

THE RELATIONSHIP OF TRUST AND SECURITY IN DEVELOPING
CUSTOMER WORD-OF-MOUTH AND LOYALTY IN MOBILE BANKING

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To my beloved parents and husband, thank you for always being there for me,
supporting me and encouraging me to be the best that I can be.

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ABSTRACT

Currently the large number of people involved in electronic commerce. Mobile banking which introduced by developing mobile technology is new adopted technology in electronic commerce. Even though mobile banking is accepted as part of daily life of people, focusing on just adopting this technology is not enough and managers should also go far beyond to increase customers. In addition, it is difficult to increase the number of customers in online business without considering the effecting factors. Therefore the importance of investigation in development of customer loyalty and positive word-of-mouth as two main concerns of online managers is obvious. Trust and security as two main technical factors cited by most of researchers in adopting mobile banking needs more consideration. Focusing on the relationships between customers and banks through mobile technologies, there is still a lack of studies that analyze the formation of both concepts. Hence, this research investigates on the relationship of security and trust for developing customer loyalty and positive word-of-mouth in the mobile banking services. Data is collected through questionnaire from CIMB mobile banking users in Malaysia. The data of this research analyzed through SPSS and LISREL software. The results of this research indicate that there is a direct and positive relationship between both factors namely security and trust in developing customer loyalty and positive word-of-mouth.

ABSTRAK

Kini terdapat ramai orang yang terlibat dalam perdagangan elektronik. Perbankan mudah alih yang diperkenalkan dengan membangunkan teknologi mudah alih adalah teknologi baru yang diterima pakai dalam perdagangan elektronik. Walaupun perbankan mudah alih diterima sebagai sebahagian daripada kehidupan harian, memberi fokus hanya kepada teknologi ini sahaja tidak mencukupi dan pengurus juga harus bergerak selangkah maju ke hadapan untuk meningkatkan bilangan pelanggan. Tambahan pula, ia adalah sukar untuk meningkatkan jumlah pelanggan dalam perniagaan dalam talian tanpa mempertimbangkan faktor-faktor yang berkaitan. Oleh itu, kepentingan kajian dalam membina kesetiaan pelanggan dan penyebaran maklumat positif sebagai dua kebimbangan utama pengurus dalam talian, adalah ketara. Kepercayaan dan keselamatan adalah dua faktor teknikal utama yang sering disebut oleh kebanyakan penyelidik dalam menerima pakai perbankan mudah alih dan memerlukan lebih banyak pertimbangan. Berfokus kepada hubungan antara pelanggan dan bank-bank melalui teknologi mudah alih, masih terdapat kekurangan kajian yang menganalisis pembentukan kedua-dua konsep. Maka, penyelidikan ini mengkaji hubungan keselamatan dan kepercayaan untuk membangunkan kesetiaan pelanggan dan penyebaran maklumat positif dalam perkhidmatan perbankan mudah alih. Data telah dikumpul melalui soal selidik daripada pengguna perbankan mudah alih CIMB di Malaysia. Data kajian ini dianalisis menggunakan SPSS dan perisian LISREL. Hasil kajian ini menunjukkan bahawa terdapat hubungan langsung dan positif antara kedua-dua faktor iaitu keselamatan dan kepercayaan dalam membangunkan kesetiaan pelanggan dan penyebaran maklumat positif.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Currently the reduced search expenses and the high power obtained by customers with the internet are the main factors in growing competitiveness in electronic commerce which involved too many organizations and people in electronic commerce. On the other hand, it is really hard to increase the number of customers in online commerce without considering the effecting factors, therefore the importance of investigation in development of customer loyalty and positive word-of-mouth (WOM) - "*written or oral recommendation by a satisfied customer to the prospective customers of a goods or service*" - as two main concerns of online managers, is obvious especially these days by growing new technologies. In fact, managers have conventionally documented the overall significance of both relevant concepts and because of that, marketing studies has extensively analyzed both concept of WOM (For example: Bansal and Voyer, 2000; Chung and Darke, 2006) and loyalty (For instance: Dick and Basu, 1994, Hallowell, 1996, Oliver, 1999; Lindestad and Andreassen, 1998). In addition mobile banking is one of the new technologies which introduced by developing mobile technology. Presently Mobile banking as a new adopted technology in electronic commerce has become accepted as part of daily life. Meanwhile the importance of security in mobile banking cannot be neglected as a key factor for customers. Concentrating on the relationships between banks and customers through mobile technologies, there is still a lack of

studies that analyze the formation of both concepts. Hence, this research investigates on the relationship of security and trust for developing customer positive WOM and loyalty in mobile banking services. With the aim of moving on this topic, this study puts forward a descriptive model that characterizes customer loyalty and positive WOM in the context of mobile banking.

