sciendo

Financial Internet Quarterly „e-Finanse" 2019, vol. 15 / no. 2, p. 73-86

DOI: 10.2478/fiqf-2019-0013

eFinanse
financial internet quarterly

AN ESSENTIAL REVIEW OF INTERNET BANKING SERVICES IN DEVELOPING COUNTRIES

Yadgar M. Hama Khan[1]

Abstract

In the absence of a literature review for an adoption of internet banking in developing countries, this study was conducted to review and summarize the most evaluated articles in the literature. The significance of this work came from three concepts which are to highlight the concepts of research in developing countries, to accentuate the dominant models which have been used effectively in analyzing the constructs in adopting internet banking, and thirdly, to shed some light on the gaps in the potential applications for the system in the future. The Technology Acceptance Model, Theory of Reasoned Action, Theory of Planned Behaviour, Unified Theory of Acceptance and Use of Technology and Self Designed models have been used by most of the researchers in this review with a higher frequency of the Technology Acceptance Model among them. The results from this review are limited to 28 articles which were selected from a total of 110. The sources were from the search engines of Science Direct, Emerald Insight, Growing Science, International Business Information Management Association and Canadian Central of Science and Education and other different types of journal publications. The factors revealed to have important effects on the acceptance and adoption of the system were trust, perceived ease of use, and perceived usefulness, security and privacy and social influences.

JEL classification: M3
Keywords: TAM, UTAUT, Internet Banking customers, Acceptance, Adoption, Trust

Received: 31.01.2019 Accepted: 22.08.2019

[1] PhD candidate at Doctoral School of Management and Organizational Science, Kaposvár University, Hungary, Economics Department, College of Administration and Economics, University of Sulaimani, Kurdistan Region, Iraq, e-mail: yadgarhamakhan@gmail.com, yadgar.hamakhan@ke.hu, yadgar.hamakhan@univsul.edu.iq, ORCID: https://orcid.org/0000-0002-1516-0651.

Introduction

Internet banking definition

There are some definitions for internet banking by researchers on the base of its scope of services and the access limit for their customers. It is considered an internal banking portal for customers to use different kinds of bank services (Teo et al., 2003).

It is defined as a system of transactions that enable a customer to engage in online banking activities (Nelson & Richmond, 2007). Others defined internet banking as the practice of conducting financial transactions by customers over the internet through a bank's website (Shao, 2007) or a wider definition by others as using technology to access services through bank websites from public or private networks (Enrovianti et al., 2012).

However, internet banking is a tool bank distribution networks use to carry out their transaction services between it and their customers. These include checking balances, making and receiving of bills, transferring of money, or applying for a loan to make investments.

This method of banking is used to encourage customers to find lower cost, less required physical presence at bank offices, buying and selling more with faster services at their own locations. For bank institutions, it is a more attractive method for their customers to stay with their services rather than switching to other banks with more adapted technology in their internet-banking services.

Paré et al., (2014) developed a typology of review types and provided a descriptive insight into the most common reviews found in top IS journals. The results followed narrative reviews, meta-analyses, descriptive reviews, hybrid reviews, critical reviews, and scoping reviews, thus research can be conducted accordingly to these types, in the light of that the purpose of this paper is to review and analyze the literature which is related to acceptance and adoption of internet banking services in developing countries. However, the operating of Internet banking services in some places is still out of the systems in countries such as Iraq, where there are many factors beyond the initiation of this technology. The factors are numerous, but the most significant factors are scattered in the literature and utterly specific to the country where the studies were conducted.

A review of the literature

Internet banking is a banking channel that allows consumers to perform a wide range of financial and non-financial services through a bank's website (Tan & Thompson, 2000; Bhattacherjee, 2003). In developed countries traditional banks offer their product thus they offer Internet banking effectively as an electronic delivery channel to their customers among other opportunities such as ATM and Mobile banking. According to Hoehle et al., (2012), Internet banking is the third of E-banking channels.

One of the most interesting academic topics is internet banking thus it is a multidisciplinary perspective in which scholars can find it discussed in journals from various fields, including marketing, consumer behavior, IT, quality assurance, benchmarking, electronic research, business research, and management systems. Internet banking adoption literature can be classified by three main themes: whether scholars sought to describe the phenomenon (descriptive); whether they sought to understand the interplay between the factors that drive adoption (relational); or whether they sought to draw higher level conclusions through a comparison across populations, channels or methods (comparative) Hanafizade et al., (2014).

Generally speaking there are many factors which affect internet banking services in developing countries in perspective of strategic marketing, one of the major factors driving Internet banking service is cost, in order to get new online customers who are internet users, however, in comparison to developed countries cost is still one of the main factors that can be a parameter to measure the degree of internet banking users and to keep them loyal to the bank, besides the implication of e-customer satisfaction because banks offer almost the same services to customers (Hamid, 2008; Adapa & Cooksey, 2013; Amin, 2015; Ling et al., 2016).

The effect of cultural difference is another issue in developing countries for the domain of technology acceptance and adoption such as the case in Jordan, where previously few studies concentrated on the cultural differences, however it is only from the view of Gender and Age groups making the cultural comparison between two countries as an example (AbuShanab & Pearson, 2007; Yuen, 2013). According to Venkatesh and Brown (2001) Internet-banking should be accepted, trusted, adopted and used. That is why researchers select the

relevant studies and theories in literature to understand how different factors affect the internet banking services and the degree of the level of the situations that internet banking reflects in any of countries.

On the other hand, technology is one of the problems for a lot of people nowadays in developing countries, many of them avoid it due to its risk and they do not feel comfortable with it, particularly older generations who are not ready to use it. An empirical study in Yemen determined that attitude, subjective norm and technology readiness are considered most influential factors on individuals' intention to adopt internet banking services (Alsajjan & Dennis, 2009; Al-Ajam & Md Nor, 2013; Al-Qeisi & Hegazy, 2015).

Security is another factor which can affect the internet banking industry, Security violations can cause various problems including the breakdown of operating systems or preventing access to information, thus many internet users do not use internet banking because they do not trust its security system easily (Kasemsan & Hunngam, 2011). According to Kassim and Abdulla (2006) trust is an important construct catalyst in many transactional relationships.

Appendix (1) shows the summary for the employed theory, unit of samples and results. Appendix (2) shows the summary for Researches Per Countries and Results.

