



WHAT FACTORS AFFECT CUSTOMER ADOPTION TOWARDS VIRTUAL BANKING? STUDY BASED ON WESTERN PROVINCE, SRI LANKA

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Abstract

In the present competitive market, the banking sector plays a significant role by managing the financial assets of the people, whereas highlights as one of the momentous economic segments. Technological development has way-forward the virtual banking, including Teller cards, credit and debit cards, Tele-banking facilities, and banking via the internet. These virtual banking facilities highly facilitate the smooth functioning of the transaction while maintaining a secure platform and speed. With the adoption of ICT, the banking sector in Sri Lanka has been rapidly transformed into a virtual facilitator. The current study identifies the factors affecting the virtual banking adoption by the customers' end, referring to the banking customers in Western Province, Sri Lanka. Survey method was administered and a stratified Random Sampling method was adopted to select a sample of 400 virtual banking customers. With respect to inferential, Exploratory Factor Analysis was adopted to identify the most significant determinants that are influential for virtual banking adoption. As the analysis tool, SPSS has been used. Findings highlight the most influential 11 factors for adoption of the virtual banking by the customers. As for recommendations, enhancing the service quality and eradicate the service barriers will enhance the competitiveness among the banking service, and motivation towards virtual banking adaptation by the customers was highlighted.

Keywords: *Banking sector, Consumer behavior, Customer adoption, Virtual Banking*

Introduction

In recent years it has become increasingly apparent that the Internet will become a critical service delivery channel. Many researchers have discussed information benefits that web technology provides to businesses (Greaves, 1999). Web technology can provide the facility to automate business transactions, which may allow the more responsive provision of service to customers. At present many companies in the financial sector are adopting Internet facilities, and electronic service is becoming a trending option for ease interaction between financial service providers and their customers. The technological innovation of the electronic channel of service delivery has brought in level playing importance for businesses by



eliminating geographical, regulatory, and industrial barriers. Virtual banking was first introduced to the country in late 1998 by Sampath bank as the first user. Through online banking, Sri Lankan customers can get credit card payment facilities over the internet (Wijesiriwardana, 2011). It is said that Sampath bank customers are heavily used to internet banking facilities compared with other banks (Jayasiri and Weerathunga, 2008). Adaptation of virtual banking began as an alternative for commercial banks but has in recent times morphed into a critical necessity that is central to modern-day banking. Customers and other stakeholders in the banking industry are quickly adopting digital banking practices and trends for the value it presents in terms of convenience, speed, and ease of access.

However, the customer adoption of Virtual banking has not been as strong as most banks wished. Aladwani (2001) and Suganthi (2001) stated that some research shows that most retail banking customers rank Virtual banking as less important than other technology-based delivery channels, such as ATMs. Researches show that in Thailand, retail customers show attitudes consistent with this, and are uncertain about adopting Virtual banking (Ongkasuwan and Tantichattanon, 2002);(Rotchanakitumnuai and Speece, 2003). It is becoming very clear that the potential value of web-based service adoption by customers depends not only on the benefits but also on overcoming a number of barriers. There are different types of researches conducted in several countries to identify the factors influencing the adoption of the internet banking system by customers. In Sri Lanka also, few types of researches have been conducted to identify the factors influencing the adoption of the internet banking system by consumers (Perera, 2018). There have been a number of studies in the field of digital banking but there is still a knowledge gap since the studies covered other concepts in internet banking but not specifically on the factors that influence the adoption of digital banking by customers among commercial banks (Momanyi, 2016). There is still more to be studied on factors influencing the Sri Lankan banks' customers to adopt digital banking. Insights into what factors influence the uptake of digital banking services will assist banks in coming up with better strategies for attracting and retaining these evasive customers. Therefore, this study sought to find out the knowledge gap, in identifying which factors influenced the adoption of virtual banking services by customers in the western province of Sri Lanka.

Research Questions

With the purpose of seeking an answer for the research problem, researchers have identified the following research questions which are related to the factors that influence Customer adoption of Virtual Banking Practices.

- What are the determinants influencing the adoption of virtual banking services by customers?
- What is the level of influence on determinants of virtual banking adoption by customers?

