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PERCEPTIVE CONTEXTS IN TECHNOLOGY ACCEPTANCE MODEL OR DIFFUSION OF INNOVATION THEORY OF INTERNET BANKING ADOPTION

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Abstract
Understanding the main determinants of Internet banking adoption is of crucial issue for banks. The term globalisation has constituted tremendous shift in the distribution channels of banking industry with internet and internet banking has become a natural part of consumers' life in the past few decades and nowadays almost taken for granted in developed countries, soon as well in developing countries. In this paper Perception is emphasised on the basis of its vital role in any acceptance model which changes the overall pattern from traditional application to technological acceptance. Be it TAM or Diffusion of innovation Theory, perception dominates and gives the ignition to go further to adopt or accept technologies. Notwithstanding many constructs that determines perception dominates and impulses to finish the adoption process. The overall purpose of this paper is to underline the importance of perception in the context of internet banking adoption among user segments. This paper chiefly concentrates on the perceptive context in the application of TAM and Diffusion of innovation theory. Moreover in this paper the effective participation of perception in the context of TAM and Diffusion of Innovation theory has been emphasised.

Key words: TAM, Diffusion of Innovation, Internet Banking, Adoption, Perception.

Introduction

In an increasingly-developing banking industry, a well-built, viable tactic is vital for any bank that seeks to survive on the global market and to provide upwardly living standards for its customers. Internet banking services which rooted its existence on the early 19th century meets the 21st century global standards. Together with the increasing rate of Internet and mobile services penetration, the banking industry is witnessing significant changes in its distribution channel system. Simultaneously, bank service providers have been constantly adapting to these changes and at the same time they have met customers' requirements with new services.

The rapid pace of technological development, especially the emergence of the internet is creating arrays of new business opportunities. Internet Banking (IB) is one such successful example and it has become one of the most attractive alternative retail distribution channels in terms of usage rate (Guerrero et al., 2007). With its global reach and tens of millions of users, IB has brought numerous opportunities but also fierce challenges for the banking sector, development of which is very important for any economy. IB that emerged in the 1990s may have changed the structure of banks and the pattern of banking services permanently. Despite IB's apparent advantages for banks and bank customers, the adoption rates vary across countries and are not as high as many banks expected (Sayar and Wolfe, 2007). In other words, banks face huge (sometimes even daunting) challenges in promoting IB services and maintaining its safety. This is because on the one hand, banks need to satisfy customers' needs in order to compete in the sector. On the other hand, customers' perceptions to IB are the utmost determinant of IB service adoption. If customers have strong psychological barriers to IB, their attitudes towards using online banking services are prudential, resistant and limited.

Customer satisfaction is an indistinct and intangible concept. Actual expression of the state of satisfaction will have the discrepancies from person to person, product to product and service to service. The state of satisfaction depends on a number of factors which consolidate as psychological, economic and physical factors. Though number of variables determines the satisfactory as well as the adoption of internet banking perception dominates all other factors.

Objectives of the study

1. To study the importance of perception in general view.
2. To study the contribution of perception in TAM and Diffusion of Innovation theory.

Importance of the study

This study gives importance of the role of perception in technological acceptance models and theories. This study emphasises perception as a stimuli and a determinant which gives solution to the acceptance model notwithstanding other factors. This study also focuses on TAM and diffusion of Innovation theory that shows the customers acceptance and adoption in technologies.

