

INFLUENCE OF DEMOGRAPHICAL VARIABLES ON ADOPTION OF INTERNET BANKING TECHNOLOGY

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Abstract :The proliferation of internet technology and financial innovations has globally revolutionized the delivery of banking services. Internet banking offers substantial benefits, such as reduced transaction cost, convenience and flexibility to the customers as well as to the banks. Despite the apparent advantages, prevalence of internet banking services is at its nascent stage. The study aims at determining influence of demographic variables on adoption of internet banking technology. Extensive study on prior research and available literature has been made and constructs such as perceived usefulness, convenience, perceived ease of use, quality of banking website, credibility, self-efficacy, facilitating conditions, social influence and perceived value and behavioural intention for continued use are identified to study the factors determining internet banking adoption. Descriptive research was undertaken and primary data were collected through self-administered questionnaires, which yielded 602 valid responses. Influence of Demographic variables and psychographic variables on adoption of Internet Banking was analyzed. The results revealed that demographic variables significantly influence consumer perception on internet banking adoption. Implications would help bank managers and policy formulators to build customer specific strategies to escalate usage of internet banking services.

Keywords: Technology Acceptance, Internet Banking, Demographic Variables.

I. INTRODUCTION

Advancements in information and communication technology are profusely changing the way we work, communicate and shop so on. This certainly has brought radical changes in the way we bank too. The use of internet facility in service delivery has transformed the entire scenario of providing services. Customers are increasingly using technology such as online shopping, online business services etc. Gradually, customers are realizing the vital role of technology in business development. Prevalence of high competition in the sector and the customer's demand for convenient and innovative products has enforced banks to adapt e banking concept. Many business houses are rapidly changing and embracing new innovations and technologies in internet in order to increase their operating efficiency and raising their service quality. These radical changes in the adoption of technology and innovations have reshaped the business globally. Latest technological advancements are prevalent in each sector of business, but financial sector does not easily and quickly adapts a new technology owing to risk associated with it. However e banking is a breakthrough technology which was welcomed by the banking sector as well. In view of the manifold benefits of this mode of service delivery, it has been widely accepted by the financial sector as well. Initially it was used by the bank only for promotional and marketing purposes, but slowly and steadily the concept of internet banking started gaining importance. This could be credited to the multitudinal benefits pertaining to this technology such as reduced operating cost, customer delight by providing them the convenience of 'anytime anywhere' banking (Abu Shanab et al. 2010)

This research intends to understand consumers perception on internet banking adoption and will lead banks to develop a more realistic strategy for consumer adoption of internet banking. Unrealistic expectations can only misguide banks to undertake investments that are not ready to give adequate returns. Analysis of demographic factors on drivers of technology adoption would help the service providers to identify the focal areas to retain the existing customers and attract potential one.

II. LITERATURE REVIEW

The variables determining the consumer perception on acceptance of internet banking includes perceived usefulness, convenience, perceived ease of use, quality of banking website, credibility, self-efficacy, facilitating conditions, social influence, perceived value and continued intention to use. These variables are derived from best-known models of technology adoption Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT), to predict the intention to continue using internet banking

The behavioral intention is defined as "the strength of one's intention to perform a specified behavior". (Fishbein and Ajzen 1975). Consumer acceptance of internet banking is possessing a favourable attitude about it, intending to

use it and continue as well as extend its usage in the future. The constructs of Perceived Usefulness (PU) and perceived ease of use (PEOU) has been derived from TAM (Davis et al. 1989). If internet banking service is considered useful and easy to learn and use, it will certainly influence the customer to use this service (Aderonke and Charles 2010). Customers consider convenience as an important factor for using internet banking services. Internet banking is convenient owing to its advantages such as no waiting in line in bank and anytime, anywhere banking etc (Lee et al. 2005, Lichtenstein and Williamson 2006, Singhal and Padhmanabhan 2008, Ma 2012).

Self-efficacy originated by Bandura (1977) is defined as “conviction that one can successfully execute the behavior required to produce the outcomes.” The results in previous studies include self-efficacy as an antecedent for acceptance of the technology. (Ernovati et al. 2012, Kesharwani and Radha Krishna, 2013). Facilitating conditions is defined as “the degree to which an individual believes that an available organizational and technical infrastructure supports use of the system and resources to make use of said system” (Venkatesh et al. 2003). Resources and necessary knowledge available with the user to perform internet banking. (Venkatesh 2000, Teo 2011). Quality of internet banking websites have the ability to influence decision on internet banking adoption (Gounaris and Koritos, 2008). Perceived credibility is defined as the “extent to which a person believes that using a system will be free of security and privacy concerns”. The ability of internet bank to maintain the security and privacy of clients, banking activities (Luarn and Lin 2005, Hainudin 2007). Social Influence is “an individual's perception of other people's opinions on if he/ she should perform a particular behaviour”. Social influence could be interpersonal (family, friends, peers, colleagues etc) or media influence (Amin et al. 2008, Sripalawat et al. 2011). Zeithmal (1988) defined “perceived value as the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given”. Perceived value is reckoned when the benefits arising from the use of a technology weighs more than the cost associated with it (Venkatesh et al. 2012). Thus, perceived value is considered to study the customer perception of internet banking adoption. Table 1 depicts the operationalization of the constructs