Research Objectives have been developed in line with the research questions to fill the research gap, whereas;



- To identify the determinants influencing the adoption of virtual banking services by customers
- To examine the level of influence on determinants of virtual banking adoption by customers

Review of Literature

Virtual Banking

Virtual banking facilitates for banking users to carry out financial transactions on their own through the use of a secured internet platform operated by the commercial bank, a retail or virtual bank, credit union, or building society (Ajanthan, 2018). Virtual banking becomes like a new trend and it comes with the latest technology in the current era. Due to the development of technological advancements ATM's, credit cards, debit cards, Tele-banking, internet banking have become effective delivery channels. It helps to deliver traditional banking products in a more advanced way. Banks have realized that the internet helps to expand their performance local into a global (Loannou and Mavri, 2006). Internet banking becomes popular day by day. Every person is busy with their works. They are seeking efficient services from the banks to maximize their benefits. Instead of paper banking now moves to the paperless banking systems. It helps to get quicker services with a minimum time and cost. Customers can use internet banking facilities for 24 hours while staying anywhere such as home, business, and etc.

Moreover, virtual banking is also known as, E-Banking, Online banking, digital banking. Bank customers can access their accounts through the internet. Here, Customers are given their own user names and password, by the banks to access their accounts. By using their own user name and password they can do their all transactions without going to the banks (Burnham, 1996). The concept of internet banking activities performed through electronic networks. It is the latest channel of banking services delivery which is used for both businesses to business (B2B) and Business to customers (B2C) transactions. By using virtual banking customers can get varieties of services. Such as, payment of bills and invoices, applying for loans, settlement of loan installments, transfer of funds between accounts, sending funds to third parties via e-mails or internet connections regardless of where the client is located (Rahman, 2009). Internet banking is the cost-effective and cheapest channel which reduces a large number of human capital. Because no need for a large number of employees to do their transactions. All the transactions can be done through the internet.

Virtual Bank adoption in Sri Lanka

The banking sector in Sri Lanka has faced a quick transformation with the adoption of ICT (Information Communication Technology)-based banking solutions. The widespread usage of ICT in Sri Lanka's banking sector began only in the late 1980s with the introduction of the first ATM by HSBC Bank in 1986. The most recent delivery channel introduced for financial services is Internet or Online banking and on the other hand, is the latest, most innovative, and most profitable banking services to be offered by the banks (Sathye, 1999). The Internet



was first used as a platform for providing banking services in the USA in 1995. In just a few years, this new channel has rapidly gained popularity and spread in almost all developed countries and many developing countries (Zarook, 2010). Whereas in Sri Lanka, Internet banking was introduced in early 1999 (Jayamaha, 2008).

Sri Lanka was the first South Asian country to introduce unrestricted, commercial internet connectivity in April 1995. Even though it was introduced early, penetration has been slow and uneven in the 16 years since. Sri Lankans are now enjoying virtual banking services often over the internet, where it was first introduced in Sri Lanka in March 1999 (Jayamaha, 2008). Not surprisingly, customers are still in their inception.

For a country with 8.3 percent internet penetration, it will take few more years for exclusive Internet banks and fully pledged Internet banking services to come into existence and practice (Central Bank of Sri Lanka, 2012). As per records in the Central Bank of Sri Lanka, currently, there are 24 listed commercial banks in Sri Lanka from those 12 are local banks that already have the internet banking facility except for Amana bank. In reviewing the literature, it was found that the usage of Internet and Internet technology had a steady growth in Sri Lanka and now many banks in Sri Lanka have implemented Internet technology in their services by providing Internet Banking facilities to their customers. Even though there are many internet users and many banks with fully-fledged Internet facilities and virtual banking services, yet the number of Internet Banking users is low amongst the internet users (Zarook, 2010). But the dark side of internet banking in Sri Lanka is, even though the majority of the customers in the country were aware of e-banking facilities, most of them have not shown interest in those facilities by themselves. They still pay their necessary bills, withdraw money, check balances, and deposit various cheques at their bank counters much like the traditional way (Jayasiri and Weerathunga, 2008). Although the banking professionals interviewed by the researchers themselves are not pleased with this situation, they appear to be contented with the status quo (Suraweera et al., 2011).

