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A study on the Influence of psychological and behavioral factors towards acceptance of Internet Banking Services

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Abstract

Internet Experience is identified as the most important factor influencing consumers to adopt Internet banking. Therefore, the government and banks have to develop methods that can increase bank customer' knowledge and skills about computers and Internet banking.

The aim of this study is to evaluate the factors that influence the acceptance of internet banking in India, particularly reliability, customers' experience, costing, and comfort of usage. The questions were asked to 125 internet banking users in various cities of North India. Outcomes showed that customer reliability and experience have significant relationship towards acceptance of internet banking. Nonetheless, costing and comfort of usage was found to be insignificant in this research article. The findings provide important information for banking service providers in designing a customer-oriented or user-friendly internet banking services that would attract people to accept internet banking.

Keywords: acceptance, internet banking, reliability, costing, comfort of usage, customers' experience

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1. Introduction

The concept of Internet banking has been simultaneously evolving with the development of the World Wide Web. Programmers working on banking data bases came up with ideas for online banking transactions, sometime during the 1980s.

The first online banking service in United States was introduced, in October 1994. The service was developed by Stanford Federal Credit Union, which is a financial institution. The online banking services are becoming more and more prevalent due to the well-developed systems. Though there are pros and cons of electronic cash, it has become a revolution that is enhancing the banking sector.

"Internet banking" started in the 1980s, and continued to evolve in 1990s (Sarreal, 2016). According to Sarreal (2016), internet banking has become the mainstream by 2000, where e-commerce is becoming popular. The internet banking user-friendly system and convenience are the major selling point. Internet banking allow customers to access their bank account for services such as funds transfer, bill payment, balance checking, bank e-Statement, and so on. Besides that, with internet banking, customers can access to the bank services 24/7.

Internet banking is a trend nowadays due to technological movement and growth. However, some people remained skeptical and are not willing to use the internet banking for transactions. In India, a lot of people are prudent to any changes and would respond negatively to newly introduced technology. Despite all the advantages of internet banking, there are people who still prefer to use the counter services due to various reasons. This further explained the busyness of bank counters during the bank operation hours.

In India, there are a total of 45 million of Indian subscribed to internet banking, which captured a huge population of Internet Users in India. (Yeong, 2013). Nonetheless, it does not mean all of these subscribers are actively using the internet banking services.

2. Objectives of Study

The objectives of this research are:

1: To find the relationship between reliability and acceptance of internet banking.

2: To find the relationship between customer experience and acceptance of internet banking. 3: To find the relationship between comfort to usage and acceptance of internet banking.

4: To find the relationship between cost and acceptance of internet banking.

3. Review of Literature

Internet banking

Internet banking refers to the banking services via website provided by the bank (Yee & Faziharudean, 2010). It allows the bank customers to manage their account(s) with minimal inconvenience. It is fast and convenient, where customers can access and utilize the internet banking services anywhere, anytime. Furthermore, Pikkarainen, Pikkarainen, Karjaluoto, and Pahnila (2004) reported that internet banking is one of the cheapest channels for banking products.

Reliability

According to Selvanathan (2015), reliability has long been considered as dominant factor in buyer and seller interactions. In general, reliability is defined as the relative feeling of secure in an unknown or risk situation. From the economic perspective, reliability is seen as a way that can reduces the transaction cost (Chiou & Shen, 2012). It decreased customers' perception of risk and enhances their likelihood to engage in an exchange, resulting in efficient transactions. As revealed by Dauda, Santhapparaj, Asirvatham, and Raman (2007), Indians tend to adopt internet banking based on their banking needs, reliability towards the bank, as well as their reliability related to their prior internet experience. McKnight and Chervany (2002) further revealed the reliability typology in e-commerce. They described that the reliability of the consumers towards e-commerce or e-vendor came from one's trusting belief (i.e., one's perception or belief that it is beneficial for them related to their personality traits) and trusting intentions (i.e., one's willingness to depend on others to do something on behalf such as paying through credit card online), which can be explained in the three reliability concepts – interpersonal reliability (e.g., reliability the e-vendor), institutional reliability (e.g., reliability the website), and dispositional reliability (e.g., reliability other people). Due to the higher degree of uncertainty in the online environment, reliability is emphasized even more (Chen & Barnes, 2007). Thus, reliability is a key factor for bank to improve its services because it can be the key determinants for customers to use internet banking services.