Table 1- Operationalization of the Variables

Variables	No of Items	Reference
Perceived usefulness	5	Davis, TAM (1989)
Convenience	5	Gerrard and Cunningham (2003)
Perceived Ease of use	7	Davis, TAM (1989)
Website Quality	7	Yoo and Donthu (2001)
Perceived creditability	7	Luarn and Lin (2005)
Self -Efficacy	6	Venkatesh UTAUT Model (2000)
Facilitating conditions	7	Thompson MPCU model (1991)
Social influence	5	Fishbein and Ajzen (1975)
Perceived Value	5	Levesque and McDougall (1996)
Behavioural Intention	6	Fishbein and Ajzen (1975)

III. RESEARCH METHODOLOGY

Sampling frame is a list of all those within a population who can be sample. Obtaining a complete list of internet banking users in Chennai city is not feasible as the banks will not disclose this kind of information due to the competition prevailing in the Industry. Hence the researcher has to adopt non probability sampling method. One does not need a sampling frame to take non probability sampling (Tull and Hawkins 1993). Respondents of the study were selected using Purposive sampling since the population is infinite. Self-administered questionnaire was used to collect the data. Questions pertaining to the demographic and psychographic profiles were addressed in the first section and second section dealt with questions related to consumer perception on major determinants of online banking. The data were collected from 602 internet banking customers in Chennai during the period of August to September 2019.

IV. DATA ANALYSIS AND INTERPRETATION

The data has been collected and analyzed using SPSS 24. A series of inferences have been drawn based on the data collected, analysis of demographic influences on factors determining intention to adopt internet banking has been presented. The respondent's demographic profile is discussed below.

Table 2 - Demographic Profile of the respondents

Particulars	Classification	N	Percentage
Gender	Male	335	55.5
	Female	267	44.5
Age	Less Than 25	168	28.0
	25- 35 Years	298	49.3
	36-45 Years	107	17.8
	46- 55 Years	22	3.7
	Above 55 Years	7	1.2
Marital Status	Married	347	57.5
	Single	255	42.5
Educational Qualification	Higher Secondary/Diploma	32	5.3
	Graduate	256	42.3
	Post Graduate	239	39.8
	Professional	75	12.5
Occupation	Government Employee	73	12.1
	Private Employee	382	64.0
	Business/Self Employed	74	12.3
	Students/Housewife	70	11.7
Annual Income	Below 2,50,000	186	31.0
	2,50,000-5,00,000	243	40.2
	5,00,001-10,00,000	130	21.7
	Above 10,00,000	43	7.2

Source: The Author

Table 2 indicates that nearly half of the respondents are in the age group of 25-35 years and most of the respondents were married. Majority of the respondents are graduates and employed in private companies. Income wise distribution of respondents shows 40.2% of the respondents are in the income category of Rs 2,50,000 – 5,00,000. The details pertaining to internet banking like years of using internet banking, their preferred internet bank, number of internet banking transactions per month are tabulated in Table 3

Table 3 - Banking Details

Particulars	Classification	N	Percentage
Preferred Internet Bank	Public Sector Banks	278	45.8
	Private Sector Banks	307	51.0
	Foreign Banks	20	3.2
Years of Internet Banking	Less than 1 year	72	11.7
	1-5 Years	399	66.5
	6-10 Years	118	19.6
	Above 10 Years	13	2.2
IB transaction per month	Less than 10 Transactions	403	67.0
	10-20 Transactions	125	20.7
	21-30 Transactions	45	7.5
	Above 30 Transactions	29	4.8
Level of Efficacy	Experts (Very High)	256	42.4
	Advanced (High)	242	40.2
	Intermediate (Average)	90	15.0
	Beginners (Low)	14	2.4

Source: The Author

Private sector banks are the most preferred internet banks (51%) of the respondents, closely followed by a public sector bank (45.8%). Another investigation about internet banking experience reveals that 66.5% of the respondents are using internet banking services from 1 to 5 years. 67% of the respondents perform less than 10 internet banking

transactions per month. . Most of the bank customers use internet banking but still do not perform all banking transactions online. They still prefer other modes for getting their banking services. Hence majority of the respondents are using internet banking for less than 10 transactions per month. Most of the respondents are experts or advanced in computer efficacy skills and usage