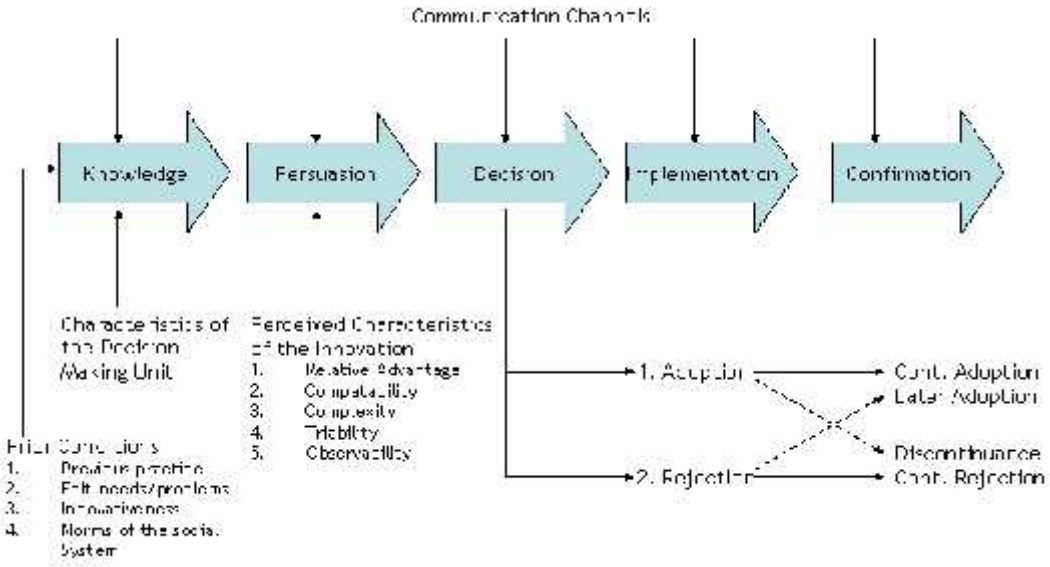
Practical Implications

Financial bank institutions should give attention to the inhibitors or perceived risk factors of internet banking adoption in order to retain existing customers as well as attract new consumers. The study also suggests that banks should build a web site with features to facilitate users' assessment of internet banking services and thus minimize the perceived risk and maximize the perceived ease of internet banking services. Web-based retailers depending on online payments would also be benefit by incorporating the elements of perceived risk and trust in their own web design and online services.

Perceptions in the Context of Internet Banking

The adoption of internet banking has invoked undeniably enormous amounts of interest in which perception is clearly evident. The characteristics understanding of the term perception being difficult and ambiguous it has been correlated to some other defining construct. The perception of service usefulness has been found to be the key construct for promoting the adoption of internet banking, when a well-designed and easy-to-use internet bank is not perceived as useful in the first place. Also the significant indirect effect of perceived ease of use on the intention to adopt through perceived usefulness is also validated. Perceived usefulness and perceived ease of use, the basic constructs of the Technology acceptance model are common concept combinations regarding perception.

Figure 1: Perception and Communication Channels



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Perception

Perception is a process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment. A motivated person is ready to act. How the motivated person actually acts is influenced by his or her perception of the situation. Perception depends not only upon the physical stimuli, but also on the stimuli's relation to the surroundings field and on the condition within the individual. People's behaviour is based on their perception of what reality is, not on reality itself. Perception is understood as the act of seeing what is there to be seen which is influenced by the individual, the object and the situation. Perception is the process by which an individual selects, organizes, and interprets the information inputs to create a meaningful picture of the world. In simple terms, perception is why the same universe is viewed differently by different people.

Adoption and Diffusion Meaning

Within this context, "adoption" refers to the stage in which a technology is selected for use by an individual or an organization. "Innovation" is similarly used with the nuance of a new or "innovative" technology being adopted. "Diffusion" refers to the stage in which the technology spreads to general use and application. "Integration" connotes a sense of acceptance, and perhaps transparency, within the user environment.