Bearing these considerations in mind, the research is structured as follows: firstly, we carry out an in-depth review of the relevant literature concerning the four variables included in the study. Secondly, we formalize the hypotheses. Thirdly, we explain the process of data collection and measures validation and afterwards we are going to present the main results. Lastly, we show the main conclusions of the study and we will focus on future works.

1.2 Research Background

Nowadays everything done through technology since the world is very small with that like a global village. IT has an important role in the world for development of industries and organizations. The experts in the area of information technologies try to use new methods and techniques for easing daily affairs of human being specially the owners of industries and businesses in order to give opportunity to them to be able to communicate with their customers in the earliest time without any limitations of time and place and by the cheapest way. In addition with the increase of internet influence and the invention of new ways to serve customers through electronic media, this is one of the concerns of managers to increase the tendency of customers toward using new channels. One of the clear and emerging new channels in the space of banking and payments is mobile.

The banking industry in recent times has been undergoing radical change and this is taking place in all aspects of the banking sector. One of these new changes in the banking industry is the information technology system (IT) and is mainly used by banks to reduce turnaround time and improve business in general. The introduction of mobile technology and its devices have indeed brought about efficiency in the manner in which commercial and business activities are been carried out (Tiwari and Buse, 2007; UNCTAD, 2007).

Mobile banking is a new technology which adopted by banks around the world. Research shows that 30 percent of households in the United State of America use mobile phones to perform banking services. This is also the case in European and Asian countries where 80 percent of households use mobile banking services (Gupta, 2005). Presently, mobile phones are the most popular means of communication technology in Africa (ITU, 2007). Although there has been unprecedented growth in the mobile banking market in many nations in recent years, but focusing on the relationships between customers and banks through mobile banking services is one of the main concerns of managers (Taavasoli, 2011). How they can keep the loyal customers and how to increase the number of customers through positive word-of-mouth (WOM) concept, which have been traditionally two important goals targeted by managers, cannot be achieved unless doing investigation on the effecting factors on mobile banking context.

Focusing on the relationships between customers and mobile banking (M-banking), there is still a lack of studies that analyze the formation of both concepts in investigating role of effecting factors point of view. Thus, although the increasing competitiveness in electronic business is motivating an exponential growth in the number of studies that analyze loyalty development (e.g. Auh *et al.*, 2007; Flavia'n and Guinali'u, 2006; Harris and Goode, 2004; Srinivasan *et al.*, 2002), and customer positive WOM (e.g. Kozinets, 2002; Smith *et al.*, 2005; Brown *et al.*, 2007; Sen and Lerman, 2007) in the online context, there is a call for studies that will help to understand how customer loyalty and positive WOM are formed in the mobile banking business in greater detail. However, most of the studies on these

concepts have been carried out in the context of traditional distribution channels (e.g. Swan and Oliver, 1989; Mizerski, 1982; Hallowell, 1996; Knox and Denison, 2000) and, as a result, this research tackles an interesting topic of research which has not been yet addressed in literature by these factors.

1.3 Research Importance

Today, financial firms are competing to increase their profit share in the market. Among these firms, banks have radically shifted from traditional banking to branchless mode of banking. Adoption of latest technology has enabled banks to extend their customer base, where electronic banking has proved to be the chief advancement. Mobile banking can be categorized as the latest advancement in electronic banking, which has widened customers' access to bank accounts through wireless channels. Mobile banking is a financial service where the bank customers perform balance inquiry, credit transfer, and other businesses according to instruction sent through the mobile phone. From customers' perspective adopting mobile banking services benefit in terms of convenience to perform banking transactions anytime and anywhere, with ease to use. On the other hand, there will be more threats to mobile devices these days than ever, including company data leakage, mobile-based viruses, and more. Although mobile banking is somewhat secure because of using different layer of security and there are so many variations of banking apps and methods in the market, but still is a key area of concern for consumers and financial service providers. High security may lead to increasing the percentage of trust by customer and it creates customer loyalty which leads to increasing the possibility of positive word of mouth by loyal customers.

