioneer to offer latest channels of delivery like ATMs, Phone Banking, Internet Banking and Mobile Banking. The current generation banks did not have the branch network that public sector banks possessed and they also had to introduce some differentiator to the customers. New generation banks like ICICI Bank, HDFC Bank, Axis Bank and foreign banks like HSBC Bank and Citibank enhanced the ATM revolution in India.

ICICI Bank implemented a very dynamic strategy of ATM deployment to improve its branch presence across the country. ICICI's ATM count increased from 125 ATMs in January 2000 to 1200 ATMs by the end of 2002 (Srikanth & Padmanabhan, 2002). The bank also witnessed the impact of that implementation in the form exceptional growth in customers in the same period, customer base increased to 5 million from 2 million.

ATMs not only attracted the customers but also allowed banks to reduce its transaction cost. Customer accepted the ATM services open handedly and customers in non-urban areas also welcomed this innovation with both hands. Considerable efforts are being done to develop ATMs services in rural areas also with support of IIT Chennai by developing multi-lingual ATMs as a new channel. Another major innovation that was introduced in India during the last decade is Internet banking which offered many new services to the customer (Rajneesh & Padmanabhan, 2002). ICICI Bank was the first bank in India which offered this delivery channel, by kicking off its online banking services in 1996. Other private sector banks like Citibank, IndusInd Bank and HDFC Bank started offering internet banking services in 1999. SBI started its digital banking services from July 2001. Other public sector banks like State Bank of Travancore, Bank of Baroda, Allahabad Bank, Syndicate Bank and Bank of India, also rolled their services during the same time. Although, the adoption of online banking was lower compared to that of ATMs, banks are expecting usage levels to go up as internet penetration in the country improves.

III. OBJECTIVE OF THE STUDY

This study plans to "plug" the gap in research in adoption of digital banking among Indian customers. The primary objective of this study is to develop a frame-work to explain behavioural intention to use digital banking.

IV. SIGNIFICANCE OF THE STUDY

This study has a number of theoretical contributions. It is one of the primary studies to empirically examine the behavioural intentions to adopt or use Internet banking services in India using a modified version TAM construct. In this study TAM constructs along with influences of security awareness and security concerns among consumers is analysed. Even though TAM has been considered as one of the most important models for analysing user acceptance of computer & IT in a wide range of end-user computing technologies, not many studies were conducted among Indian IT users. This study tries to verify if the results of TAM constructs reflect the results of other studies conducted in other countries. From a business point, commerce through Internet is showing tremendous increase over the past years. But there are few factors which affect the decisions of customers when adopting Internet commerce, positively or negatively. This study tries to analyse the customer feeling about Internet Banking. Findings of this survey could help banks operating in India to fine tune their Internet Banking products.

V. RESEARCH METHODOLOGY

Most of the previous studies utilised theoretical framework provided by Technology Acceptance Model (TAM) as the base. TAM provided a sound theoretical base for analysing customer acceptance of information technology. When studying technology acceptance, researchers extended TAM model to include constructs relevant to the research problem area. In the present study the research model was developed by taking constructs from TAM and constructs from similar studies in the past. Since there were not many studies in internet banking acceptance with respect to Indian context, the researcher decided to first conduct a qualitative study with a group of banking customers. The exploratory and descriptive study was conducted using a close ended questionnaire. The close ended questionnaire was prepared to elicit the customer perception about internet banking in India. The questions in the qualitative study were framed in accordance with the recommendations given for conducting the study using Theory of Planned Behaviour (TPB) model (Francis et al., 2004). The questions could be used to develop the indirect (belief-based) measures for all the predictor constructs in the TPB model (attitude; subjective norm; and perceived behavioural control). An exploratory and descriptive both research designs were used in this study which included a field survey where the researcher went to the population of interest for them to describe and analyse problem that are typical of normal conditions, attitudes, beliefs, practices and aims about digital banking usage to establish the status of the problem under investigation.

VI. DATA ANALYSIS AND INTERPRETATION

The results of the survey conducted as part of the research study is presented and analysed in this chapter. Descriptive statistics of the survey respondents are presented first. Then, reliability and validity of the survey questionnaire is analysed. Finally, hypotheses and research model are tested using regression techniques. A survey was undertaken using a structured questionnaire. After discarding incomplete and vague responses 378 responses were taken for final analysis.

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Cronbach's alpha coefficient

Constructs	Variable name	Cronbach's alpha coefficient
Perceived Benefit	(PB)	0.858
Perceived Ease of Handling	(PEOH)	0.772
Perceived Consumer Attentiveness	(CA)	0.899
Perceived consumer Safety Measures	(SM)	0.745
Perceived Service Quality	(SQ)	0.827
Abstract Means	(AM)	0.754
Perceived Reliance & Confidentiality	(RC)	0.698

Before undertaking statistical analysis of data, validity of the survey instrument was tested using widely accepted techniques. Reliability of the survey instrument was tested by calculating the Cronbach's alpha for each research construct. Even though the Cronbach's alpha coefficient of every variable was above 0.70 without dropping any item, the researcher decided to drop 5 items for the survey instrument to improve the alpha coefficient to above 0.80. After confirming construct reliability, hypotheses formulated were tested using linear regression analysis. All the seven hypotheses developed were found to be supportive. Finally, to test the research model multiple regression analysis was conducted. Results of multiple regression analysis confirmed the existence of statistically significant effect of variables Perceived Benefit and Consumer Safety Measures on Internet Banking Use. The results also showed the effect of other variables in the dependent variable.