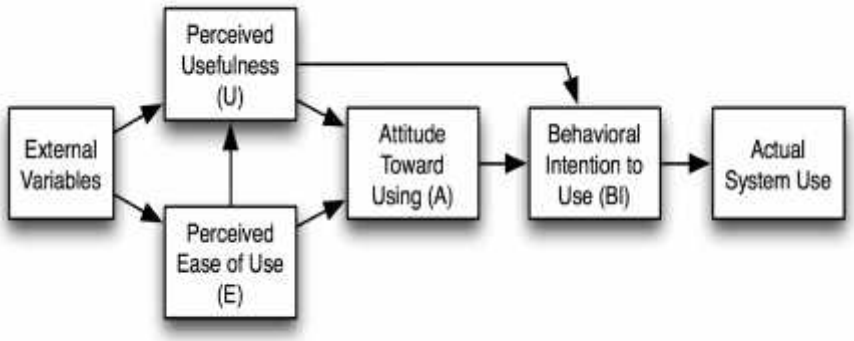
Perception Context in TAM

Basic TAM has been accompanied by several other constructs since the two have been found out to be insufficient to explain the complex inter-dependent in adopting internet banking. For example, Chau and Lai (2003) used four additional variables (personalization, alliance services, task familiarity and accessibility) and established a significant influence of the first three on perceived usefulness and the last on perceived ease of use inducing a positive attitude toward adopting the services. Also convenience that is the relative advantage in comparison to branch banking refers to consumers' perceived usefulness in internet services.

Technology Acceptance Model

The **Technology Acceptance Model** (**TAM**) is an information systems theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. TAM adapted the TRA model to the domain of user acceptance of information technology, replacing the TRA model's attitudinal determinants with two beliefs: perceived usefulness and perceived ease of use. TAM was found to be a simpler, easier to use. And more powerful model to uncover what determines user acceptance of IT, while both models were found to satisfactory predict an individual's attitude (satisfaction) E and behavioural intention. In addition, TAM's attitudinal determinants outperformed the TRA model's much larger set of measures.

Figure 2: The Technology Acceptance Model (TAM)



Source: http://www.globelegislators.org/pdfjs/test/pdfs/TAMReview.pdf

Perceived Usefulness (PU): This was defined by Fred Davis as "the degree to which a person believes that using a particular system would enhance his or her job performance".

Perceived Ease-of-Use (PEOU): Davis defined this as "the degree to which a person believes that using a particular system would be free from effort".

Perceived Usefulness

As indicated in the TAM framework (Davis, 1989) and related earlier works of Theory of Planned Behaviour and Theory of Reasoned Action (Ajzen and Fishbein, 1980), perceived usefulness is the primary element for potential users to consider in making a decision whether or not to adopt new technology such as IB. This is because users have the belief that the usefulness of a particular system could enhance their job performances. In particular, Gerrard and Cunningham (2003) suggested that the perception of usefulness on online banking depends on the services banks provided, in terms of needs of customers such as paying bills, applying for a loan, obtaining information on mutual funds, transferring money abroad, and checking banking balances.

Perceived Ease of Use

Perceived ease of use is also originated from TAM (Davis, 1989) and it refers to the belief that users of new technology feel that using the product/service would be free of effort. If the easier the use of an application is perceived to be by customers, this product/service is more likely to be accepted by them. In this regards, banks have to compete in creating and operating a comprehensive interface of user-friendly IB environments for easy-to-use innovations to promote the process of users' adoption. This process becomes routine work for banks to be sustainable in attracting new and retaining existing customers

(Eriksson et al., 2005). The empirical literature has provided ample evidence on the close relationship between IB adopters and their perceptions of ease of use IB. For example, Wang et al. (2003) showed that perceived ease of use is strongly related to the adoption of online banking.

Apart from the two variables (perceived usefulness and perceive ease of use), as discussed above, several dimensions of perception of risks are also associated with the growing trend in adoption of online banking in recent years.

Perceived Security Risk

Perceived security risk describes customers' beliefs in potential uncertainties or loss caused by the vulnerability of IB, which will lead to unexpected and unnecessary personal stress (Ozdemir et al., 2008). The adoption process of a product/service of IB will only happen when customers feel it is secure and free of risks (Siu and Mou, 2005). Moreover, consumers who have perception security risk may think all online transactions are risky, which could cause far-reaching consequences, including resistance to other products/services provided by banks. In contrast, customers who perceive IB as having low security risk would be more adaptable to using online services.

Perceived Privacy Risk

Perceived privacy risk refers to the concerns about personal and private information being revealed due to unauthorised access to this information by third parties and/or the beliefs that banks make use of private information about their clients without their consent (Ozdemir et al. 2008). As with perceived security risk, customers become more and more concerned about their private information being compromised as a result of frauds or hacking through banks offering a wide range of products/services via the internet open platform (Reavley, 2005).

