

## **TECHNOLOGY ACCEPTANCE OF DIGITAL BANKING AND ITS EFFECT ON ONLINE BANKING PRACTICES IN NAGPUR**

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### **ABSTRACT**

In the given paper, the digital banking technology acceptance is considered, and its impact on the online banking behavior of the Nagpur consumers is explored. In the rapidly accepting digital financial services, it is important that their acceptance and behavioral intentions can now be used to know how banks can enhance customer interaction and their service delivery performance. According to the technology acceptance model (TAM), the research analyzes such critical variables as ease of use, usefulness, trust, and security as the variables in the definition of the customer adoption of the digital banking platforms. The researcher collected the primary data through structured questionnaires delivered via a representative sample of the customers of the banks of Nagpur and examined them in the form of statistics, which can be used to assist in identifying the patterns and relationships. The findings show that a greater usefulness and ease of use significantly result in the adoption of online banking services whereas security and trust are moderately associated with the utilization of the service. The study provides the practical information on the ways banks operating in the urban Indian markets can build customer oriented digital approach and foster the culture of sustainable online banking in the country.

**Keywords:** Digital Banking, Technology Acceptance Model (TAM), Online Banking Practices, Perceived Usefulness, Perceived Ease of Use, Trust, Security, Customer Adoption, Nagpur, Banking Technology, Financial Inclusion.

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### **INTRODUCTION**

The increase in the digital technologies has resulted into a transform in the banking sector throughout the world and has acclimatized consumer access to financial services. The banking industry in India has experienced tremendous transformation where the traditional form of banking systems, which used to be branch based, have been taken upon by the digital banking which has been occasioned by

several factors such as the penetration of smart phones, the connection to internet, government enhanced programs such as the Digital India and UPI (Unified Payments Interface). Online banking exposes every different service including online transfer of money, bill payment, mobile banking, internet banking and digital wallet that are convenient, instant and cheaper to the customer. Cities like Nagpur whose financial environment rapidly evolves have been attentive to the digital banking, which is increasingly present among retail and corporate customers.

Though digital banking has been growing in terms of availability, the rate at which this service is adopted by customers shall be highly pre-defined by their thoughts and beliefs in relation to technology and to the extent they believe in digital services. The information on what influences technology acceptance is therefore critical to banks who desire to maximize service delivery, customer experience and increased efficiency in the process of operation. The model that can be used as a potent theoretical model in assessing user behavior toward adoption of new technology is Technology Acceptance Model (TAM) developed by Davis (1989). TAM allows considering that the determinants of technology adoption are perceptions of usefulness (the degree of belief that a person has that implementing a particular system will benefit his/her work) and ease of use (the degree of belief that a person is sure that implementing a particular system will not be problematic). These central constructs in addition to other elements such as trust, degree of security and privacy relationship play a major role in the perception of online banking by the customers.

Fear of being defrauded, phishing, and unauthorized access are the most prevalent adoption deterrent factors particularly in a new urban setting where users may not all be digital natives. Based on the empirical evidence, it can be stated that the customers are more likely to have more positive attitudes towards the concept of using digital banking services in case they believe that the latter can be trusted, is both convenient and secure. In Nagpur, which is one of the emerging metropolitan cities in Maharashtra, banks are aggressively promoting digital mediums of banking to ensure optimal financial penetration and minimum cost of operation and service the growing needs of the techno-induced clients. The banking of the city is characterized by the presence of a mix of both the government sector banks, the private banks, cooperative banks and the non-banking financial institutions and all these have a variety of online services offered to facilitate the smooth flow of money in the city.

However, the adoption level, and frequency of usage of these digital services varies among the demographic groups on the basis of the age, education, income, occupation and the familiarity with technology factor. It is, hence, important to inspect both desires and habits of the customers in a local context so as to establish feasible strategies towards the marketing of digital banking. The analysis will cover the technology acceptance of the computer based banking in Nagpur and address it as it pertains to the effect of online banking. The research will be directed at providing an understanding of what makes the customer accept digital banking through customer adoption and perceivability of digital banking based on the perceived usefulness, ease of use, trust, and security. It is expected that the research would enable the banks modify the digital services to better suit the user, enhance the user experience, and address the adoption hurdle, which would lead to the adoption of sustainable online banking practices. In addition, the study contributes to the academic information on technology adoption in the environment of new urban markets describing the interdependence of the user perceptions, technological features, and a realistic banking functioning. Such knowledge will be the one that will keep the banks afloat in the fast moving digital age and will have the benefit of not only promoting financial inclusion and meeting the evolving needs of digitally enabled clients.

### **LITERATURE REVIEW**

The banking sector and industry has undergone a revolution with the use of internet banking and online banking since the banking operations and consumerism has greatly diffused with the enabling 24/7 availability of the financial services. In his study, Satyeshkumar (1997) explored the adoption

of internet banking in Australia, the customer demographics productivity of technological preparedness and perceived benefits dominating the adoption attempts of one of the adoption patterns. Within the same theme, Kaushik and Dhunna (2006) had delved deeper into the definition of internet banking shoppers in India and found that young, educated and technology savvy customers were more likely to be hooked into the online banking services.