Customers' Experience

Gentile, Spiller, and Noci (2007) defined customer's experience as "a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction". As internet banking services are delivered through internet, Lee, Kwon and Schumann (2005) suggested that customers have to be familiar with the technologies, such as personal computer and web browser. This was supported by the study conducted by Laforet and Li (2005) who investigated the customers' attitude towards the internet banking services in China. They showed significant different between the internet banking users and non-internet banking users, in which internet banking users tend to have experience with computer and new technology. In addition, Dauda *et al.* (2007) also found that internet experience and banking needs appeared to be the major factors that lead to Indians' and Singaporeans' acceptance of internet banking. They further described that the internet skill and experience can be a strong predictor of technology acceptance across the culture, which findings is similar to the studies conducted by Saranathan (2008), as well as Karjaluoto, Mattila, and Pento (2002). As suggested by Thornton and White (2001), when people obtain knowledge, confidence, and together with the increase of computer usage, people may change and accept the internet banking technology.

Costing

Costing is also one of the factors that will influence customers' acceptance of internet banking service. Aliyu and Tasmin (2012) reported that customers would accept new technologies only if the price is reasonable. According to Campbell and Frei (2010), implementation of new technologies may lower cost of service which in turn lower the service fees. They found that low cost of interactions appears to have unintended consequence of increasing service consumption. This is also one of the major factors that lead to one's online acceptance behaviors, where Sohrabi, Yee, and Nathan (2013) also revealed that the customers

usually adopt internet banking as the cost involved is lower. Similar to the study carried out by Aliyu and Tasmin (2012) which showed the association between cost factor (linked with the use of internet and service charges) and acceptance of internet banking. They suggested that customers who adopt internet banking are aware of the fee charges and found it acceptable. In brief, people may choose to support or against internet banking system based on their perception of the cost.

Comfort of Usage

According to Malarvizhi (2011), comfort of usage is another influential factor for the practice of internet banking. There is a positive relationship between ease of use and service delivery via internet banking, where various services needed by the customers can be set up online by the bank. Sathye (1999) recognized that the technologies innovation "must be comfort to usage" in order for customer accept and adopt internet banking. As stated by Musiime and Biyaki (2010), the level of internet banking acceptance had direct impact on customers' satisfaction level. In other words, customers would accept or continue to adopt internet banking is the services are comfort to usage. A number of past research (e.g., Asdullah & Yazdifar, 2016; Khaitbaeva, Al-Subaiey, & Enyinda, 2014) have showed that "convenience" as the main factor that lead customers to adopt internet banking service, where the customers can access to the bank services 24/7. Nonetheless, it is interesting to see Chung and Paynter's (2002) findings on the reason of not using internet banking among the participants in their study, where the participants think that it is sufficient with the main banking facilities available such as ATM, EFTPOS (electronic funds transfers at point of sale), phone banking, and counter service. On the other hand, Prompattanapakdee (2009) found that the participants in his study are more likely to use internet banking because it is easy to use as they are familiar with the technology. It further increases the likelihood to continue using internet banking when they think that it is easier than their expectation. Cooper (1997) further suggested that user-friendly website (such as webpage design with appropriate graphical user interface and navigational tools) is important in making customers feel more "comfort to usage". Therefore, the webpage's design, content, as well as user guidance, are said to have impact on the customers' satisfaction and their likelihood to adopt internet banking.

4. Findings

Correlation Analysis

Correlation analysis was run to test the relationship between the acceptance of internet banking and the four factors (i.e., reliability, customers' experience, costing, and comfort of usage). Table 1 shows the correlation analysis result for all the variables based on 125 respondents in India. All variables were found to have significant positive relationships. The results showed positive and significant relationships between acceptance of internet banking and reliability (r = .54, p < .01), customers' experience (r = .56, p < .01), cost (r = .47, p < .01), and ease of use (r = .39, p

< .01).