1.4 Problem Statement

By emerging new technologies in electronic commerce area especially increasing competitiveness in financial organizations, managers are really interested to increase their market profit share by finding the effecting factors for attracting customers.

Banks are one of these organizations which shifted very fast from traditional version to the branchless mode. Using new technologies provided this opportunity for banks to attract more customers. Mobile banking can be categorized as the latest improvement in electronic banking, which has extended customers' access to bank accounts through wireless channels.

Based on an in-depth review of relevant literature, there is still a lack of studies that analyze the formation of the relationships between customers and mobile banking. Therefore investigating on the effecting factors in the relationship between them is one of the concerns of managers. Thus the main focus of the author in this research is investigating on the relation of security and trust for developing customer positive word-of-mouth (WOM) and loyalty in the mobile banking services.

1.5 Research Questions

According to the related literature at the first phase the role of security and trust as two main factors in adopting mobile banking is really important, while in the second phase we need to investigate the formation of these two factors in developing customer loyalty and positive WOM , therefore the main research question is arise as follows:

“How to investigate the formation and effect of security and trust for developing customer loyalty and positive word-of-mouth (WOM) in the mobile banking services?”

Hence, the sub-questions of this research are:

1- What is the relationship between security and customer loyalty in mobile banking context?

2- What is the relationship between trust and customer loyalty in mobile banking context?

3- What is the relationship between security and customer positive word of mouth (WOM) in mobile banking context?

4- What is the relationship between trust and customer positive word of mouth (WOM) in mobile banking context?

1.6 Research Objectives

This research investigates on the relationship of security and trust for developing customer loyalty and positive word-of-mouth (WOM) in the mobile banking services. The proposed model for this research is indicated in chapter 4. Therefore the objectives of this research are:

- i) To investigate the relationship between security and customer loyalty in mobile banking.
- ii) To investigate the relationship between trust and customer loyalty in mobile banking.
- iii) To investigate the relationship between security and customer positive word of mouth (WOM) in mobile banking.
- iv) To investigate the relationship between trust and customer positive word of mouth (WOM) in mobile banking.

1.7 Research Scope

As it mentioned before, this research investigates on the relationship of security and trust for developing customer positive word-of-mouth and loyalty in mobile banking services. In addition to the theoretical development, real-world case studies are investigated in this research to gain insights into the practicability of proposed models. According to the suggestion by (Casaló *et al.*, 2008), study of this research uses a wider sample of customer in order to investigate possible differences in customers' behavior from different nationalities in the mobile banking context. Therefore this research is based on an in-depth case study of mobile banking customers of CIMB BANK in Malaysia. The designed questionnaire is distributed to UTM community.

REFERENCES

- Abratt R, Russel J (1999). Relationship Marketing in Private Banking South Africa. *The Int. J. Bank Mark.* 17(1): 5-19.
- Agarwal, S., Khapra, M., Menezes, B., & Uchat, N. (2007). Security issues in mobile payment systems. In *Proceedings of ICEG 2007: The 5th International Conference on E-Governance* (pp. 142-152).
- Agarwal, S., Khapra, M., Menezes, B., & Uchat, N. (2007). Security issues in mobile payment systems. In *Proceedings of ICEG 2007: The 5th International Conference on E-Governance* (pp. 142-152).
- Ahmad, A. E. M. K. (2011). E-banking Functionality and Outcomes of Customer Satisfaction: An Empirical Investigation. *International Journal of Marketing Studies*, 3(1).
- Aldas-Manzano, J., Ruiz-Mafe, C., Sanz-Blas, S., & Lassala-Navarré, C. (2011). Internet banking loyalty: evaluating the role of trust, satisfaction, perceived risk and frequency of use. *The Service Industries Journal*, 31(7), 1165-1190.
- Alnsour, M. S., & AL-HYARI, K. H. A. L. I. L. (2011). Internet Banking and Jordanian Corporate Customers: Issues of Security and Trust. *Journal of Internet Banking & Commerce*, 16(1).
- Al-Somali, S. A., Gholami, R., & Clegg, B. (2009). An investigation into the acceptance of online banking in Saudi Arabia. *Technovation*, 29(2), 130-141.
- Altun, Ö. (2012). Factors Affecting the Use of Internet Banking; the Case of Northern Cyprus (Doctoral dissertation, Eastern Mediterranean University (EMU)).
- Andreassen, T. W., & Lindestad, B. (1998). The effect of corporate image in the formation of customer loyalty. *Journal of Service Research*, 1(1), 82-92.
- Arndt, J. (1967). Role of Product-Related Conversations in the Diffusion of a New Product. *Journal of Marketing Research (JMR)*, 4(3).