Research approaches

The stages of adopting internet banking in developing countries have been given less light in the literature. Therefore, an attempt to bring the most valuable scattered studies together in a short review is necessary to provide an opportunity for the further development of research in the field.

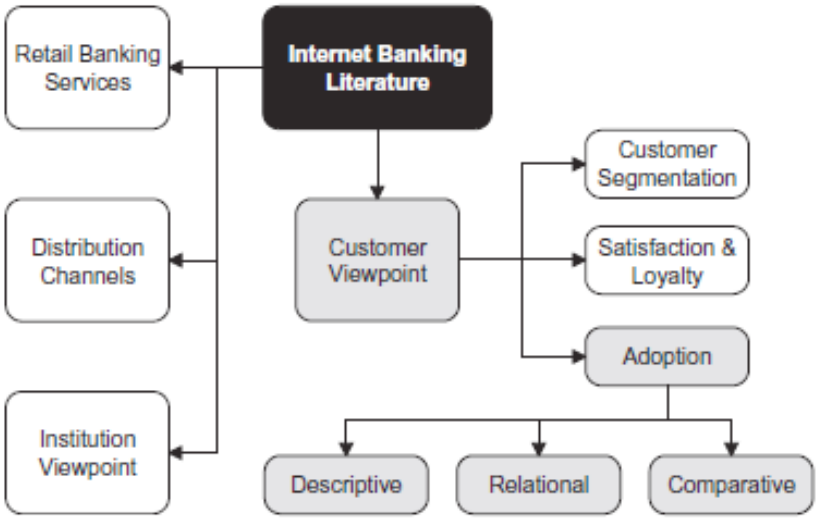
One of the major problems in developing countries is the difficulty new technology devices usually have in reaching these populations, and consequently the longer time it takes to learn about the system and finally to adopt it in their banking services. Thus, to adopt the system effectively, the adopting process has been taken through different stages of awareness, interest, evaluation, trial and finally a complete adoption (Rogers, 1995).

In this paper, 28 studies are reviewed in which the acceptance and adoption of internet banking service were investigated using different theories, data sample, sample size, diameters and other details. Appendix (1) shows the summary of the used models, unit of samples and those factors that have been used.

Consider the descriptions (by Akinci et al., 2004) of four types of interrelated research areas influencing this system as shown in Figure 1. In this study, the review and analysis of the results by the researchers are worked out according to the third group of studies concerning the system adoption by customers described as descriptive, rational and comparative.

Hanafizadeh et al., (2014) explains these as the descriptive method covering those studies that identify the nature of internet banking adoption, the character and attitude of customers and the barriers to adoption. The Rational studies attempt to explain and predict the

Figure 1: Positioning internet banking adoption within the literature



Source: Duplicated from Hanafizadeh et al. (2014)

factors that affect the level of adoption using models and theories. The comparative studies concern the comparisons among key variables like population streams of demographics, economics, society, politics and the availability of technology tools.

Research methodology

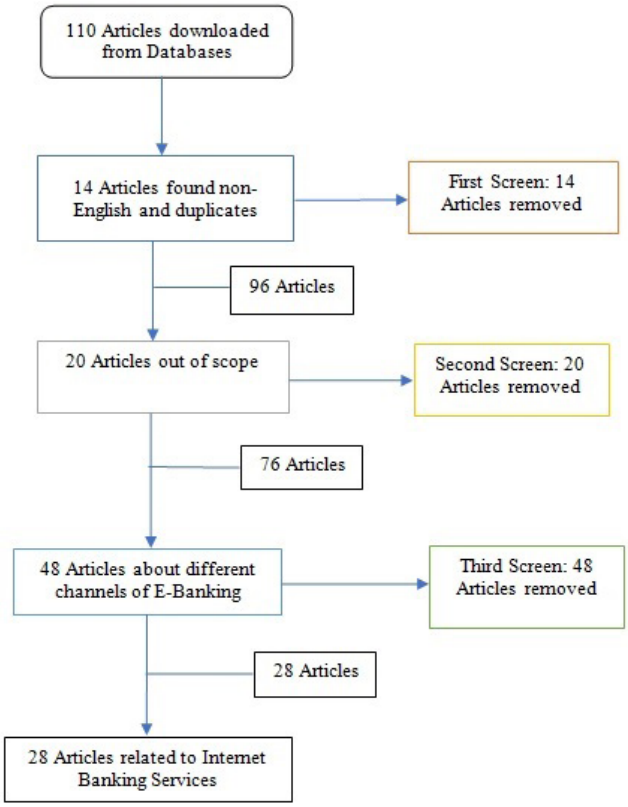
Internet banking is taking its first serious steps in the developing countries in which researchers and bank institutions do not seem to have an organized and official cooperation. Most articles are at the individual level that focus on the adoption of internet banking or work to develop a single case in an existing bank in a particular developing country. The review is intended to focus on those which the acceptance and adoption of an internet-banking system were their priority. The search yielded (110) peer-reviewed research publications using various engines like Science Direct, Emerald Insight, Growing Science, IBIMA and Canadian Central of Science and Education and different types of journal publications.

Figure 2 shows a flow chart of the screening process of the numbers of included articles of revision stages of this study. After searching and downloading 110 articles, in the first stage 4 articles were foun not in English and 10 articles were found that were duplicates, 14 articles were removed in the first stage. In the second stage 20 articles were found that were out of the scope of the study thus those 20 articles were removed. In the third stage 48 articles were found about different channels of E-Banking thus those 48 articles were removed. Finally, 28 articles were used in this study.

The full texts of these papers were carefully studied and resulted in selecting 28 articles which were written between 2002-2016 to show a review of the most important concerns, which are the level of the researchers, the missing constructs, the most used models in analyzing the concerned data, the relationship between the adoption process and the influenced factors, the comparisons between the interest in adoption with developed countries.