Theory of Reasoned Action (TRA)

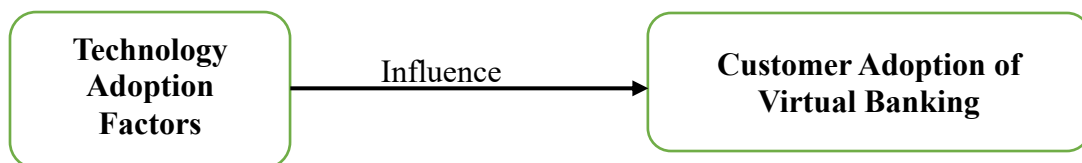
Bagozzi (1981) has argued that the most basic attitude theory, which has been widely considered to have a significant theoretical and practical approach was the Theory of Reasoned Action (TRA) proposed by (Ajzen and Fishbein, 1977). This theory has been built on three guidelines; Behavioral Intention (BI), Attitude (A), and Subjective Norms (SN). This theory recommends that a person's behavioral intention (this is not defined) is subjective by the person's attitude (i.e., the person's valuation of a positive or negative result from implementation of the behavior) and subjective norms (such as the perceived social coercion to perform or not to perform the behavior) [BI = A + SN].

Technology Acceptance Model (TAM)

Davis (1989) Established the TAM and it forecasts the acceptability of innovation and identifies the adjustments if necessary, which are needed to be done to make the product acceptable to the prospective users. TAM identifies the perceived usefulness and the perceived ease of use of technology as determining user behavior (Davis, 1989). TAM uses the TRA as

a theoretical basis for specifying the causal linkages between two key factors; perceived usefulness and perceived ease of use (Davis, 1989). TAM is one of the most utilized models in studying IB acceptance (Momanyi, 2016). Notwithstanding its widespread favoritism, TAM had faced some criticism by other researchers. One of the criticisms levied against was its inability in applying to a larger spectrum of users (Sukkar and Hasan, 2005). It overlooks the factors that were seen as external and situational especially at a given condition. Therefore, the researchers have developed the conceptual model by referring the literature.

Conceptual model



Operationalization of the Conceptual Model

Variables		Dimension	Indicators	Measurements
Independent variable: Determinants of Adoption	Attitude, (Tan and Teo, 2000)	Relative Advantage	Ease of use, Efficiency, Effectiveness, Convenience	Likert scale
		Compatibility with values	Compatibility Finance Management	
		Internet Experience	Span, Frequency, Intensity, Diversity	
		Banking Needs	Variance	
		Complexity	Psychological effort Easiness	
		Triability	Testing	
		Risk	Security, Confidentiality	

Determinants of Adoption	Subjective Norms (Taylor and Todd, 1995)	Social Norms	Individual Perceptions, Social Pressure	Likert scale
		Knowledge	Technological Literacy Awareness	
		Demographic Conditions	Environmental, Support Income Level	
	Perceived behavioral control (Barki and Hartwick, 1994)	Self-efficacy	Confidence	
		Government Support	Endorsement	
		Technology Support	Advancement, Accessibility Feasibility	



Research Methodology

Population, sample and data collection

The main idea behind this research is to find out the factors or determinants that affect the adoption of virtual banking services by users in Western province. In this particular research, the population is virtual banking users of the Western province which is extracted from the population of 3 districts accordingly as Colombo, Kalutara, and Gampaha. And the sample has been selected from virtual banking users who use different services of virtual banking around the Western province. The sample determines the adequate respondents from the total number of the target population. For the purpose of this study 400 questionnaires were administered and of which 397 were returned. Out of the total population sample of 400 customers were selected which is 0.0065%. Further, a stratified random sampling method was used to collect the sample size. Stratified random sampling is a method of sampling that involves the division of a population into smaller sub-groups known as strata. In stratified random sampling, the strata are formed based on members' shared attributes or characteristics.

Data Analysis

Data analysis is the most important and significant part of the research because the final decision, conclusion, and recommendations are based on the data analysis of the research. Statistical Packages for Social Science (SPSS) version 23 software was used for the analysis of data.