Table 1. Correlation Analysis

		1	2	3	4	5
1.	Internet banking	–	.542**	.526**	.472**	.392**
2.	Reliability	.542**	–	.632**	.596**	.547**
3.	Customers' Experience	.562**	.632**	–	.525**	.528**
4.	Costing	.472**	.596**	.525**	–	.414**
5.	Comfort of usage	.392**	.547**	.528**	.414**	–

** Correlation is significant at the 0.01 level (2-tailed).

Multiple Regression Analysis

Multiple regression analysis was used to test if the 4 factors (reliability, customers' experience, costing, and comfort of usage) significantly predicted participants' acceptance of internet banking. The results of the regression indicated the four predictors explained 36% of the variance (R^2 = .369). It was found that reliability significantly predicted acceptance of internet banking (β = .25, p < .05), as did customers' experience (β = .25, p < .05).

Table 2. Multiple Regression Analysis

	B	Sig.	R^2
Reliability	.400	.019	
Customer Experience	.306	.017	.369
Costing	.233	.082	
Comfort of usage	.084	.584	

Hypotheses Analysis

Based on Table 2, the significant value for each variable will show whether the variable contribute statistically towards the similarity. If the significant value is lower than .05, hence, the hypothesis are accepted. As shown in Table 3, H1 and H2 are accepted, meanwhile H3 and H4 are rejected.

Table 3. Hypothesis Testing Results

	Hypotheses	Result
H1	There is a positive relationship between reliability and acceptance of internet banking.	Accepted
H2	There is a positive relationship between customers' experience and acceptance of internet banking.	Accepted
H3	There is a positive relationship between costing and acceptance of internet banking.	Rejected
H4	There is a positive relationship between comfort of usage and acceptance of internet banking.	Rejected

5. Overall Findings Based on the Research Objectives

Reliability

H1 (refers to Objective 1) showed significant positive relationship between reliability and acceptance of internet banking. Consistent with prior studies (e.g., Baraghani, 2007; Chen & Barnes, 2007; Chong, Oii, Lin, & Tan, 2010; Dauda *et al*., 2007; Gefen, 2000; Lee *et al*., 2005; McKnight & Chervany, 2002), the findings in this study show that reliability will influence the acceptance of internet banking in India. Chong *et al.* (2010) stated that people from developing countries tend to be more cautious when using internet banking services as it involves money and people are used to conduct monetary transaction in-person. According to Featherman, Miyazaki, and Sprott (2010), privacy risk that seemed to hinder people from adopting internet banking services may reduce through promising perceptions on the provider. People are stated to be more likely to adopt internet banking services if the provider is perceived as reliability worthy and capable to reduce privacy risk and its effects. Therefore, banks should try to build the reliability in their customers by increasing and enforcing banks' security.

Customers' Experience

H2 (refers to Objective 2) that showed significant positive relationship between customers' experience and acceptance of internet banking. This is similar to various past research (e.g., Brown, Hoppe, Mugera, Newman, & Stander, 2004; Dauda *et al*., 2007; Saranathan, 2008; Karjaluoto *et al*., 2002; Laforet & Li, 2005; Thornton & White, 2001) that revealed customers' experience as a significant influential factor in adopting internet banking. These findings further suggested that customers' experience in using internet banking service does play a role in determining the likelihood of accepting and using internet banking. As highlighted by Lichtenstein and Williamson (2006), people are more willing to accept the risk relate to internet based services with greater customer support for such services. Thus, as Lichtenstein and Williamson (2006) suggested, it is recommended that bank providers recognize public's needs for time to adjust and learn, and not solely about implementation and acceptance of a new technology. Bank providers need to be patient and offer deeper levels of customer support throughout the process of adjustment and learning.