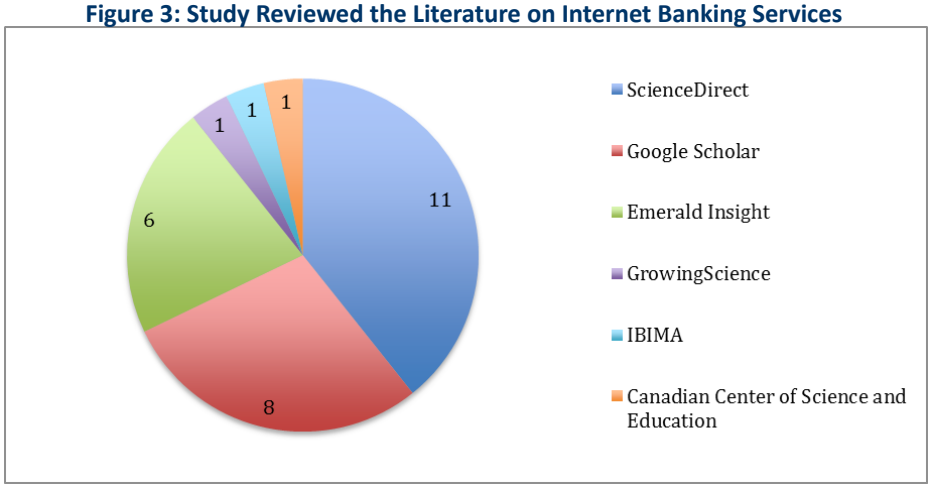
The different methodology and theories for assessing the parameters along with most of the variables and constructs in these studies which have the major influences on the adoption of internet banking are shown separately.

Figure 2: Flow chart of screening process



Source: Own elaboration

Figure 3: Study Reviewed the Literature on Internet Banking Services



Source: Own elaboration

The review is intended to show the comparison of works regarding the outcomes of the existing models and the study of or comparison between the acceptance by people from developing countries and those from developed countries. They include different theories and models, data, sample size, geography and more details as shown in Figure 3.

Research objectives:

1) To investigate the effect of factors (trust, perceived ease of use, and perceived usefulness) that have significance for the acceptance and adoption of internet banking services.

2) To analyze the results of the most related studies of the most influential factors.

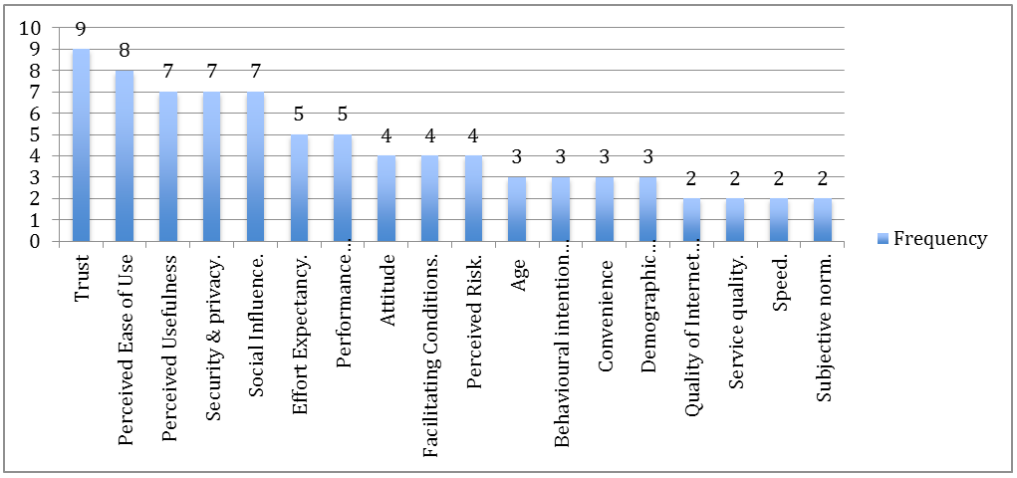
3) To identify the factors and circumstances which surround developing countries in adopting this system from those studies that were conducted by authors from these countries.

4) To give theoretical background for future research by the developing countries on how to create a better chance for acceptance and adoption in the future.

Research findings

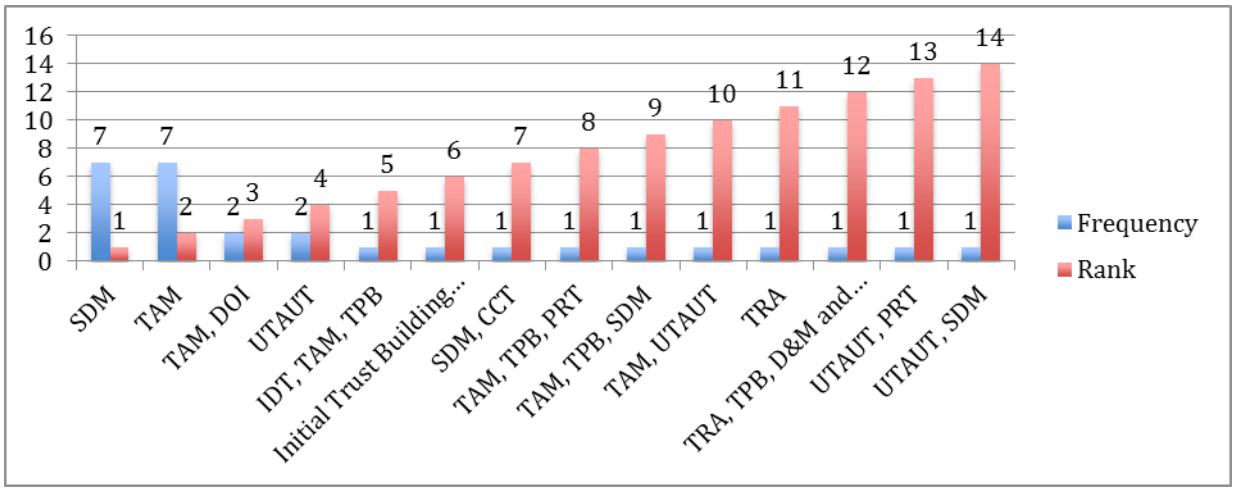
The most influential factors in the reviewed studies which affect the acceptance or adoption of internet banking services are analyzed in terms of their frequency and ranks as shown in Figure 4. It was found that the trust, perceived ease of use, and perceived usefulness have their noticeable impacts, which means that these factors have been used by a total of 28 studies to understand acceptance or adoption of internet banking service. On the other hand, the factors that have been used the least are a subjective norm, speed and service quality. The definition of factors is given in Appendix 3.

