

Using Technology Acceptance Model to Study Customers' Perception Towards Green Banking

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Abstract

Tech-friendliness in this new era is an important quotient considered and the persons' acceptance towards the technology frequency matters a lot. But still the frequency varies from person to person, this brought in the concept of Technology Acceptance Model given by Fred Davis in 1989. The theory of TAM is based on two theories that are Theory of Reasoned Action and Theory of Planned Behavior, TAM is extended version of these two. Green Banking is a new technology introduced by the banks that focuses on the growth of Sustainable development and Banking system too. Thus, banks ask their customers to use it or practice it in their daily life transactions. But every customer has their own point of view on the usage of Green banking. Thus, the research aims to understand the customers' perception towards the Green Banking for this TAM is used. The research states that Perceived risk is the primary factor that is followed by perceived usefulness and perceived ease of use that impacts the decision to use green banking. Thus, the behavioral intention results in actual use of green banking usage for which people are trying to accept the new technology. So, the banks have earned points for creating awareness among their customers but still they have to work hard and clarify their customers' problems and vanish that hitch that is stopping them to use green banking easily.

Key words: Green Banking, Technology Acceptance Model, Perceived Usefulness, Perceived Risk, Perceived Ease of use.

I. Introduction

In this tech-friendly world it is very much necessary to understand how much a technology has been accepted by the people. Every technology has its own pros and cons and the technology that showcases more pros to its customers is the successful technology. However, it is easy for every person to use every new technology or in other words, accept the new technology readily. For better understanding of person's mind Davis in 1989 introduced the Technology Acceptance Model. It is the extension of Theory of Reasoned Action (by Fishbein; Ajzen, 1967) and Theory of Planned Behavior (Ajzen, 1985). Theory of Reasoned Action focuses on the theory that a persons' action is dependent on the attitude towards

behavior towards the new technology and subjective norm. Then, the following theory, Theory of Planned behavior came into existence that says that person's acceptance for a new technology is dependent on the attitude towards behavior, subjective norm and the perceived control behavior. Then in 1989 Davis gave a new model i.e. Technology Acceptance Model. The theory of Technology Acceptance Model says that a technology's acceptance by a person is dependent on the perceived usefulness and perceived ease of use. Perceived usefulness is the user's belief that by using the particular technology will enhance his or her performance in job or in life. Perceived ease of use is the users' belief that using the particular technology is free of effort or effortless. These two variables define the behavioural intention of a person to use that particular technology. Behavioural intention is the decision that whether the person would use the new technology or not i.e. it determines the actual usage of technology by the person.

Green Banking is the new technology that follows the 'Go Green' mantra i.e. banking in a sustainable manner. Green banking is a kind of banking system that supports paperless banking and putting money into eco-friendly investments. Thus, a new variable is also introduced in the above model i.e. perceived risk. Perceived risk is the set of uncertainties that user has while using the new technology.

Coming to our country India, India is a developing nation that has a dream to get counted among the developed nations. In order to achieve this, dream the country focussed fully on its economic growth for which if it had to ruin the flora and fauna of nature also it did. But the country started facing larger number of natural calamities due to which the economic growth achieved started deviating towards these disaster management. The economic growth of any country is very much needed to move ahead in competition of world. The economic growth only focuses on industrialization, urbanization, etc. for which it ruthlessly exploits the nature and resultant is pollution of different kinds.

In order to achieve development UN in 2015 shifted focus from economic development to sustainable development. Sustainable development is the kind of ethical economic development that does not harm the nature. For implementing it every country of the world is trying to make their citizens aware about it, so does India too.

For dealing with mass, banks are the best place to create awareness and promote sustainable development activities and green banking is the best way to promote sustainable development. It is a new concept in the country; due to this people are having different perceptions for using it. This difference in the acceptance of new technology i.e. green banking can be understood better with the help of Technology Acceptance Model.

II. Literature Review

Safeena et al. (2013) have studied about the adoption of e-banking with combination of Technology Acceptance model and Theory of Planned Behaviour and found that perceived ease of use, perceived usefulness, attitude, subjective norm and perceived behavioural control are the major significant factors that affect the adoption of e-banking.

Katyal and Nagpal (2014) have tried to understand the role of green banking in sustainable development of India and found that banks have a major role to play as it can promote low carbon economy and will be able to discourage higher carbon footprint projects. The green banking benefits to all the banks, industries as well as environment.