Perceived Performance Risk

Perceived performance risk is the concerns about potential monetary loss that may be incurred because of deficiencies or malfunctions in IB activities (Kuisma et al., 2007). Users of IB are always apprehensive about the possibility that the system breaks down while they conduct their online transactions, as these unexpected incidents often lead to unexpected losses in their bank accounts or personal stress. Perceived performance risk is closely linked to consumers' trust in bank's technical capability and maintenance of IB system. Krauter and Faullant (2008) found that trust in the internet has significant impact on the risk perception and consumer attitude towards IB.

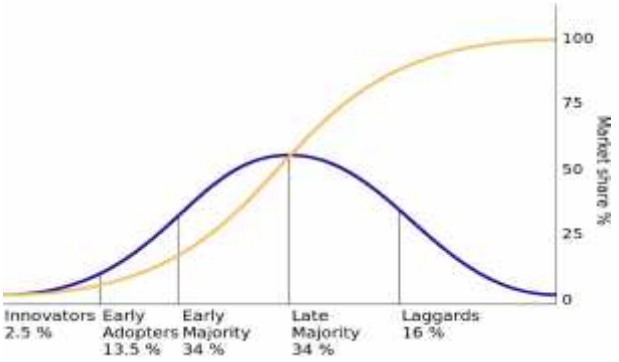
Perceived Financial Risk

Perceived financial risk is closely related to perceived performance and security risks but it is concerned with customers preoccupation with potential monetary loss due to misuse of bank account or transaction error (Kuisma et al., 2007). Users of IB are afraid of losing money while transferring money or making transactions over the internet. Compared to traditional banking, IB transactions lack the assurance provided in traditional setting through formal proceedings and receipts. Once transaction errors occur, customers of IB often find it difficult to ask for compensation (Littler and Melanthiou, 2006).

Perceptive Contexts in Diffusion of Innovation Theory

Diffusion of Innovations seeks to explain how innovations are taken up in a population. An innovation is an idea, behaviour, or object that is perceived as new by its audience.

Fig: 3 Diffusion of Innovation Model



Source: https://en.wikipedia.org/wiki/Diffusion_of_innovations

Why do certain innovations spread more quickly than others? And why do others fail? Diffusion scholars recognise five qualities that determine the success of an innovation. Notwithstanding several factors that are included in the adoption process, perception gives an ignition or impulse to initiate and conclude the acceptance process.

Another reason why the laggards felt that the use of internet banking is not need to be accepted immediately is that in their perception internet banking might have been deemed less important, risky, no secure and the more. So it can be confirmed that perception makes one innovator and the others laggards.

Relative Advantage
This is the degree to which an innovation is perceived as better than the idea it supersedes by a particular group of users, measured in terms that matter to those users, like economic advantage, social prestige, convenience, or satisfaction. The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption is likely to be. There are no absolute rules for what constitutes "relative advantage". It depends on the particular perceptions and needs of the user group.

Compatibility with Existing Values and Practices
This is the degree to which an innovation is perceived as being consistent with the values, past experiences, and needs of potential adopters. An idea that is incompatible with their values, norms or practices will not be adopted as rapidly as an innovation that is compatible.

Simplicity and Ease of Use
This is the degree to which an innovation is perceived as difficult to understand and use. New ideas that are simpler to understand are adopted more rapidly than innovations that require the adopter to develop new skills and understandings.

Trial ability
This is the degree to which an innovation can be experimented with on a limited basis. An innovation that is trial able represents less risk to the individual who is considering it.

Observable Results
The easier it is for individuals to see the results of an innovation, the more likely they are to adopt it. Visible results lower uncertainty and also stimulate peer discussion of a new idea, as friends and neighbours of an adopter often request information about it.