Figure 4: Frequency and Ranking of Factors



Source: Own elaboration

Figure 5: Acceptance or Adoption Theories



Source: Own elaboration

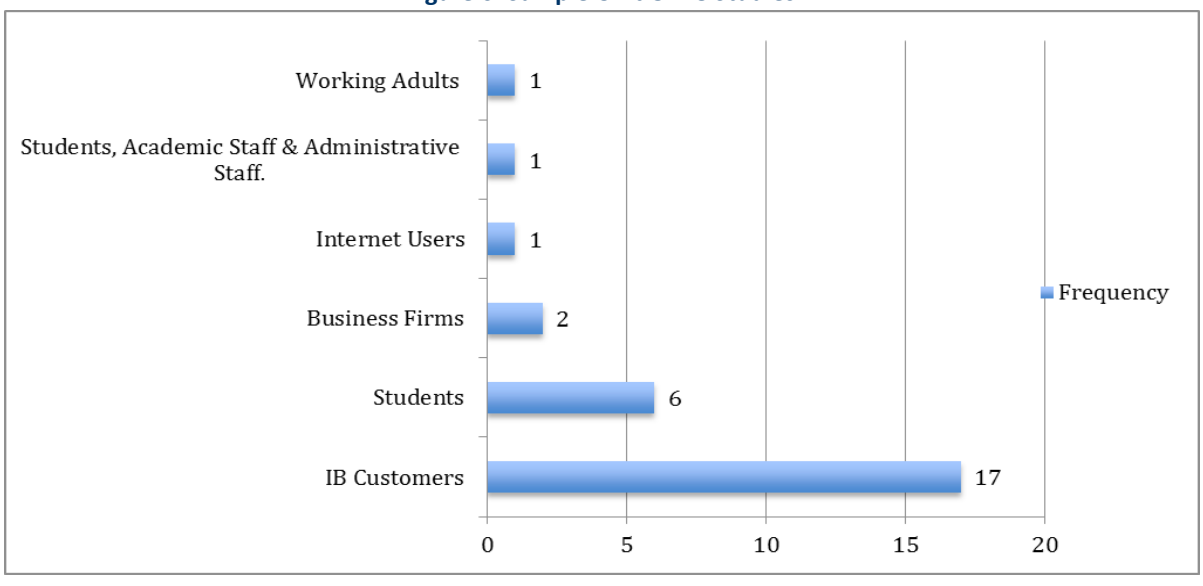
In Figure 5, frequency of theories that have been used in these studies are shown. There are 7 studies which used a self-developed model, the rest of the 28 studies used the models based on social psychology or adoption of new technological theories in which 7 studies used TAM, 2 studies TAM and DOI, 2 studies used UTAUT and 1 study for each of the rest of theories which is shown in Figure 5.

The most powerful acceptance theory is the Technology Acceptance Model (TAM) compared to other theories and cites user acceptance of new technology, as shown in Figure 5. Technology Acceptance Model (TAM) is used in these studies to determine the best practice and user's acceptance of IT/IS, which means studying expectations of human behaviour with Information Communication Technology (ICT), user attitude towards and acceptance of a new information system which is an important tool in measuring the successful adoption of the information system and realizing the reason for acceptance or rejection of new technologies in organizational settings (Davis, 1989; Davis et al., 1989).

It was found that the most dominant sample unit in the 28 studies was the internet banking customers in 17 studies, students of internet banking services in 6 studies, business firms of internet banking services in 2 studies, internet users of banking services in 1 study, students, academic staff and administrative staff of internet banking services in 1 study and working adults of banking services in 1 study, which is shown in Figure 6.

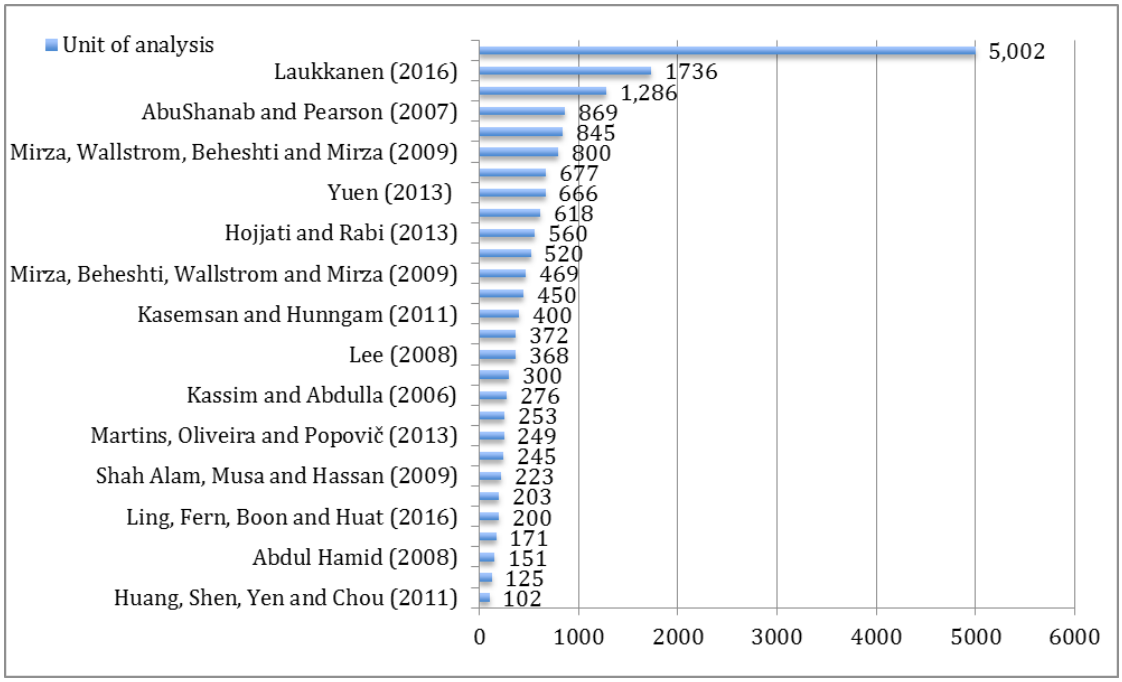
The size of samples is shown in Figure 7 regardless