- Auh, S., Bell, S. J., McLeod, C. S., & Shih, E. (2007). Co-production and customer loyalty in financial services. *Journal of retailing*, 83(3), 359-370.
- Avery, C., Resnick, P. & Zeckhauser, R. (1999). The market for evaluations. *American Economic Review*, 89(3), 564-584.
- Bangdao, C., & Roscoe, A. W. (2011). Mobile electronic identity: securing payment on mobile phones. In *Information Security Theory and Practice. Security and Privacy of Mobile Devices in Wireless Communication* (pp. 22-37). Springer Berlin Heidelberg.
- Bansal, H. S., & Voyer, P. A. (2000). Word-of-mouth processes within a services purchase decision context. *Journal of service research*, 3(2), 166-177.
- Barati, S., & Mohammadi, S. (2009). An efficient model to improve customer acceptance of mobile banking. In *World Congress on Engineering and Computer Science* (2), 20-22.
- Barrett, P. (2007), "Structural Equation Modelling: Adjudging Model Fit," *Personality and Individual Differences*, 42 (5), 815-24.
- Bayus, B. L. (1985). Word of Mouth-the Indirect Effects of Marketing Efforts. *Journal of advertising research*, 25(3), 31-39.
- Beerli, A., Martin, J. D., & Quintana, A. (2004). A model of customer loyalty in the retail banking market. *European Journal of Marketing*, 38(1/2), 253-275.
- Belanger, F., Hiller, J. S., & Smith, W. J. (2002). Trustworthiness in electronic commerce: the role of privacy, security, and site attributes. *The Journal of Strategic Information Systems*, 11(3), 245-270.
- Benamati, J., & Serva, M. A. (2007). Trust and distrust in online banking: Their role in developing countries. *Information Technology for Development*, 13(2), 161-175.
- Bentler, P.M. (1990), "Comparative Fit Indexes in Structural Models," *Psychological Bulletin*, 107 (2), 238-46.
- Bentler, P.M. and Bonnet, D.C. (1980), "Significance Tests and Goodness of Fit in the Analysis of Covariance Structures," *Psychological Bulletin*, 88 (3), 588-606.
- Bhatty, M., Skinkle, R., & Spalding, T. (2001). DEPARTMENTS-HEADSTART-Retaining customer loyalty, the customer's way. *Ivey Business Journal*, 65(3), 8-17.
- Bickford, J., O'Hare, R., Baliga, A., Ganapathy, V., & Iftode, L. (2010). Rootkits on smart phones: attacks, implications and opportunities. In *Proceedings of the*

- eleventh workshop on mobile computing systems & applications (pp. 49-54). ACM.
- Bilal, M., & Sankar, G. (2011). Trust & Security issues in Mobile banking and its effect on Customers. School of Computing, Blekinge Institute of Technology, SE-371, 79.
- Bloemer, J., Ruyter, K. and Wetzels, M. (1998), "On the relationship between perceived service quality, service loyalty and switching costs", *International Journal of Industry Management*, Vol. 9 No. 5, pp. 436-53.
- Bontis, N., Booker, L. D., & Serenko, A. (2007). The mediating effect of organizational reputation on customer loyalty and service recommendation in the banking industry. *Management Decision*, 45(9), 1426-1445.
- Borg, F., & Persson, M. (2010). Assessing Factors Influencing the Diffusion of Mobile Banking in South Africa-A case study on the company Wizzit. rapport nr.: Industriell och finansiell ekonomi 08/09: 66.
- Braum, L. (2002). Involved customers lead to loyalty gains. *Marketing News*, 36(2), 16.
- Brown, I., & Buys, M. (2005). A cross-cultural investigation into customer satisfaction with internet banking security. In *Proceedings of the 2005 annual research conference of the South African Institute of Computer Scientists and Information Technologists on IT Research in Developing Countries* (pp. 200-207). South African Institute for Computer Scientists and Information Technologists.
- Brown, I., Cajee, Z., Davies, D., & Stroebel, S. (2003). Cell phone banking: predictors of adoption in South Africa—an exploratory study. *International journal of information management*, 23(5), 381-394.
- Brown, J., Broderick, A. J., & Lee, N. (2007). Word of mouth communication within online communities: Conceptualizing the online social network. *Journal of interactive marketing*, 21(3), 2-20.
- Bruce, M., & Daly, L. (2006). Buyer behaviour for fast fashion. *Journal of Fashion Marketing and Management*, 10(3), 329-344.
- Byrne, B. (1998). *Structural equation modeling with LISREL, PRELIS and SIMPLIS: Basic concepts, applications and programming*. Mahwah, NJ: Lawrence Erlbaum Associates.