Roy and Sinha (2014) have tried to find out the determinants of customer's acceptance of e-payment system in Indian Banking and found that perceived ease of use is the most significant determinant to use e-payment system and customer's attitude was found to be the least affecting factor from new model formulated for the study.

Brar et al. (2014) have studied about the factors influencing e-banking adoption in India with the help of Technology Acceptance model and Theory of Planned Behaviour and found that the customers' acceptance and intention to use e-banking can be explained by perceived ease of use, perceived usefulness, perceived behavioural control, subjective norm and attitude.

Sharifi and Hossein (2015) have studied about the green banking and environmental sustainability by commercial Indian banks and the study revealed that India has a long way to go to achieve sustainable development but it also has the opportunity to grow in the manner that is sustainable and Indian commercial banks are trying to achieve it by implementing green banking in their banks that does not harm the nature with its functioning.

Anoop and Sreeranganadhan (2016) have studied about the Indian e-banking with the help of extended Technology Acceptance model and the study reveals that there is no significant difference in the adoption of e-banking by the customers of both Indian private and public sector banks. The customers of both sector banks have agreed that self-efficacy as the most significant determinant of internet banking and e-banking has made banking easy and convenient.

Beriha (2017) had studied about the consumers' perceived usefulness and barriers towards usage of e-banking and found that perceived barriers, customers' attitude, perceived effectiveness are having a significant relationship with perceived usefulness due to which consumers decision to use e-banking gets affected either positively or negatively.

Doshi and Sule (2018) have studied about the evolution of green banking concept and the study says that green banking is a new concept that is time savvy also. It can promote India's future towards sustainable development. But banks have to motivate their consumers to adapt it in their day to day life.

Kaur and Malik (2019) have studied the customers' intention by integrating corporate image into Technology Acceptance model within Indian internet banking and found that for customers to accept and include e-banking in day to day life has to be beneficial and customers' friendly. The internet quality banks' responsiveness, privacy of customers, banks' assurance plays the major role for the acceptance of internet banking of any bank.

Objective of the Study

The study aims to understand the customers' perception towards green banking with the help of Technology Acceptance model.

The order of paper is as follows- Section 1 is dealing with introduction, Section 2 has literature review, Section 3- explains the research methodology, Section 4- interprets the data in results and discussion which is followed by conclusion and policy implications in the last section i.e. Section 5.

III. Research Methodology

The study was conducted in Indore city. Total 400 (200 each from Public and Private Banks) respondents were selected from the convenient sampling method. From each corner of city 100 respondents were given a self-structured questionnaire. Questionnaire was divided into two sections. Section A deals with the demographic profile of respondents and Section B contained of 23 questions that contained questions regarding perceived usefulness, perceived risk, perceived ease of use. The respondents were asked to answer these questions on the basis of Likert scale where 5 means Strongly Agree, 4 means Agree, 3 is for Neutral, 2 denotes Disagree and 1 means Strongly Disagree.

For analysing the data, multiple variable regression and Linear Probability Model has been used. The multiple variable regression has been used to understand the relationship between behavioural intention to use green banking and perceived usefulness, perceived risk, perceived ease of use. The model used for the study is as follows:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + u_i$$

Where,

Y_i – Behavioural intention to use green banking

X_{1i} – Perceived usefulness

X_{2i} – Perceived risk

X_{3i} – Perceived ease of use

β_0 – Intercept

$\beta_1, \beta_2, \beta_3$ – coefficients of respective variables

U_i - error term

Linear Probability Model has been used to analyse the concept that actual usage of green banking which is dependent on the behavioural intention of the customers. The model used for the study is:

$$Y_i = \alpha_0 + \alpha_1 X_i + U_i$$

Where,

Y_i – actual usage of green banking

If $Y_i = 1$ means customer uses green banking

If $Y_i = 0$ means customers is not using green banking

X_i - behavioural intention of the customer to use green banking

α_0 – intercept

α_1 – coefficient of behavioural intention

u_i - error term

IV. Data Analysis

The study has been conducted in Indore city. 200 consumers from each public and private bank have been selected by the convenient sampling method from all corner of the city. Thus, total 400 consumers were undertaken for comprehensive study. After analysing the data following information have been derived regarding public and private sector banks is given in the following table.