Figure 6: Sample Unit Of 28 Studies



Source: Own elaboration

Figure 7: The Respondents Of 28 Studies



Source: Own elaboration

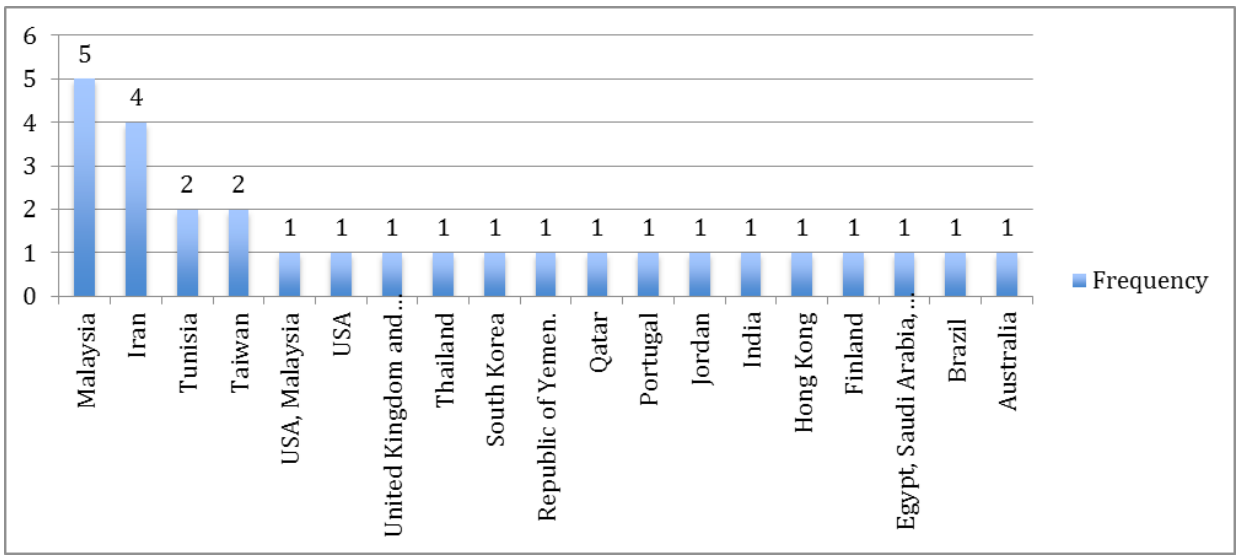
of the under-utilized factors and employed theory through the numbers of the respondents, which have been considered in the individual study. The numbers are between 102 to 5002.

The location of study is shown in Appendix (2). From the 28 studies, 5 are from Malaysia, 4 studies are for Iran, 2 studies are from Tunisia, 2 from Taiwan and data collection for each of the rest of the studies located in other countries, shown in Figure 8.

Limitation

The aim of this study is to direct attention to the large gap between developing countries and developed countries, regarding internet banking services. The number of studies that were included are 28 articles which were limited and selected from the total of 110 article sourced from the search engines of Science Direct, Emerald Insight, Growing Science, IBIMA and Canadian Central of Science and Education and different types of

Figure 8: The Locations of Data Collection



Source: Own elaboration

journal publications. It was found that trust, security & privacy and social influence were most used as external variables compare to service quality, speed and subjective norm. Therefore, most results are based on the outcomes of those variables. On the other hand, TAM is used as the top of the well-known models, while there is a lack of use of other theories such as UTAUT and UTAUT 2.

Conclusion

This study provides a short review of the literature on internet banking in developing countries. The adoption and acceptance of internet banking in developing countries have gotten attention by their own citizen researchers and academicians aiming at building new theoretical research frameworks. The 110 relevant articles were taken from reviewed journals and research publications using various search engines like Science Direct, Emerald Insight, Growing Science, IBIMA and Canadian Central of Science and Education and different types of journal publications. The review focused on 28 articles from them to cover all aspects regarding the adoption in these countries.

The studies revealed the influential factors on the acceptance and adoption of internet banking in developing countries. It is clear that the frequency of trust in using the system safely by people dominates the other factors of perceived ease of use, and perceived usefulness, security, and consequently, privacy and social influences.

The review indicates that TAM is still the most used and confident theory for adoption. However, other models of TRA, TPB, UTAUT, and SDM have been used by some researchers and in some cases for comparison with other models.

The attempts were made to bring to light the situation in those countries where the systems have noticeable development by the contributions of government and private banks. The analysis shows that Malaysia, Iran, Tunisia and Taiwan have the larger frequency due to their higher standard of living, the spread of technology and their history of banking.

Appendixes

Appendix (1) summary for the employed theory, unit of samples and results

N	Authors & year	Theory	Unit of analysis	Factors
1.	Mirza, Beheshti, Wallstrom and Mirza (2009) Mirza, Wallstrom, Beheshti and Mirza (2009) Shah Alam, Musa and Hassan (2009) Nasri (2011) Hojjati and Rabi (2013) Amin (2016) Ling, Fern, Boon and Huat (2016)	SDM	469 user and non-user of IB service. 800 customers. 223 business firms selected from the telephone directory in Klang Valley area in Malaysia. 253 user and non-user of IB. 560 persons who were among Iranian internet users. 520 internet banking customers. 200 working adults participated	Demographic characteristics, Personal characteristics, IB usefulness, IB characteristics, Convenience, Security, Trust, Privacy, Speed of transaction, Demographic characteristics, Awareness, Ease of Use, Cost, Reluctance to change, Accessibility, Demographic characteristics, Channel Convenience, The prior internet knowledge, Perceived risk, Information on online banking, Utilization of Internet for work and teamwork, Utilization of Internet for selling or buying activities, Utilization of Internet for financial transactions or banking, Utilization of Internet for obtaining educational information or learning, Utilization of Internet for seeking commercial information, Utilization of Internet for reading news, Utilization of Internet for fun and entertainment. Internet Banking service quality, Personal need, Site organization, User friendliness, Efficiency of website, E-Customer satisfaction, Service quality, Web design and content.
2.	Kassim and Abdulla (2006)	SDM, CCT	276 bank customers' responses via a cross-sectional survey in Doha, Qatar.	Shared value, Communication, Opportunistic behaviour, Trust, Attraction.