- Casaló, L. V., Flavián, C., & Guinalú, M. (2008). The role of satisfaction and website usability in developing customer loyalty and positive word-of-mouth in the e-banking services. *International Journal of Bank Marketing*, 26(6), 399-417.
- Casaló, L. V., Flavián, C., & Guinalú, M. (2008). Towards loyalty development in the e-banking business. *Journal of Systems and Information Technology*, 10(2), 120-134.
- Cheah, C. M., Teo, A. C., Sim, J. J., Oon, K. H., & Tan, B. I. (2011). Factors affecting Malaysian mobile banking adoption: An empirical analysis. *International Journal of Network and Mobile Technologies*, 2(3), 149-160.
- Cheung, C. M., Lee, M. K., & Thadani, D. R. (2009). The impact of positive electronic word-of-mouth on consumer online purchasing decision. In *Visioning and engineering the knowledge society. A Web Science Perspective* (pp. 501-510). Springer Berlin Heidelberg.
- Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of marketing research*, 43(3), 345-354.
- Chikomo, K., Chong, M. K., Arnab, A., & Hutchison, A. (2006). Security of mobile banking. University of Cape Town, South Africa, Tech. Rep., Nov, 1.
- Chong, M. K. (2006). Security of mobile banking: Secure SMS banking. Data Network Architectures Group. University of Cape Town, South Africa.
- Chou, L. D., Lee, C. C., Lee, M. Y., & Chang, C. Y. (2004). A tour guide system for mobile learning in museums. In *Wireless and Mobile Technologies in Education, 2004. Proceedings. The 2nd IEEE International Workshop on* (pp. 195-196). IEEE.
- Chou, Y., Lee, C., & Chung, J. (2004). Understanding m-commerce payment systems through the analytic hierarchy process. *Journal of Business Research*, 57(12), 1423-1430.
- Chu, S., & Yao-bin, L. (2009). The effect of online-to-mobile trust transfer and previous satisfaction on the foundation of mobile banking initial trust. In *Mobile Business, 2009. ICMB 2009. Eighth International Conference on* (pp. 1-6). IEEE.
- Chung, C. M., & Darke, P. R. (2006). The consumer as advocate: self-relevance, culture, and word-of-mouth. *Marketing Letters*, 17(4), 269-279.
- Clarke, R. (1999). Internet privacy concerns confirm the case for intervention. *Communications of the ACM*, 42(2), 60-67.