Descriptive statistics are brief descriptive coefficients that summarize a given data set, which can be either a representation of the entire population or a sample of it. Descriptive statistics are broken down into measures of central tendency and measures of variability or spread. Measures of central tendency include the mean, median, and mode, while measures of variability include the standard deviation or variance, the minimum, and maximum variables.

Exploratory Factor Analysis: used to analyze the data. Exploratory factor analysis (EFA) is generally used to discover the factor structure of a measure and to examine its internal reliability. Therefore, EFA and Principle component analysis has been adopted.

Results and Discussion

Before the main survey, the researchers have conducted a pilot test with the involvement of 60 sample respondents to measure the reliability of the data collection instrument. Accordingly, the reliability statistics the Cronbach's alpha value of virtual banking adoption is 0.912 and, as the alpha value is at the acceptable level, there is a good internal consistency within the items of variables in the questionnaire. Hence the questionnaire has been slightly modified with the comments of the pilot study and administered for the survey.

To answer the research question, the researchers have conducted a survey to identify the determinants influencing the adoption of virtual banking services by customers. Accordingly, researchers identified the most influential indicators that would influence the



virtual banking adoption based on the literature review, as to *ease of use, efficiency, effectiveness, convenience, compatibility, finance management, span, frequency, intensity, diversity, variance, psychological effort, easiness, testing, security, confidentiality, individual, perceptions, social Pressure, technological, literacy, awareness, environmental, support, income level, confidence, endorsement, advancement, and accessibility*. Researchers develop the research instrument based on these indicators with 42 direct questions that are relevant to virtual banking adoption.

Exploratory Factor Analysis

This study has used the exploratory factor analysis technique of SPSS to analyze virtual banking adoption indicators to determine the major factors that are present in the banking industry which influence the adoption of virtual banking services in the western province.

KMO and Bartlett's test

KMO & Bartlett's test plays an important role in accepting the sample adequacy. While the KMO ranges from 0 to 1, the world- over the accepted index is over 0.6. In this study KMO value is 8.7. Also, Bartlett's test Sphericity relates to the significance of the study and thereby shows the validity and suitability of the responses collected to the problem being addressed through the study. For factor Analysis recommended suitably, Bartlett's Test of Sphericity must be less than 0.05. The factors were analyzed using principal component analysis with VARIMAX rotation to identify the factors that influence virtual banking adoption. According to the extraction most significant factor of the virtual banking adoption by customers is "the ability to manage finances more effectively". It is shown by the highest component value of 0.841, accordingly, the second and third highest significant factors are "easiness to conduct my banking transactions" and "I am confident of using Virtual Banking if I have only the online instructions for reference" which denotes the component value as 0.815 and 0.809 respectively.

Factor loadings are carried out to identify the most significant factors which are influencing the adoption of virtual banking services by special referencing the Western province. The total variance percentage accumulated in the factors is 71.78%. According to the factors that have been extracted it can be interpreted into eleven categories. From the results of the Exploratory Factor Analysis, consideration is taken in for grouping of all 42 items into 11 factors, namely,

1. Approach factors
2. Technological factors
3. Personal factors
4. Knowledge factors
5. Informative factors
6. Attitudinal factors
7. Environmental factors
8. Social factors
9. Subjectivity factors
10. Self-efficacy factors
11. Facilitating factors



Table 1 denotes the total data fit into the virtual banking adoption dimensions. The total variance percentage accumulated in the factors is 71.78%.

Table 1: Extraction Sums of Squared Loadings

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.436	34.370	34.370	14.436	34.370	34.370
2	2.594	6.175	40.545	2.594	6.175	40.545
3	2.198	5.233	45.778	2.198	5.233	45.778
4	1.817	4.327	50.105	1.817	4.327	50.105
5	1.651	3.931	54.036	1.651	3.931	54.036
6	1.438	3.423	57.459	1.438	3.423	57.459
7	1.368	3.257	60.716	1.368	3.257	60.716
8	1.299	3.094	63.810	1.299	3.094	63.810
9	1.182	2.814	66.624	1.182	2.814	66.624
10	1.151	2.740	69.364	1.151	2.740	69.364
11	1.015	2.417	71.782	1.015	2.417	71.782
12	.897	2.136	73.918			

The Principle component analysis place 42 items into 11 factors, as depicts in Table 2.