VII. HYPOTHESIS TESTING

Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.662	.918		3.988	.000
	PB	.372	.205	.646	1.819	.078
	PEOH	.484	.204	.728	2.379	.024
	CA	.041	.127	.075	.326	.746
	SM	-.355	.157	-.390	-2.261	.031
	SQ	.043	.137	.082	.315	.755
	AM	.194	.154	.283	1.260	.217
	RC	.045	.166	.059	.274	.786

a. Dependent Variable: IBU

Hypothesis H1: Perceived Benefit (PB) has a significant positive relationship with the consumer adoption of online banking (ß = 0.372, t = 1.819 and p <=0.078). The result is expected and is a confirmation of Technology Acceptance Model postulate (Davis, 1989). Previous studies on internet banking also came with same findings (Pikkarainnes et al., 2004, Chan, 2001, Tan & Leo, 2000). It means that if a customer perceives internet banking as a useful service then he/she could start using it more.

Hypothesis H2: Perceived Ease of Handling (PEOH) has a significant positive relationship with the consumer adoption of online banking (ß = 0.484, t = 2.379 and p <=.024). Again this result confirms that TAM model could be used to explain internet banking adoption among customers. From a practical viewpoint we could expect adoption of internet banking to increase when more and more customers feel that it is easy to use.

Hypothesis H3: Perceived Consumer Attentiveness (CA) has a significant positive relationship with the consumer adoption of online banking (ß = .041, t = .326 and p <=.746). The awareness level of precautions to be taken while conducting internet banking transactions was found to be high among the survey respondents. The relationship between the variables are positive indicating that when consumers are aware of the precaution to be taken while doing internet banking transactions they will be inclined to accept that banking channel.

Hypothesis H4: Perceived consumer Safety Issues (SI) has a significant negative relationship with the consumer adoption of online banking (ß = -.355, t = -2.261 and p <=.031). The negative relationship between the variables Internet Banking Use and Consumer Safety Measures indicates that concerns about security of internet banking services are hampering acceptance of that channel among customers.

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Hypothesis H5: Perceived Internet Service Quality (SQ) for accessing bank site has a significant positive relationship with the consumer adoption of online banking (ß = .043, t = 0.315and p <=.755). Confirmation of this hypothesis holds great significance in the context of developing countries like India. Acceptance of internet banking among Indian customers is bound to increase when the quality of infrastructure in the country is improved.

Hypothesis H6: The beliefs associated with Abstract Means (AM) are significantly positively related to an individual's intention to adopt Internet banking is accepted (ß = .194, t = 1.260 and p <=.217). This hypothesis is based on the construct of the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975). Hypothesis is found to be supporting indicating that customers are influenced by their peer group while taking decisions on adopting new technology like internet banking. As the number of people using this channel increase they could influence their friends or relatives in adopting internet banking.

Hypothesis H7: Perceived Reliance & Confidentiality (RC) on the bank has a positive effect on the customer acceptance of online banking is accepted (ß = .045, t = .274 and p <=.786). Trust is an important factor affecting any product or service (Gefen et al., 2003, Gefen, 2002). Customers tend to accept internet banking more when they trust their bank and have full confidence in their internet banking infrastructure

The entire hypotheses framed for the study were found to be empirically accepted. Finally, result of the multiple regression analysis performed on the research model found the overall model to be statistically significant. Though only statistical significance for only two constructs Perceived Benefit and consumer Safety Measures were obtained in the multiple regression testing, the research model's ability to predict behavioural intention of Indian banking customers in accepting internet banking could be accepted. Thus it could be concluded that the objective of the study has also been successfully achieved.

Indian economy is showing a prominent growth over the last few years. There have been rapid changes and developments in various dimensions of business and its infrastructures during the growth period. Online banking adoption among Indians has been increasing over the last one decade. Indian banks have also enhanced their offerings by providing new channels of delivery to their customers. E-Banking is one of the most popular and advanced channel which has become available to Indian customers. Customer adoption for digital banking services showed a positive response so far.

In this study the researcher tried to conduct a qualitative and quantitative investigation of consumer adoption of internet banking among Indians. The researcher tried to identify important factors that affect customer's behavioural intention for internet banking. The researcher also proposes a research model which was extended from Technology Acceptance Model for predicting internet banking acceptance. The quantitative analysis of the model confirmed that the factors identified by the researcher viz. Perceived Benefit, Perceived Ease of Handling, Consumer Attentiveness, Consumer Safety Issues, Internet Service Quality, Abstract Means and Reliance & Confidentiality did influence customer behavioural intentions towards internet banking. The results showed that five variables Perceived Benefit, Perceived Ease of Handling, Consumer Attentiveness, Service Quality and Abstract Means had positive influence on internet banking use. Similarly, results showed that two variables Consumer Safety Issues and Reliance & Confidentiality are negative influence on internet banking use. The findings of the study would be useful for Indian banks in planning and upgrading their internet banking service.

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