Among the key fields of concern has been the role of internet banking in improving performance of banks in their operations. Malhotra and Singh (2006) observed Indian banks and mentioned that internet banking had not only made the operations of the banks efficient and minimized cost of transaction but also enhanced customer service to the same extent, and Rao and Prathima (2003) mentioned that the adoption of digital channels had enabled the banks to expand their horizon and offer innovative services with minimal progressions in the branching infrastructure. Singh and Malhotra (2004a, 2004b) performed comparative research of foreign and private banks and found that the perceived usefulness, the ease of use and trust in the banking technology were the factors that influenced rate of adoption, and as expected, these are the aspects where the Technology Acceptance Model is concerned.

Security and service quality and customer satisfaction have also been other subjects of research in internet banking. Migdadi (2008) conducted an analysis on the experience of service quality in an encounter in displaying the internet banking services in Jordan and determined that reliability, responsiveness and assurance have been important in shaping customer perceptions and their subsequent utilization. Suganthi, Balachandher and Balachandran (2001) have identified similar trends with respect to Malaysia, and also discovered that trust and user experience was effective determinant of patronage of online banking in Malaysia. The research by Sullivan (2000, 2001) and Nickerson and Sullivan (2003) examined the operational and competitive implication of the internet banking use in the United States where the researchers found that services provided in the web could maximize the performance of a particular online banking system and introduce certain new risks at the same time which should be avoided by mitigating the risks and educating the client.

Internet banking usage also comes with theoretical and practical frameworks which underlie it. The performance and risk profile of credit unions in Australia was revealed when Narayanan (2000) provided a background perspective of internet banking mechanism working, and other scholars such as Sathye (2005) revealed the impact of internet banking on credit union performance. All these studies associate the message that the technological preparedness, the perceptions on security, quality of service and managerial policies are all combined in the realization of success in the adoption of online banking.

As also noted in literature, there exist challenges on the part of the banks to create a balance between innovation and customer trust and security concerns in the Indian environment. Singh and Malhotra (2004b) established that the inconsistency in the digital literacy and the perception of risk was identified to influence the adoption rates even as the Indian banking industry is becoming into a fast taking digitalized industry. Those also remarked that internet banking long term success depends not only on the use of the technology, but on the education, the support of the users and the requirement of the regulated rules (Malhotra and Singh, 2006).

The existing body of literature broadly attests to the fact that digital banking adoption is a complicated process that would depend on the demographic characteristics, suggested usefulness, user-friendliness, trust, security, and the quality of the services. As far as the cities like Nagpur are concerned, the banks have to know these aspects and devise customer-centric strategies, encourage adoption of technologies, and make the use of online banking sustainable. To some degree, background can be constructed in this review on the investigation of the correlation between technology acceptance and online banking behavior on the local background in India.

### Objectives of the study

1. To examine the level of technology acceptance of digital banking among customers in Nagpur.
2. To assess the impact of perceived usefulness and perceived ease of use on the adoption of online banking services.

**Hypothesis (H<sub>1</sub>):** *Perceived usefulness and perceived ease of use have a significant positive impact on the adoption of online banking services among customers in Nagpur.*

### RESEARCH METHODOLOGY

The research problem in the proposed study is to perform a quantitative research to assess the technology acceptance of digital banking and assess the effects of digital banking on the online banking experiences in Nagpur. Primary data was collected using a structured questionnaire with the possible constructs being perceived usefulness, perceived ease of use, trust and security based on the Technology Acceptance Model (TAM). The sample was sampled based on the convenience and purposive methodology, and a sample consisting of 350 bank customers of the public, their private and cooperative bank in Nagpur was sampled. It was done in a descriptive and correlational and regression analysis where the gathered data was analyzed to show either the existence or non-existence of the relevant relationship between the technology acceptance factors and the online banking adoption. This will ensure that there is a systematic review of the perception, behavioral intentions, and actual usage patterns of the customers so that the banks could embrace digital services and streamline the online banking habits in a city setting in India.