Costing

H3 (refers to Objective 3) did not show any significant relationship between cost and acceptance of internet banking. This finding is inconsistent with previous study (e.g., Aliyu & Tasmin, 2012; Campbell & Frei, 2010; Sathye, 1999; Sohrabi, 2013). This may due to the different research area and respondents' population, in which the respondents are mostly aged 21-29. As stated by Tan, Chong, Ooi, and Chong (2010), social influences maybe more significant as compared to cost among youngsters. They do not concern about the cost involved if most of their friends are adopting internet banking. In addition, cost related to internet banking fees have reduced throughout the years. Together with the long term usage of the particular bank services, cost may not occur as an important factor that influences acceptance of internet banking. Healy (1999) revealed that long-term customers are less sensitive of the price changes. This was supported by Poon (2007) of which more than 60 percent of the Indians are aware of the annual fee, but would continue to use the services.

Comfort of usage

H4 (refers to Objective 4) also showed no significant relationship between comfort of usage of use and acceptance of internet banking. This result show that ease of use has no significant effect on acceptance of internet banking. This result differs from a number of past research (e.g., Asdullah & Yazdifar, 2016; Jahangir & Begum, 2008; Khaitbaeva *et al*., 2014; Sathye, 1999; Shih & Fang, 2004). Nevertheless, some

research (e.g., Chong *et al.*, 2010; Chung & Paynter, 2002; Pikkarainen *et al.*, 2004) also reported to have no significant impact of ease of use on acceptance of internet banking. One of the possible reasons that lead to this inconsistency of result is the respondents' age. More than 50% of the respondents aged 21-29, who are seen as tech savvy generation. As stated by Chong *et al.* (2010), youngsters nowadays may not see ease of use as an important factor that influence them to adopt internet banking. Chong *et al.* (2010) reasoned that youngsters do not see ease of use as a barrier to their acceptance of internet banking as they can learn about internet banking services easily.

6. Conclusion

This study aims to examine the factors that influence the acceptance of internet banking in India. In summary, the findings showed that reliability, and customers' experience are the major factors influencing acceptance of internet banking in India while cost and ease of use were found to be insignificant in this study. Results in this study provide important information for bank providers in designing a mass-oriented or user-friendly internet banking that would attract people to adopt internet banking.

References

Al-Agaga, A. M., & Nor, K. M. (2012). Factors that influence e-loyalty of internet banking users. *International Journal of Electronic Commerce Studies*, *3*(2), 297-304. http://dx.doi.org/10.7903/ijecs.1097

Aliyu, A. A., & Tasmin, R. B. H. (2012). The impact of information and communication technology on banks' performance and customer service delivery in the banking industry. *International Journal of Latest Trends in Finance and Economic Sciences*, *2*(1), 80-90. Retrieved from www.ojs.excelingtech.co.uk/index.php/IJLTFES/article/download/402/233

Asdullah, M. A., & Yazdifar, H. (2016). Evaluation of factors influencing youth towards Islamic banking in Pakistan. *ICTAT Journal on Management Studies*, *2*(1), 217-223. http://dx.doi.org/10.21917/ijms.2016.0030

Baraghani, S. N. (2007). *Factors influencing the acceptance of internet banking* (Master's thesis). Lulea University of Technology. Retrieved from https://pure.ltu.se/ws/files/31102242/LTU-PB-EX-08099-SE.pdf

Brown, I., Hoppe, R., Mugera, P., Newman, P., & Stander, A. (2004). The impact of national environment on the acceptance of internet banking: Comparing Singapore and South Africa. *Journal of Global Information Management*, *12*(2), 1-26. http://dx.doi.org/10.4018/jgim.2004040101

Campbell, D., & Frei, F. (2010). Cost structure, customer profitability, and retention implications of self-service distribution channels: Evidence from customer behavior in an internet banking channel. *Management Science*, *56*(1), 4-24.