3.	Kasemsan and Hunngam (2011) Safeena, Date and Kammani (2011) Pourasadi and Dastanian (2014) Hassanuddin, Abdullah, Mansor and Hassan (2012)	TAM	400 internet banking users in Bangkok. 300 students customers of the institute who use IB services. 450 customers. 171 respondents from two groups of respondents, which consist of customers from the Pasir Mas branch and employees from all branches of Bank Rakyat.	Perceived usefulness, Perceived ease of use, Trust, Quality of Internet Connection, Legal Support, Perceived risks, Security & privacy.
4.	Claro and Rosa (2016)	TAM, DOI	5,002 firms located in 239 counties in Brazil.	Firm management structure, Size, Age, Firm demographics, Complexity, External members, Founder members, Competitive environment, Intensity of Competition, Competitors' Adoption of IBs
5.	Al-Qeisi and Hegazy (2015)	TAM, UTAUT	(677) Actual internet banking users	Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Behavioural intention.
6.	Al-Ajam and Md Nor (2015)	TRA	1,286 questionnaires from Bank customers.	Relative Advantage, Perceived Risk, Mass Media, Family's Influence, Innovativeness, Scepticism.
7.	AbuShanab and Pearson (2007)	UTAUT	869 responses bank customers.	Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Gender, Age, Experience, Voluntariness of use.
8.	Martins, Oliveira and Popovič (2013)	UTAUT, PRT	249 students and ex-students from a university	Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Behavioural Intention, Perceived Risk.
9.	Chaouali, Yahia and Souiden (2015)	UTAUT, SDM	245 students	Counter-conformity motivation, Social influence, Trust in physical bank, Trust in Internet banking, Performance expectancy, Effort expectancy.
10.	Jaruwachirathanakul and Fink (2005) Lin, Wu and Tran (2014)	TPB, TAM	506 users. 350 students, workers, others.	Attitude to (Features of the web Site, Perceived Usefulness, Risk and Privacy, Adoption, Personal Preference), Perceived Behavioural Control, External Environment, Subject Norm, Culture, Perceived ease of use, Perceived credibility.

Appendix (2) Summary for Researches Per Countries and Results

N	Authors & year	Country	Summary of result
1.	Claro and Rosa (2016)	Brazil	Results revealed that firms, with high propensity to adopt IBS, operate with a diverse management board, are large and young, and compete with a large number of firm users. The survival model showed that the diverse composition of management board also speeds up IBS adoption.
2.	Al-Qeisi and Hegazy (2015)	Egypt, Saudi Arabia, and Jordan	The results should enhance our understanding of consumer motivation of using internet banking technology. This understanding can aid our efforts when promoting the e-service.
3.	Safeena, Date and Kammani (2011)	India	This study determines the factors influencing the consumer's adoption of internet banking in India and hence investigates the influence of perceived usefulness, perceived ease of use and perceived risk on use of IB.

4.	Hojjati and Rabi (2013) Mirza, Beheshti, Wallstrom and Mirza (2009) Mirza, Wallstrom, Beheshti and Mirza (2009) Pourasadi and Dastanian (2014)	Iran	Use of the internet for work or teamwork, selling or buying, finance activities or banking operations, and reading news, has significant relevance to the internet banking adoption, but using the internet with the purpose of having fun and entertainment and seeking commercial information does not have a significant effect on internet banking acceptance. There are also significant differences between demographic profiles and attitudes of users and non-users groups. The security concerns, lack of technological knowledge and awareness stand out as being obstacles to the adoption of Internet banking (IB) services. Perceived ease of use, perceived usefulness as well as trust had positive and meaningful impact on internet banking.
5.	AbuShanab and Pearson (2007)	Jordan	UTAUT provides a good foundation for future technology acceptance research. The three main predictors relevant to this study (performance expectancy, effort expectancy, and social influence) were significant and explained a significant amount of the variance in predicting a customer's intention to adopt internet banking. The results also indicate that gender moderated the relationships between the three independent variables and the dependent variable (behavioral intention).
6.	Amin (2016) Ling, Fern, Boon and Huat (2016) Shah Alam, Musa and Hassan (2009) Hassanuddin, Abdullah, Mansor and Hassan (2012) Abdul Hamid (2008)	Malaysia	The relationship between Internets banking service quality, e-customer satisfaction and e-customer loyalty are significant. Web design and content, convenience and speed are the top three factors that influence customer satisfaction toward Internet Banking. Perceive ease of use and reluctant to change are found to be insignificant in determining its adoption. The trust of the user increases when the user perceived that the website was usable
7.	Martins, Oliveira and Popovič (2013)	Portugal	Results support some relationships of UTAUT, such as performance expectancy, effort expectancy, and social influence, and also the role of risk as a stronger predictor of intention. To explain usage behaviour of Internet banking the most important factor is behavioural intention to use Internet banking.
8.	Kassim and Abdulla (2006)	Qatar	Trust and attraction have significant positive impact on relationship commitment with attraction having a strong positive effect, with communication representing the most important determinant of attraction and having a significant positive relationship with both trust and attraction.
9.	Al-Ajam and Md Nor (2015)	Republic of Yemen	Customer's behavioral intention was significantly influenced by attitude, subjective norms and TR. Overall, the results indicate that the model provides a good understanding of factors that influence the intention to use internet banking service.
10.	Kasemsan and Hunngam (2011) Jaruwachirathanakul and Fink (2005)	Thailand	The results of the research showed that the customers paid attention to the security, risk awareness, ease of use, and quality of Internet connection, respectively. Furthermore, it can also be concluded that a comparative study between the Internet banking and mobile banking should be studied as well as the study of social factors, and security factors to ensure the security and in order to meet with the customers' needs. The attitudinal factors that appeared to encourage the adoption of internet banking in Thailand.

11.	Nasri (2011) Chaouali, Yahia and Souiden (2015)	Tunisia	Use of internet banking in Tunisia is influenced most strongly by convenience, risk, security and prior internet knowledge. Only information on online banking did not affect intention to use internet banking service in Tunisia. Demographic factors impact significantly internet banking behaviour, specifically, occupation and instruction. Intention to adopt Internet banking is mainly influenced by trust in the Internet banking services, followed by customers' counter- conformity motivation and performance expectancy. Effort expectancy has no effect on it.
12.	Lin, Wu and Tran (2014)	Vietnam	The results of this study indicated that the use of Internet banking services in Vietnam may be motivated by a set of specific factors (i.e., perceived usefulness, perceived ease of use, perceived credibility, perceived behavioral control, subjective norms, and attitude toward use).