Table 2.: Principle Factor Components

	Component										
	1	2	3	4	5	6	7	8	9	10	11
I believe Virtual Banking allows one better control over my bank account.									.828		
Virtual Banking is a convenient way to do banking.										.833	
Virtual Banking makes it easier for me to conduct my banking transactions.							.765				
Virtual Banking gives me greater control over my finances.	.641										
Virtual Banking allows me to manage my finances more efficiently.											.547
Virtual Banking is a convenient way to manage my finances.	.638										
Virtual Banking allows me to manage my finances more effectively.						.784					
Virtual Banking is suitable for my lifestyle.			.613								
Using the Internet to conduct banking transactions fits into my working style							.402				



I spend more time on internet for daily routine.	.694	
I use internet for diversified work requirements.		.748
I am very skilled at using the Internet.	.403	
I consider myself knowledgeable about good search techniques on the Internet.	.589	
I know less about using the Internet than most users.	.647	
I believe to use the digital for banking purposes involves a lot of mental effort.	.677	
Using Virtual Banking can be frustrating	.636	
I believe it is not easy to conduct banking using the digital.	.486	.674
I want to try Virtual Banking for at least one month		.762
I believe if people are given opportunity to try out Virtual Banking most people will eventual adopting it.		.824
I think that interaction with Virtual Banking services does not require a lot of effort.	.732	
I think that Virtual Banking is easy to use.	.447	
I think that Virtual Banking services are useful.	.708	
I think that Virtual Banking services would enable me to save time.		.699
I think that Virtual Banking services would make it easier for me to carry out my financial requirements.	.619	
If my friends use Virtual Banking, I will definitely use it also.	.589	
If colleagues at work use Virtual Banking, I will definitely use it also.	.568	
If the people I respect use Virtual Banking I will definitely use it also.		.634
I fully trust the technology (internet, mobile phone and point of sale readers) used to deliver Virtual Banking services.	.627	
I believe Virtual Banking is secure for making payments.	.684	
I have received enough information about the benefits of using digital bank services	.682	
I have generally received enough information about Virtual Banking services	.463	
I am confident of using Virtual Banking if I have only the online instructions for reference.		.737
I am confident of using Virtual Banking even if there is no one around to show me how to do it.		.553



I am confident of using Virtual Banking even if I have never used such a system before.	.628
I am confident of using Virtual Banking if I have just the online “help” function for assistance.	.666
The government endorses Internet commerce in Sri Lanka.	.644
The Sri Lankan government is active in setting up the facilities to enable Internet commerce.	.558
The Sri Lankan government promotes the use of the Internet for commerce.	.732
I am confident of using Virtual Banking if I have just seen someone using it before trying it myself.	.579
Advances in Internet security technology provide for safer Virtual Banking.	.586
Faster Internet access speed is important for Virtual Banking.	.699
Internet technology in Sri Lanka makes Virtual Banking more feasible	.765

Conclusion

This study has reported the results of the investigation of virtual banking adoption by the customers and different dimensions used to evaluate the virtual banking adoption level. Virtual Banking users are concerned with how they are exposed to banking requirements with the conditions present in the demographic, social, technological, and occupational environments. 19 Determinants are identified based on micro and macro environmental factors as well as technology adoption models which were identified through past researches. The researcher used the past models as a base to develop a new model to identify the most relevant determinants which relate to virtual banking adoption in the western province and ensured the reliability of the model through the pilot test. Finally, the identified determinants were confirmed by running the exploratory factor analysis through the SPSS. The research objective is to examine the level of influence of determinants on virtual banking adoption by customers. Dimension Reduction technique in SPSS used to analyze the factors and grouped the extraction results into eleven categories named as *Approach factors*, *Technological factors*, *Personal factors*, *Knowledge factors*, *Informative factors*, *Attitudinal factors*, *Environmental factors*, *Social factors*, *Subjectivity factors*, *Self-efficacy factors*, and *Facilitating factors* while identifying the most significant factors with accomplishing the research objective. Hence, according to the study findings, the most preferred Virtual Banking method is ATM banking, and the most significant determinant that influences virtual banking adoption is the “ability to manage finance effectively”.