Chen, Y. H., & Barnes, S. (2007). Initial reliability and online buyer behaviour. *Industrial Management & Data Systems*, *107*(1), 21-36. http://dx.doi.org/10.1108/02635570710719034

Chiou, J. S., & Shen, C. C. (2012). The antecedents of online financial service acceptance: The impact of physical banking services on internet banking acceptance. *Behaviour & Information Technology*, *31*(9), 859-871. http://dx.doi.org/10.1080/0144929X.2010.549509

Chong, A. Y., Ooi, K., Lin, B., & Tan, B. (2010). Internet banking acceptance: An empirical analysis. *International Journal of Bank Marketing*, *28*(4), 267-287. http://dx.doi.org/10.1108/02652321011054963

Chung, W., & Paynter, J. (2002). An evaluation of internet banking in New Zealand. *Proceedings of the 35th Hawaii International Conference on System Sciences*. http://dx.doi.org/10.1109/HICSS.2002.994178

Cooper, R. G. (1997). Examining some myths about new product winners. In Katz, R. (Ed.). *The human side of managing technological innovation* (pp. 550-560). USA: Oxford University Press.

Dauda, Y., Santhapparaj, A. S., Asirvatham, D., & Raman, R. (2007). The impact of e-commerce security, and national environment on consumer acceptance of internet banking in Malaysia and Singapore. *Journal of Internet Banking and Commerce*, *12*(2), 1-20. Retrieved from http://www.icommercecentral.com/open-access/the-impact-of-

ecommerce-security-and-national-environme nt-on-consumer-acceptance-of-internet-banking-in-malaysia-and-singapore.pdf

Featherman, M. S., Miyazaki, A. D., & Sprott, D. E. (2010). Reducing online privacy risk to facilitate e-service acceptance: The influence of perceived ease of use and corporate credibility. *Journal of Services Marketing*, *24*(3), 219-229. http://dx.doi.org/10.1108/08876041011040622

Gefen, D. (2000). E-commerce: The role of familiarity and reliability. *The International of Management Science*, *28*(6), 725-737. http://dx.doi.org/10.1016/s0305-0483(00)00021-9

Gentile, C., Spiller, N., & Noci, G. (2007). How to sustain the customer experience: An overview of experience components that co-create value with the customer. *European Management Journal*, *25*(5), 395-410. http://dx.doi.org/10.1016/j.emj.2007.08.005

Healy, T. J. (1999). Why you should retain your customers. *America Community Banker, 8*(9), 22-26. http://onemvweb.com/sources/sources/ecommerce_role_familiarity_reliability.pdf

Jahangir, N., & Begum, N. (2008). The role of perceived usefulness, perceived ease of use, security and privacy, and customer attitude to engender customer adaptation in the context of electronic banking. *African Journal of Business Management*, *2*(1), 32-40. Retrieved from http://www.academicjournals.org/article/article1380536538_Jahangir%20and%20%20Begum.pdf

Karjaluoto, H., Mattila, M., & Pento, T. (2002). Factors underlying attitude formation towards internet banking In Finland. *International Journal of Bank Marketing, 20*(6), 261-272. http://dx.doi.org/10.1108/02652320210446724

Khaitbaeva, S., Al-Subaiey, A. A., & Eyinda, C. I. (2014). An empirical analysis of attributes influencing bank selection choices by customers in the UAE: The Dubai context. *Proceedings of the First Middle East Conference on Global Business, Economics, Finance and Banking* (pp. 1-16). Retrieved from http://globalbizresearch.org/Dubai_Conference/pdf/pdf/D4115.pdf

Laforet, S., & Li, X. (2005). Consumers' attitudes towards online and mobile banking in China. *International Journal of Bank Marketing*, *23*(5), 362-380. http://dx.doi.org/10.1108/02652320510629250

Lee, E. J., Kwon, K. N., & Schumann, D. W. (2005). Segmenting the non-adopter category in the diffusion of internet banking. *International Journal of Bank Marketing*, *23*(5), 414-437. http://dx.doi.org/10.1108/02652320510612483

Lichtenstein, S., & Williamson, K. (2006). Understanding consumer acceptance of internet banking: An interpretive study in the Australian banking context. *Journal of Electronic Commerce Research, 7*(2), 50-66. Retrieved from http://www.jecr.org/sites/default/files/07_2_p01.pdf

Malarvizhi, V. (2011). An analysis on the usage of e-banking services in Coimbatore city. *International Journal of Business Quantitative Economics and Applied Management Research, 2*(1), 226-242.