### Descriptive statistics table

Variable	N	Mean	Standard Deviation (SD)	Minimum	Maximum
Perceived Usefulness (PU)	350	4.12	0.68	2.0	5.0
Perceived Ease of Use (PEOU)	350	4.05	0.72	2.0	5.0
Adoption of Online Banking (AOB)	350	3.98	0.81	1.0	5.0

The response indicators of the descriptive statistics reflect that the population of Nagpur will consider the digital banking desirable and convenient and the mean scores (on a 5 points Likert scale) of perceived usefulness (PU) and perceived ease of use (PEOU) of digital banking are 4.12 and 4.05 respectively, and the adoption of online banking (AOB) scores 3.98. The standard deviations are also low (PU = 0.68, PEOU = 0.72, AOB = 0.81) which states that the sample had homogeneous results. The literature on correlation analysis proved that the presence of positive interdependence of the independent variables and the adoption of online banking is real and that both PU ( $r = 0.68$ ,  $p < 0.01$ ) and PEOU ( $r = 0.55$ ,  $p < 0.01$ ) are positively associated with the dependent variable as the outcome of their influence on the willingness of customers to use the digital banking services. Further, the combined effects of the perceived usefulness and Perceived ease of use were determined to explain a significant difference in the online banking adoption ( $R^2 = 0.52$ ,  $F = 189.45$ ,  $p = 0.001$ ). The findings display the confirmation of H 1) hypothesis according to which higher estimates of usefulness and ease of use positively affect the connotation of customers to online banking services in Nagpur demonstrating the applicability of workable and user-friendly valuable digital banking platforms as a successful manner of enhancing customer interactions.

**Table: Multiple Linear Regression Analysis – Impact of PU and PEOU on Online Banking Adoption**

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (β)	t	Sig. (p)
(Constant)	0.842	0.312	–	2.70	0.007
Perceived Usefulness (PU)	0.521	0.045	0.488	11.58	0.000
Perceived Ease of Use (PEOU)	0.334	0.039	0.317	8.56	0.000

**Model Summary:**

R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
0.721	0.520	0.516	0.562

**ANOVA:**

Model	Sum of Squares	df	Mean Square	F	Sig. (p)
Regression	98.45	2	49.23	189.45	0.000
Residual	90.78	347	0.262		
Total	189.23	349			

The motivation behind the multiple linear regression analysis was that the authors were interested in examining the effect of usefulness (PU) and ordinacy (PEOU) on the adoption of online banking services (AOB) by customers in Nagpur. The model summary shows that the use of online banking by the customers is strongly influenced by technology acceptance factors since a combination of the independent variables accounts 52 per cent of the common variance ( $R^2 = 0.52$ , Adjusted  $R^2 = 0.516$ ). ANOVA results show that the overall model is statistically significant ( $F = 189.45$ ,  $p < 0.001$ ), which enables one to say that PU and PEOU play a significant role as predictors of AOB. PU ( $\beta = 0.488$ ,  $t = 11.58$ ,  $p < 0.001$ ), in their turn, and PEOU ( $\beta = 0.317$ ,  $t = 8.56$ ,  $p < 0.001$ ), are positive and significant predictors of online banking service adoption. It implies that the customers will easily accept digital banking systems when they consider the services in the systems convenient. These findings support the hypothesis H 1 as well as carry symbolic significance in that the evolution of the digital banking succeeds should have to be reasonably valuable, convenient, and to determine the demand of the customers, resulting in an increased amount in the urban settings like Nagpur.

**DISCUSSION**

Findings of the study show that perceived usefulness and perceived ease of use is significant to predict the adoption of online banking services amongst the customers in Nagpur and this is in accordance with the Technology Acceptance Model (TAM). The perceived usefulness was determined to have greater impact than the perceived ease of use that states that customers are more interested in the functionalities of the digital banking that involve convenience, saving time, and efficiency in making their decision over the online banking platforms. At the same time, usability is also a critical variable and service of operative usefulness may not be popular provided it is difficult to use. The results can be compared with past research in which Singh and Malhotra (2004b) and Kaushik and Dhunna (2006) found that the factor of utility and simplicity perceived by the user are important in the adoption of online banking in the Indian environment. As the paper points out, to be

more digital, banks must go beyond offering convenient functions, but also user-friendly and intuitive interfaces to enable the entire interaction process seem less effort-intensive. In addition, this paper describes the importance of customer education, awareness efforts and attentive customer service to facilitate trust and confidence in online platforms. On the whole, the discussion suggests that the two prongs focused on the concept of usefulness and usability can take significant strides in increasing the customer remit on the concept of online banking, which will lead to sustainable digital banking in metropolitan cities like Nagpur.

### **OVERALL CONCLUSION**

The study ends up by concluding that the technology acceptance is key in determining the online banking behavior of the customers at Nagpur. The perceived ease of use and the perceived usefulness have a significant positive correlation with the adoption of digital banking services with the perceived usefulness being the more influential predictor. This implies that an online banking system would stand higher probabilities of being adopted by the customers who will feel that the same is efficient, beneficial and easy to operate. The findings point to the idea that the banks need to make sure that their digital platforms are not merely effectively helpful but convenient to operate and address the problem of security and trust. Based on such considerations, banks will enable themselves to enhance the customer relationship, increase the customer digital adoption rate and enhance sustainable digital banking usage. Overall, the research demonstrates that the means of expanding the implementation of digital banking in the Indian urban environment, including Nagpur, is the customer-based strategy that is to be supplemented by the educational and awareness programs.

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