Recommendations

The implications of these discoveries and conclusions were that banks need to play a leading role in influencing the perception, and thereby the attitude and behavior of current and potential web banking users. The outcome of this study has a practical implication and recommendation for banks.

- Changing customers' attitudes towards virtual banking should be put into consideration. The bank should place more emphasis on the awareness of online banking adoption while customers on its existence and benefits.
- Implement innovative practices to help customers with banking activities in an easy and convenient manner; Short message services (SMS) based banking platform, which may help for the reliable and effective gain of information of their transactions
- Management of banks should focus more on their websites.
- Online banking websites should be made user-friendly and provide online help and giving the customer the choice of their preferred language will ease their transactions
- Avoiding unnecessary charges for virtual banking services
- The sound communication network or cross-functional training for employees of the banks may deliver better awareness and promotion about virtual banking to casual banking users at counters

References

- Ajanthan, D. (2018). Customers' adoption and use of E-Banking Services: A study in public commercial Banks, Sri Lanka. *Global Journal of Management And Business Research*.
- Aladwani, A. M. (2001). Online banking: a field study of drivers, development challenges, and expectations. *International Journal of Information Management*, 21, 213-225.
- Amin, H. (1970). Internet banking adoption among young intellectuals. *The Journal of Internet Banking and Commerce*, 12, 1-13.
- Bagozzi, R. P. (1981). Attitudes, intentions, and behavior: A test of some key hypotheses. *Journal of personality and social psychology*, 41, 607.
- Barki, H. & Hartwick, J. (1994). Measuring user participation, user involvement, and user attitude. *MIS quarterly*, 59-82.
- Buckley, J. (2003). E-service quality and the public sector. *Managing Service Quality: An International Journal*, 13, 453-462.
- Burnham, B. (1996). The Internet's impact on retail banking. *Booz-Allen Hamilton*, 1-10.
- Cheung, W., Chang, M. K. & Lai, V. S. (2000). Prediction of Internet and World Wide Web usage at work: a test of an extended Triandis model. *Decision support systems*, 30, 83-100.
- Chua, E. (1980). Consumer intention to deposit at banks: An empirical investigation of its relationship with attitude, normative belief and confidence. *Academic Exercise, Faculty of Business Administration, National University of Singapore*.
- Cooper, R. B. & Zmud, R. W. (1990). Information technology implementation research: a technological diffusion approach. *Management science*, 36, 123-139.
- DuPlessis, P. & Rousseau, G. (1999). Buyer behavior. a multicultural approach. Halfway House. *International Thomson Sigma*.



- Evans, P. B. & Wurster, T. S. (1997). *Strategy and the new economics of information*, Harvard Business Review New York, NY.
- Greaves, B. B. (1999). Market Money and Free Banking. *Freeman-New York-Foundation For Economic Education-*, 49, 43-50.
- Grönroos, C., Heinonen, F., Isoniemi, K. & Lindholm, M. (2000). The NetOffer model: a case example from the virtual marketspace. *Management decision*, 38, 243-252.
- Hernández Ortega, B., Jiménez Martínez, J. & José Martín De Hoyos, M. (2007). Influence of the business technological compatibility on the acceptance of innovations. *European Journal of Innovation Management*, 10, 7-24.
- Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Research in nursing & health*, 31, 180-191.
- Howcroft, B., Hamilton, R. & Hewer, P. (2002). Consumer attitude and the usage and adoption of home-based banking in the United Kingdom. *International journal of bank marketing*, 20, 111-121.
- Hua, G. 2008. An experimental investigation of online banking adoption in China. *AMCIS 2008 Proceedings*, 36.
- Jayamaha, R. (2008). Impact of IT in the Banking Sector. *BIS Review*, 13.
- Jayasiri, N. K. & Weerathunga, W. 2008. Popularity of e-banking in Sri Lanka.
- Karjaluoto, H., Mattila, M. & Pentto, T. (2002). Factors underlying attitude formation towards online banking in Finland. *International journal of bank marketing*, 20, 261-272.
- Khatimah, H. & Halim, F. (2016). The effect of attitude and its decomposed, perceived behavioral control and its decomposed and awareness on intention to use e-money mobile in Indonesia. *Journal of Scientific Research and Development*, 3, 39-50.
- Kim, B.-M., Widdows, R. & Yilmazer, T. (2005). The determinants of consumers' adoption of Internet banking. *Proceedings of the Consumer Behavior and Payment Choice 2005 Conference*, Boston, MA, 1-34.
- Lee, M.-C. (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. *Electronic commerce research and applications*, 8, 130-141.
- Loannou, G. & Mavri, M. (2006). Performance-net: a decision support system for reconfiguring a bank's branch network. *Omega. International Journal of Management Science*. v35 i2, 190-201.
- Madden, G. & Savage, S. J. (2000). Telecommunications and economic growth. *International Journal of Social Economics*, 27, 893-906.
- Momanyi, R. (2016). Factors Influencing The Adoption Of Digital Banking By Customers Among Commercial Banks In Kenya. Kenya: Sn.
- Ongkasuwan, M. & Tantichattanon, W. (2002). A comparative study of Internet banking in Thailand. *First National Conference on Electronic Business*, Bangkok.
- Perera, A. S. A. (2018). The Factors Influencing On the Customer Adoption of Internet Banking System Special Reference to the Sampath Bank in Colombo District *International Journal of Scientific and Research Publications*, Volume 8.
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. & Pahnla, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet research*, 14, 224-235.
- Rahman, M. M. (2009). E-banking in Bangladesh: Some policy implications. *Policy notes, Bangladesh Bank Quarterly*.
- Ravi, V., Carr, M. & Sagar, N. V. (2006). Profiling of Internet Banking Users in India Using Intelligent Techniques. *Journal of Services Research*, 6.