Table 4- Descriptive statistics of the constructs

Construct Items	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Perceived Usefulness	2.20	5	4.22	0.559	-0.481	0.046
Convenience	2.60	5	4.23	0.724	0.162	0.631
Perceived ease of Use	2.57	5	4.07	0.576	-0.222	-0.401
Quality of Banking website	2.14	5	3.85	0.571	0.258	-0.583
Creditability	2.00	5	4.06	0.653	-0.477	0.003
Self Efficacy	1.33	5	3.97	0.676	-0.283	-0.33
Facilitating Conditions	2.43	5	3.96	0.599	-0.005	-0.776
Social Influence	2.00	5	3.85	0.649	0.096	-0.617
Perceived Value	1.00	5	3.73	0.742	-0.146	-0.076
Behavioral Intention for Continued Use	2.33	5	4.36	0.601	-0.724	-0.283

Source: The Author

Summarizeddescriptive statistics of each variable of the study is presented in Table 4. The mean values are above the neutral point 3.00 indicating better agreement level for all the constructs by the respondents.

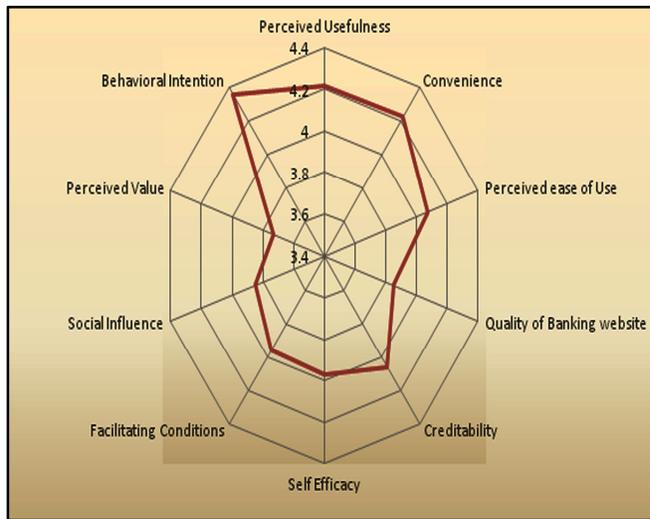


Figure 1- Mean values of the constructs

V RESULTS AND DISCUSSION

The independent sample t-test is used to test the significant difference in customer perception based on gender and marital status. The analysis of variance is carried out to examine the impact of other demographic variables with factors influencing internet banking. Subsequently, posthoc tests Tukey B is used to further analyse the results of ANOVA.(Moore et al. 2003, Struwig and Stead, 2001). The null hypothesis to be tested is given below.

H0 : There is no significant difference between demographic profile of the respondent with respect to their perception towards internet banking adoption.

Table 5- Summary Results of t Test and ANOVA

Construct Items	Gender	Age	Marital Status	Education	Occupation	Annual Income
Perceived Usefulness	Male**	<55 Years**	NS	NS	Business/ Self Employed*	Higher Income group**
Convenience	NS	NS	NS	NS	NS	NS
Perceived Ease of Use	NS	NS	NS	NS	Business Self Employed*	NS
Quality of Banking Website	NS	NS	NS	NS	NS	NS
Creditability	NS	NS	NS	NS	NS	NS
Self-Efficacy	NS	<25 Years*	NS	NS	NS	Rs.5-10 Lakhs*
Facilitating Conditions	NS	NS	NS	NS	NS	NS
Social Influence	NS	NS	NS	NS	NS	NS
Perceived Value	NS	NS	Married*	NS	NS	NS
Behavioural Intention	NS	NS	NS	NS	NS	Higher Income Group

Source: The Author ***Significant at 0.1% level **Significant at 1% level *Significant at 5% level (NS) represents not significant

From the above table 5, We infer that there is a significant difference between the genders of the respondent with respect to their perception towards perceived usefulness. Further investigating the means, we reveal that male users perceive online banking services as more useful than the female users which is in line with the previous studies (Arunkumar 2008, Cruz et al. 2010, Goswami and Dutta 2016). However there is no significant difference between genders regarding other variables. Married respondents perceive more value using online banking services than single respondents (Mattila et al. 2003, Munnukka, 2007, Iddris, 2013). However there is no significant difference between marital status while determining adoption of internet banking. Both married and single respondents perceive the attributes of internet banking adoption similarly. (Gan et al. 2006)

There is significant difference among age groups and their perception on perceived usefulness and self efficacy. The results of the post hoc test using Tukey's B multiple comparisons indicated that adoption level of less than 25 age group, 25-35 age group, 36-45 age group and 46 -55 age group is not significantly different however it is found significantly different from above 55 years age group. Young customers perceive factors of internet banking adoption better than the mature ones (Polatoglu and Ekin 2001, Jaruwachirathanakul and Fink 2005). This could be due to increased efficacy in dealing with technology (Joshua, 2011) Customers belonging to different age group have the same perception regarding the other variables. Few studies also stated that age has no significance influence on technology acceptance (Amin et al. 2013). Customers belonging to different education levels have the same perception regarding these variables determining adoption of internet banking. Hence education level of the users does not influence their consumer's perception on internet banking. The perceptions of the respondents on above attributes are alike because the respondents are literate at least completed their higher secondary and there is no significant difference based on their various level of education. (Ismail et al. 2010, Tan and Teo 2000).