Appendix (3) Definition of Factors

Factor	Definition	Reference
Perceived Usefulness	is "the degree to which a person believes that using a particular system would enhance his or her job performance".	Davis et al. (1989)
Perceived Ease of Use	to refers to "the degree to which a person believes that using a particular system would be free of effort".	Davis (1989)
Electronic Quality	includes five dimensions including ease of usage, designing website, ordering, responding, and trust. Service quality is also defined as a customer's belief or attitude concerning the rate of service superiority in the bank environment	Ward et al., 2009.
Trust	"The willingness to make oneself vulnerable to actions taken by the trusted party based on the feeling of confidence or assurance"	Gefen,2002.
Privacy	refers to degree to which customers believe the site is safe from intrusion and personal information is protected	Parasuraman et al. (2005)
Social influence	is defined as the degree to which an individual perceives that important others believe he or she should use the new system.	(Venkatesh, Morris, Davis, & Davis, 2003)
Effort expectancy	is the degree of ease associated with consumers' use of technology.	(Venkatesh, Thong, & Xu, 2012)
Performance Expectancy	is defined as the degree to which using a technology will provide benefits to consumers in performing certain activities	(Venkatesh et al., 2012).
Facilitating Conditions	refer to consumers' perceptions of the resources and support available to perform a behavior	(Venkatesh, Thong, & Xu, 2012).
Perceived Risk	as "the citizen's subjective expectation of suffering a loss in pursuit of a desired outcome.	(Warkentin, et al., 2002), (Belanger, et al., 2008).
Behavioural intention to use	A person's subjective probability that he will perform some behaviour	(Fishbein & Ajzen, 1975).
Subjective norm	The person's perception that most people who are important to her or him think that he should or should not perform the behaviour in question.	(Fishbein & Ajzen, 1975).
Speed	can be defined as the frequency of network connection breakdown, the time to navigate the Internet banking website, the amount of time that the customers spend for page response, and the rate that banks response to the complaint of customers	(Ahmad and Al-Zu' bi, 2011).

References

Hamid, N.A.A. (2008). The Relative Importance of Trust and Usable Website Design in Building E-Loyalty Intention on Internet banking. Communications of the IBIMA, Volume 3, 101-113.

AbuShanab, E., Pearson, J. (2007). Internet Banking in Jordan. Journal of Systems and Information Technology, 9(1), 78 – 97.

Adapa, S., Cooksey, R. (2013). Factors Affecting Consumers' Continued Use of Internet Banking: Empirical Evidence From Australia. Australsian Journal of Information Systems, 18(1), 5-31.

Ahmad, S.Z., Khalid, K. (2017). The Adoption of M-government Services from the User's Perspectives: Empirical Evidence from the United Arab Emirates. International Journal of Information Management, 37(5), 367–379. Retrevied from: https://doi.org/10.1016/j.ijinfomgt.2017.03.008.

Ahmad, A.E.M.K, Al-Zu'bi, H.A. (2011). E-banking Functionality and Outcomes of Customer Satisfaction: An Empirical Investigation, International Journal of Marketing Studies, 3(1), February 2011.

Ajzen, I. (1985). From Intentions to Actions: a Theory of Planned Behavior. In: Kuhl, J., Beckmann, J. (Eds.), Action Control: From Cognition to Behavior (pp. 11-39). Heilderberg: Springer.

Ajzen, I. (1991). The Theory of Planned Behaviour. Organisational Behaviour and Human Decision Processes, 50, 179-211.

Akinci, S., Atilgan-Ina, E., Aksoy, S. (2004). Adoption of Internet Banking Among Sophisticated Consumer Segments in an Advanced Developing Country. The International Journal of Bank Marketing, 22(3), 212-232. DOI 10.1108/02652320410530322.

Al-Ajam, A.S., Nor, K.Md. (2015). Challenges of Adoption of Internet Banking Service in Yemen. International Journal of Bank Marketing, 33(2), 178 – 194.

Al-Qeisi, K., Hegazy, A. (2015). Consumer Online Behaviour: A Perspective on Internet Banking Usage in Three Non-Western Countries. Procedia Economics and Finance, 23 (2015), 386 – 390.

Al-Rfou, A.N. (2013). The Usage of Internet Banking Evidence From Jordan. Asian Economic and Financial Review, 3(5), 614-623.

Alsajjan, B., Dennis, C. (2009). Internet Banking Acceptance Model: Crossmarket Examination. Journal of Business Research, 63(2010), 957–963.

Amin, M. (2016). Internet Banking Service Quality and Its Implication on Ecustomer Satisfaction and E-Customer Loyalty. International Journal of Bank Marketing, 34(3), 280 – 306.

Bandura, A. (1986). Social Foundations of Thought and Action: A Social Cognitive Theory. NJ: Prentice-Hall, Englewood Cliffs.

Baraghani, S. (2007). Factors Influencing the Adoption of Internet Banking. Master's thesis. Tarbiat University, Faculty of Engineering, Department of Industrial Engineering.

Belanger, F., Carter, L. (2008). Trust and Risk in e-Government Adoption. Journal of Strategic Information Systems, 17(2), 1-15.

Chaouali, W., Yahia, I.B., Souiden, N.. (2015). The Interplay of Counter-conformity Motivation, Social Influence, and Trust in Customers' Intention to Adopt Internet Banking Services: The Case of an Emerging Country. Journal of Retailing and Consumer Services, 28(2016), 209–218.

Cheng, T.C.E., Lam, D.Y.C., Yeung, A.C.L. (2006). Adoption of Internet Banking: An Empirical Study in Hong Kong. Decision Support Systems, 42(2006), 1558–1572.

Claro, D.P., Rosa, R.B. (2016). Drivers Leading Firm Adoption of Internet Banking Services. Marketing Intelligence & Planning, 34(3), 336 – 354.

Davis, F.D., Bagozzi, R.P., Warshaw, P.R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. Management Science, 35(1989), 982-1003.

Davis, F.D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly, 13(3), 318-39.

Diniz, E., Porto, R.M., Adachi, T. (2005). Internet Banking in Brazil: Evaluation of Functionality, Reliability and

Usability. The Electronic Journal of Information System Evaluation, 8(1), 41-50.

Ernovianti, E., Kamariah. N.M., Kassim, U., Rashid, R., Syaheera, M., Shaari, M. (2012). The Usage of Internet Banking Service among Higher Learning Students in Malaysia. American Journal of Economics, June 2012, Special Issue: 105-108. DOI: 10.5923/j.economics.20120001.24.

Fishbein, M., Ajzen, I. (1975). Believe, Attitude, Intention and Behaviour: An Introduction to Theory and Research reading. M. A.: Addison Wesley.

Paré, G., Trudel, M.-C., Jaana, M., Kitsiou, S. (2015). Synthesizing Information Systems Knowledge: A Typology of Literature Reviews. Information & Management, 52(2015). DOI: http://dx.doi.org/10.1016/j.im.2014.08.008.