Conclusion
On account of technologies' broadening characters in service delivery, it is necessary to comprehend customers' readiness to adopt technology-based systems such as internet banking. Customers' technology readiness (TR) should be taken into account in order to accurately predict the perception and behaviour of customers. Internet banking which is on the rise has been adopted by many bank consumers. On the other hand the rate of adoption is determined by certain definite constructs in which perception is said to be vital. In this paper the effective inbuilt characters of perception in any contexts especially in the case of TAM and diffusion of innovation theory has been briefed. Inspite of several determinants or constructs are in the participant row of the acceptance model or theories this paper has given emphasis on perception as an ignition and impulse also the final driver to go further to conclude the technological acceptance model process for most of them are planted on the foundational context of perception. TAM and Diffusion of Innovation Theory are not an exception. Though Perception is seemed to be a variable it plays a vital determinant in internet banking acceptance. This study also emphasis the role of perceptive contexts in the application of TAM and Diffusion of innovation theory.

Reference
1. Ankit Kesharwani, Shailendra Singh Bisht, (2012) "The impact of trust and perceived risk on internet banking adoption in India: An extension of technology acceptance model", International Journal of Bank Marketing, Vol. 30 Iss: 4, pp.303 – 322.
2. Chan, S.-C. & Lu, M.-T. (2004). Understanding internet banking adoption and use behaviour: A Hong Kong perspective. Journal of Global Information Management, 12 (3), 21–43.
3. Dr. Navpreet Singh Sidhu, "Perception and Acceptability of Electronic Banking: A Study of The Customers Of Selected Banks", International Journal Of Social Science & Interdisciplinary Research, Vol. 2 (6), June (2013) pp. 45 – 57.
4. Gerrard, P., Cunningham, J.B. (2003), The diffusion of Internet banking among Singapore consumers. International Journal of Bank Marketing, 21(1), 16-28.
5. Guerrero, M.M., Egea, J.M.O., Gonza´lez, M.V.R. (2007), Application of the latent class regression methodology to the analysis of internet use for banking transactions in the European Union, Journal of Business Research, 60(2), 137-45.

6. Kumbhar V. M. "Factors Affecting the Customer Satisfaction In E-Banking: Some Evidences Form Indian Banks" Management Research And Practice VOL. 3 ISSUE 4 (2011) PP: 1-14.
7. Kuisma T, Laukkanen, T, Hiltunen M. (2007), Mapping the reasons for resistance to internet banking: A eans-end approach. International Journal of Information Management, 27(2), 75-85.
8. Krauter, S.G., Faullant, R. (2008), Consumer acceptance of internet banking: The influence of internet trust. International Journal of Bank Marketing, 26, 483-504.
9. Littler, D., Melanthiou, D. (2006), Consumer perceptions of risk and uncertainty and the implications for behavior towards innovative retail services: The case of internet banking. Journal of Retailing and Consumer Services, 13, 431-443.
10. Muhammad Ali Nasir*, Junjie Wu, Milton Yago, Haohong Li "Influence of Psychographics and Risk Perception on Internet Banking Adoption: Current State of Affairs in Britain" International Journal of Economics and Financial Issues, 2015, 5(2), 461-468.
11. Ozdemir, S., Trott, P., Hoecht, A. (2008), Segmenting internet banking adopters and non-adopters in the Turkish retail banking sector. The International Journal of Bank Marketing, 26(4), 212-236.
12. Sayar, C., Wolfe, S. (2007), Internet banking market performance: Turkey versus the UK. International Journal of Bank Marketing, 25(3), 122-141.
13. Siu, N.Y.M., Mou, J.C.W. (2005), Measuring service quality in internet banking: The case of Hong Kong. Journal of International Consumer Marketing, 17(4), 99-116.
14. Wang, Y., Wang, Y., Lin, H., Tang, T. (2003), Determinants of user acceptance of internet banking: An empirical study". International Journal of Service Industry Management, 14(5), 501-519.
15. www.sciencedirect.com.libaccess.hud.ac.uk/science/article/pii/S096525900 5703893.
16. http://www.econjournals.com/index.php/ijefi/article/view/1067/pdf.
17. http://www.enablingchange.com.au/Summary_Diffusion_Theory.pdf.
18. https://en.wikipedia.org/wiki/Diffusion_of_innovations.
19. http://www.globelegislators.org/pdfjs/test/pdfs/TAMReview.pdf.
20. http://www.fidis.net/resources/fidis-deliverables/hightechid/int-d32000/doc/13/.