In respect to perceived usefulness and perceived ease of use, the perception of government employees and private employees are similar but differs greatly with customers running their own business or self employed. Results from ANOVA state that the business and self employed respondents perceive online banking to be more useful than the government and public employees. This implies that individual doing business and self employed consider internet banking as more useful and effortless. Occupational status has no significant play in the other variables of customer adoption for electronic banking. Customers belonging to different level of income differ on their perceived usefulness and self-efficacy. Further the results of the post hoc test using Tukey's B multiple comparisons indicated that the individuals in the income group of Below 2,50,000 and 2,50,000-5,00,000 are termed as low income clients and users in the income group of Rs 5,00,000- 10,00,000 and above 10,00,000 are high income clients. High income clients have high self efficacy and perceive internet banking as more useful than the

low income clients. (Flavián et al. 2006 ,Mann and Sahni, 2012).High Income respondents usually live an expensive lifestyle which increases their banking needs. They find it useful to conduct their banking transactions online.

Table 6- Summary Results of ANOVA

Construct Items	Bank Type	IB Experience	IB Usage	Internet Efficiency Level
Perceived Usefulness	Private Bank***	Above 10 Years***	Above 30 transactions	Expert Level***
Convenience	Private Bank*	Above 10 Years*	Above 30 transactions	Expert Level**
Perceived Ease of Use	Private Bank**	Above 6 Years**	NS	Expert Level***
Quality of Banking Website	Private Bank**	Above 10 Years**	NS	Expert, Advanced and Intermediate Level***
Creditability	NS	Above 6 Years***	Above 30 transactions*	Expert Level***
Self-Efficacy	Private Bank*	6-10 Years***	Above 30 Transactions*	Expert Level***
Facilitating Conditions	Private Bank**	Above 6 Years***	NS	Expert Level***
Social Influence	Private Bank*	NS	NS	Expert Level***
Perceived Value	NS	NS	NS	Expert Level***
Behavioural Intention	Private Bank**	Above 6 Years***	Above 30 Transactions*	Expert Level***

Source: The Author***Significant at 0.1% level **Significant at 1% level *Significant at 5% level (NS) represents not significant

The results of the ANOVA and post hoc test identifies that customers of the private banks perceive the internet banking well than the customers of public sector banks. This is due to the effective customer relationship management techniques practiced by the private sector banks. (Akilesh and Vinay ,2015) . Null hypothesis is rejected for two constructs creditability and perceived value. The perception of the customers as to creditability of the bank is same for private sector bank, public sector banks and foreign banks. Similarly the entire customer's perceived value towards internet banking services is same regardless of the type of the bank.

Most of the determinants are perceived high by the users who have been using online banking for a long period of 6 years and above. These results concur with Rajarathinam and Mangalam (2013) who classified internet banking users as beginners having low internet banking experience, moderate users having moderate internet banking experience and excellent users having high internet banking experience. Usefulness, convenience, was regarded as prime factors for internet banking adoption by excellent users. Majority of determinants are perceived well by the high users of internet banking i.e., respondents who perform more than 30 transactions per month. The heavy users of the internet banking already trust and realize the importance of using internet banking services, owing to which they have strong intentions to continue usage in the future. Increased usage of internet banking services results in stronger intention for adoption and continue use of these services (Raman et al. 2008). Users with expert level of computer and internet efficacy perceive well about all the determinants and exhibit strong intention to adopt online banking. The Internet based technologies such as internet banking subjects with prior experience would presumably be more likely to hold stronger perceptions about these technologies (Irani 2000).

V. CONCLUSION

Internet banking is an undeniably convenient as well as an economical way of performing bank transactions. In spite of that, many bank customers are reluctant to use this service. The study aims to identify the impact of demographic variables on adoption of online banking technology. This study investigated set of ten variables to comprehend the customer's perception on internet banking. The results reveals that demographic factors like age , gender, Marital Status, occupation ,annual income, level of internet efficacy , usage of internet banking, internet bank influence customer perception of online banking . The findings of the study would be beneficial to bank management to formulate strategies for promoting internet banking services.

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