Ling, G.M., Ferna, Y.S., Boon, L.K., Huat, T.S. (2015). Understanding Customer Satisfaction of Internet Banking: A Case Study In Malacca, Fifth International Conference On Marketing And Retailing (5TH INCOMaR) 2015. Procedia Economics and Finance, 37 (2016), 80 – 85.

Hanafizadeh, P., Keating, B., Khedmatgozar, H.R. (2014). A Systematic Review of Internet Banking Adoption. Telematics and Informatics, 31(2014), 492–510.

Hassanuddin, N.A., Abdullah, Z., Mansor, N., Hassan, N.H. (2012). Acceptance Towards the Use of Internet Banking Services of Cooperative Bank. International Journal of Academic Research in Business and Social Sciences, 2(3), 135-147.

Hojjati, S.N., Rabi, A.R. (2013). Effects of Iranian Online Behavior on the Acceptance of Internet Banking. Journal of Asia Business Studies, 7(2), 123 –139.

Huang, S., Shen, W., Yen, D.C., Chou, L. (2011). IT Governance: Objectives and Assurances in Internet Banking. Advances in Accounting, Incorporating Advances in International Accounting, 27(2011), 406–414.

Kasemsan, M.L. Kulthon, Hunngam, N. (2011). Internet Banking Security Guideline Model for Banking in Thailand. Communications of the IBIMA, Vol. 2011 (2011), Article ID 787725, 13 pages.

Kassim, N.M., Abdulla, A.K.M.A. (2006). The Influence of Attraction on Internet Banking: An Extension to the Trust-relationship Commitment Model. International Journal of Bank Marketing, 24(6), 424 – 442.

Laukkanen, T. (2016). Consumer Adoption versus Rejection Decisions in Seemingly Similar Service Innovations: The Case of the Internet and Mobile Banking. Journal of Business Research, 69(2016), 2432–2439.

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(2009), 130–141.

Ling, G.M., Fern, Y.S., Boon, L.K., Huat, T.S. (2016). Understanding Customer Satisfaction of Internet Banking: A Case Study In Malacca. Procedia Economics and Finance 37(16), 80-85. DOI:10.1016/S2212-5671(16)30096-X.

Fishbein, M.A., Ajzen, I. (1975). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. Reading, MA: Addison-Wesley.

Martins, C., Oliveira, T., Popovič, A. (2013). Understanding the Internet Banking Adoption: A Unified Theory of Acceptance and Use of Technology and Perceived Risk Application. International Journal of Information Management, 34(2014), 1– 13.

Mirza, A.P., Beheshti, M.T.H., Wallstrom, A., Mirza, O.P. (2009). Adoption of Internet Banking by Iranian Consumers: An Empirical Investigation. Journal of Applied Sciences, 9(14), 2567-2575.

Mirza, A.P., Beheshti, M.T.H., Wallstrom, A., Mirza, O.P. (2009). Internet Banking Service Adoption: Private Bank versus Governmental Bank. Journal of Applied Sciences, 9(24), 4206-4214.

Morgan, R.M., Hunt, S.D. (1994). The Commitment-trust Theory of Relationship Marketing. Journal of Marketing, 58(1), 20–38.

Nasri, W. (2011). Factors Influencing the Adoption of Internet Banking in Tunisia. International Journal of Business and Management, 6(8), 143.

Nelson, P., Richmond, W. (2007). Internet Banking: Gold Mine or Money Pit? Academy of Banking Studies Journal, 6 (1), 1-25.

Pourasadi, M., Dastanian, L. (2014). An Empirical Investigation on Factors Influencing Intention of Use of Internet Banking.

Management Science Letters, 4(2014), 175–180.
Rogers, E.M. (1983). Diffusion of Innovations. New York: The Free Press.
Rogers, E.M. (1995). Diffusions of Innovations. New York: 4th ed., The Free Press.
Roselius, T. (1971). Consumer Rankings of Risk Reduction Methods. Journal of Marketing, 35(1), 56–61.
Safeena, R., Date, H., Kammani, A. (2011), Internet Banking Adoption in an Emerging Economy: Indian Consumer's Perspective. International Arab Journal of e-Technology, Vol. 2, No. 1.
Alam, S.S., Musa, R., Hassan, F. (2009). Corporate Customers' Adoption of Internet banking: Case of Klang Valley Business Firm in Malaysia. International Journal of Business and Management, 4(4).
Shao, G. (2007). The Diffusion of Online Banking: Research Trends from 1998 to 2006. Journal of Internet Banking and Commerce, 12(2).
Suh, B., Han, I. (2002). Effect of Trust on Customer Acceptance of Internet Banking. Electronic Commerce Research and. Applications, 1(3-4), 247-263.
Taylor, S., Todd, P.A. (1995). Understanding Information Technology Usage: a Test of Competing Models. Information Systems Research, 6(2), 144–176.
Teo, H.H., Oh, L.B., Liu, C., Wei, K.K. (2003). An Empirical Study of the Effect of Interactivity on Web User Attitude. International Journal of Human-Computer Studies 58(3), 281–305.
Venkatesh, V., Brown, A. (2001). A Longitudinal Investigation of Personal Computers in Homes: Adoption Determinants and Emerging Challenges. MIS Quarterly, 25(1), 71-102.
Venkatesh, V., Davis, F.D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. Management Science, 45(2), 186–204.
Venkatesh, V., Morris, M.G., Davis, G.B., Davis, F.D. (2003). User Acceptance of Information Technology: Toward a Unified View. MIS Quarterly, 27(3) (Sep., 2003), 425-478.
Venkatesh, V., Thong, J.Y., Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. MIS Quarterly, 36(1), 157–178.
Warkentin, M. Gefen, D., Pavlou, P., Rose, G. (2002). Encouraging Citizen Adoption of e-Government by Building Trust. Electronic Markets, 12(2), 157-162.
Yoon,H.S., Steege, L.M.B. (2012). Development of a Quantitative Model of the Impact of Customers' Personality and Perceptions on Internet Banking Use. Computers in Human Behavior, 29(2013), 1133–1141.
Yuen, Y. (2013). Gender and Age Effect on Acceptance of Internet Banking: Cultural Comparison between United States and Malaysia. International Journal of Business and Management; 8(18), 2013.