	Demographic characteristics	Public Bank (200)		Private Bank (200)		Total (400)	
		No.	%age	No.	%age	No.	%age
1	AGE						
	Up to 30	96	48.00	66	33.00	162	40.50
	31 - 50	49	24.50	85	42.50	134	33.50
	Above 50	55	27.50	49	24.50	104	26.00
2.	GENDER						
	Male	109	54.5	82	41.00	191	47.75
	Female	91	45.5	118	59.00	209	52.25
3.	MARITAL STATUS						
	Unmarried	100	50.00	110	55.00	210	52.50

	Married	100	50.00	90	45.00	190	47.50
4.	EDUCATION						
	Intermediate	46	23.00	29	14.50	75	18.75
	Under Graduation	80	40.00	64	32.00	144	36.00
	Post-Graduation	56	28.00	83	41.50	139	34.75
	Above Post Graduation	18	09.00	24	12.00	42	10.50
5.	INCOME						
	Up to 25000	111	55.50	56	28.00	167	41.75
	25001-50000	43	21.50	64	32.00	107	26.75
	50001-1 lac	36	18.00	61	30.50	97	24.25
	Above 1lac	10	05.00	19	09.50	29	07.25
6.	OCCUPATION						
	Service	76	38.00	87	43.50	163	40.75
	Business	29	14.50	23	11.50	52	13.00
	Student	64	32.00	50	25.00	114	28.50
	Other	31	15.50	40	20.00	71	17.75

Thus, from the above table at a glance a clear-cut demographic characteristic of both public and private banks customers can be seen.

Estimation of Impact on Behavioural Intention to use Green Banking by Perceived ease of use, Perceived risk and perceived usefulness

The result, obtained after the applying multiple variable regression, shows that all the three variables that are perceived usefulness, perceived risk and perceived ease of use are significant that impact the behavioural intention to use green banking.

$$Y_i = 0.868 + 0.315X_{1i} + 0.239X_{2i} + 0.254X_{3i} + u_i$$

(4.910) (3.279) (3.305)

All the variables are significant at 1% level of significance. The most prominent among them is perceived risk.

Perceived risk

The calculated t-value is 4.910 i.e. more than the table value of t- statistic that says that the variable is significant. The customers are more concerned about the security of their transactions and account privacy.

Perceived ease of use

It is second the most significant factor which is affecting the behavioural intention to use green banking. The calculated t-value obtained is 3.279 which are greater than the table value. Customers of bank find it easy to use green banking but still are lagging behind as they are not comfortable with the technology due to which it is difficult for them to use green banking.

Perceived usefulness

The third and last variable is perceived usefulness i.e. found significant with calculated t-value as 3.305 which is higher than the table value. The customers of banks are becoming aware about the utility of green banking with time but more awareness needs to be created among them.

Estimation of Probability for Actual Use of Green Banking

The linear probability model results show that behavioural intention to use green banking as the impacting factor for actual usage of green banking by the customers of the banks. The result obtained is significant at 1% level as below given

$$Y_i = 0.001 + 0.197X_i + u_i$$

(4.459)

Thus, behavioural intention to use is an impacting factor for actual use and the probability of using the green banking has been estimated 78.1%. It means that the probability of accepting technological devices of green banking is a good indication for future. With little bit effort it (Users) may be maximise in Indore city.

V. Conclusion and policy implications

From the above discussion, it is clear that customers' behavioural intention to use green banking is driven by the green banking usefulness, easy to use it and the major impacting one is the risk associated with it. For the banks to promote the usage of green banking amongst customers it is necessary to tackle the security issues related to transactions and bank account more efficiently and smartly so that customers get attracted to use it. The usefulness of green banking has to be promoted by banks so that customer tries to change their mind towards green banking. The ease of use of using green banking is having the second position that impacts the intention to use the green banking.

The conversion of this behavioural intention to use green banking in to actual use is very necessary and the result shows that majority of people are using green banking and overcoming their perception towards green banking.

It will be better if banking sectors try to improvise green banking products and services, create more awareness among the customers and reassure them for security. But still banks have a long way to go. For this the banks and the banking industry need to formulate effective policies and efficient programmes for handling security issues.

VI. References

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