McKnight, D. H., & Chervany, N. L. (2002). What reliability means in e-commerce customer relationships: An interdisciplinary conceptual typology. *International journal of electronic commerce*, *6*(2), 35-59. Retrieved from https://msu.edu/user/mcknig26/TrTypology.pdf

Munusamy, J., Annamalah, S., & Chelliah, S. (2012). A study of users and non-users of internet banking in Malaysia. *International Journal of Innovation, Management and Technology*, *3*(4), 452-458. http://dx.doi.org/10.7763/IJIMT 2012.V3.274

Musiime, A., & Biyaki, F. (2010). Bank clients' perception of information technology usage, service delivery and customer satisfaction: Reflections on Uganda's banking sector. *Proceedings of the International Trade & Academic Research Conference* (pp. 01-17). Retrieved from http://documents.mx/documents/bank-clients-perception-of-information-technology-usage-service-delivery- and-customer-satisfaction-reflections-on-ugandas-banking-sector-fayth.html

Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). Consumer acceptance of internet banking: An extension of the Technology Acceptance Model. *Internet Research, 14*(3), 224-235.

http://dx.doi.org/10.1108/10662240410542652

Poon, W. (2007). Users' acceptance of e-banking services: The Malaysian perspectives. *Journal of Business and Industrial Marketing, 23*(1), 59-69. http://dx.doi.org/10.1108/08858620810841498

Prompattanapakdee, S. (2009). The acceptance and use of personal internet banking services in Thailand. *The Electronic Journal of Information Systems in Developing Countries*, *37*(6), 1-31. Retrieved from http://www.ejisdc.org/Ojs2/index.php/ejisdc/article/view/559/290

Saranathan, S. A. (2008). A study on attitude and intention towards internet banking with reference to Malaysian consumers in Klang Valley region. *The International Journal of Applied Management and Technology, 6*(1), 115-143. Retrieved from http://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=1023&context=ijamt

Sarreal, R. (2016). *History of internet banking: How internet banking became mainstream*. Retrieved from https://www.gobankingrates.com/banking/history-online-banking/

Sathye, M. (1999). Acceptance of internet banking by Australian consumers: An empirical investigation. *International Journal of Bank Marketing, 17*(7), 324-334. http://dx.doi.org/10.1108/02652329910305689

Selvanathan, M. (2015). The effects of employees' attitude on excellent work quality among Malaysian government employees towards customers' satisfaction. *Global Management Journal*, *7*(1), 14-26.

Shih, Y., & Fang, K. (2004). The use of a decomposed theory of planned behavior to study internet banking in Taiwan. *Internet Research, 14*(3), 213-233. http://dx.doi.org/10.1108/10662240410542643

Sohrabi, M., Yee, J. Y. M., & Nathan, R. J. (2013). Critical success factors for the acceptance of e-banking in Malaysia. *International Arab Journal of E-Technology*, *3*(2), 76-82. Retrieved from http://www.iajet.org/iajet_files/vol.3/no.2/Critical%20Success%20Factors%20for%20the%20Acceptance%20 of%20e-Banking%20in%20Malaysia.pdf

Tan, G. W., Chong, C., Ooi, K., & Chong, A. Y. (2010). The acceptance of internet banking in Malaysia: An empirical analysis. *International Journal of Business and Management Science, 3*(2), 169-193.

Thornton, J., & White, L. (2010). Customer orientations and usage of financial distribution channels. *Journal of Services Marketing, 15*(3), 168-185. http://dx.doi.org/10.1108/08876040110392461

Yee, B. Y., & Faziharudean, T. M. (2010). Factors affecting customer loyalty of using internet banking in Malaysia. *Journal of Electronic Banking Systems*, *2010*(2010), 1-21. http://dx.doi.org/10.5171/2010.592297

Yeong, E. (2013, October 3). Malaysia's internet banking penetration rate at 49.1%. *The Sun Daily*. Retrieved from http://www.thesundaily.my/news/846166