- Rogers, E. M. (2004). A prospective and retrospective look at the diffusion model. *Journal of health communication*, 9, 13-19.
- Rotchanakitumnuai, S. & Speece, M. (2003). Barriers to Internet banking adoption: a qualitative study among corporate customers in Thailand. *International Journal of Bank Marketing*, 21, 312-323.
- Safeena, R., Date, H. & Kammani, A. (2011). Internet Banking Adoption in an Emerging Economy: Indian Consumer's Perspective. *Int. Arab J. e-Technol.*, 2, 56-64.
- Sathye, M. (1999). Adoption of Internet banking by Australian consumers: an empirical investigation. *International Journal of bank marketing*, 17, 324-334.
- Senthilnathan (2011). Customer satisfaction in terms of physical evidence and employee interaction. *The IUP Journal of Marketing Management*, XI (3), 2012, 7-24.
- Shah, M. (2009). *E-Banking Management: Issues, Solutions, and Strategies: Issues, Solutions, and Strategies*, IGI Global.
- Suganthi, B. (2001). Internet banking patronage: an empirical investigation of Malaysia.
- Sukkar, A. A. & Hasan, H. (2005). Toward a model for the acceptance of internet banking in developing countries. *Information Technology for Development*, 11, 381-398.
- Suraweera, T., Kahingala, S., Batepola, A., Punchihewa, M., Senevirathna, K. & Kahandawaarachchi, C. (2011). IT driven banking services in Sri Lanka: customer acceptance and service quality. Retrieved: November, 4, 2012.
- Tan, M. & Teo, T. S. (2000). Factors influencing the adoption of Internet banking. *Journal of the Association for information Systems*, 1, 5.
- Taylor, S. & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information systems research*, 6, 144-176.
- Teo, T. S. & Too, B. L. (2000). Information systems orientation and business use of the Internet: An empirical study. *International Journal of Electronic Commerce*, 4, 105-130.
- Vasan, M. (2014). Customers' Satisfaction towards Internet Banking of ICICI Bank Limited- A Study in Erode City. *Vidushi*, 6, 13-26.
- Wijesiriwardana, K. (2011). Internet Banking in Sri Lanka. <https://www.semanticscholar.org/paper/Internet-banking-in-Sri-Lanka-Wijesiriwardana/55cdf33f6ada3f1e62943bf5fd2f95f252fc3e21>
- Zarook, M. S. (2010). Barriers Affecting Internet Users from Adopting Internet Banking in Sri Lanka. *A study submitted in partial fulfillment of the requirements for the degree of Master of Science in Information Systems Management at The University of Sheffield.*