- Clemons, E. K., Gao, G. G., & Hitt, L. M. (2006). When online reviews meet hyperdifferentiation: A study of the craft beer industry. *Journal of Management Information Systems*, 23(2), 149-171.
- Coyles, S., & Gokey, T. C. (2002). Customer retention is not enough. *The McKinsey Quarterly*, 2(2), 81-89.
- Crabbe, M., Standing, C., Standing, S., & Karjaluoto, H. (2009). An adoption model for mobile banking in Ghana. *International Journal of Mobile Communications*, 7(5), 515-543.
- Damghaniyan *et al.* (2011). Investigation on perceived security in online banking trust. *Journal of information technology*. Tehran university
- Das, T. K., & Teng, B. S. (2001). Trust, control, and risk in strategic alliances: An integrated framework. *Organization studies*, 22(2), 251-283.
- Dasgupta, S., Paul, R., & Fuloria, S. (2011). Factors affecting behavioural intentions towards mobile banking usage: empirical evidence from India. *Romanian journal of marketing*, 3(1), 6-28.
- Davis, A., & Khazanchi, D. (2008). An Empirical Study of Online Word of Mouth as a Predictor for Multi-product Category e-Commerce Sales. *Electronic Markets*, 18(2), 130-141.
- Deepika, P. (2011). Mobile banking in India. Phd Thesis, Department of commerce, India.
- Dellarocas, C. (2003). The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms. *Management Science*, 49(10), 1407- 1424.
- Dellarocas, C., Zhang, X. M., & Awad, N. F. (2007). Exploring the value of online product reviews in forecasting sales: The case of motion pictures. *Journal of Interactive marketing*, 21(4), 23-45.
- Deng, Z., Lu, Y., Wei, K. K., & Zhang, J. (2010). Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China. *International Journal of Information Management*, 30(4), 289-300.
- Dewan, S. G. (2005). Mobile Payment Adoption in the US: A Cross-industry, Cross-platform Solution. *Journal of Information Privacy & Security*, 1(2).
- Diamantopoulos, A. and Sigauw, J.A. (2000), *Introducing LISREL*. London: Sage Publications.
- Dick, A. S., & Basu, K. (1994). Customer loyalty: toward an integrated conceptual framework. *Journal of the academy of marketing science*, 22(2), 99-113.

- Dodgson, M., Gann, D. M., & Salter, A. (2008). *The management of technological innovation: strategy and practice*. Oxford University Press.
- Donner, J. (2007). M-Banking and m-payments services in the developing world: complements or substitutes for trust and social capital. In *Preconference on Mobile Communication at the 57th Annual Conference of the Int. Communication Association*.
- Duan, W., Gu, B., & Whinston, A. B. (2008). The dynamics of online word-of-mouth and product sales—An empirical investigation of the movie industry. *Journal of retailing*, 84(2), 233-242.
- East, R., Hammond, K., Lomax, W., & Robinson, H. (2005). What is the effect of a recommendation?. *Marketing Review*, 5(2).
- Easterby-Snith, M., Thorpe, R and Lowe. A (1991), *Management Research: An Introduction*. Sage Publications. London
- Esmaili, E., Desa, M., Moradi, H., & Hemmati, A. (2011). The role of trust and other behavioral intention determinants on intention toward using internet banking. *International Journal of Innovation, Management and Technology*, 2(1), 95-100.
- Eze, U. C., Gan, G. G. G., Ademu, J., & Tella, S. A. (2008). Modelling user trust and mobile payment adoption: a conceptual Framework. *Communications of the IBIMA*, 3(29), 224-231.
- Faia-Correia, M., Patriotta, G., Brigham, M., & Corbett, J. M. (1999). Making sense of telebanking information systems: the role of organizational backups. *The Journal of Strategic Information Systems*, 8(2), 143-156.
- Flavián, C., & Guinalú, M. (2006). Consumer trust, perceived security and privacy policy: three basic elements of loyalty to a web site. *Industrial Management & Data Systems*, 106(5), 601-620.
- Ganesan, S. (1994). Determinants of long-term orientation in buyer-seller relationships. *the Journal of Marketing*, 1-19.
- Ganguli, S., & Roy, S. K. (2011). Generic technology-based service quality dimensions in banking: Impact on customer satisfaction and loyalty. *International Journal of Bank Marketing*, 29(2), 168-189.
- Garg, P. & Jham, V. (2006). „Indian Banks and ATM – An Empirical Study of Consumer Perceptions“. *Strategies of Winning Organizations*. Edited by Upinder Dhar, Santosh Dhar & Vinit Singh Chauhan. Excell Books. New Delhi. 516-23.

- Gefen, D., Karahanna, E. and Straub, D.W. (2003), "Trust and TAM in online shopping: an integrated model", *MIS Quarterly*, Vol. 27 No. 1.
- Gerdes, G. R., & Walton, J. K. (2002). Use of Checks and Other Noncash Payment Instruments in the United States, *The Fed. Res. Bull.*, 88, 360.
- Geyskens, I., Steenkamp, J. B. E., & Kumar, N. (1998). Generalizations about trust in marketing channel relationships using meta-analysis. *International Journal of Research in marketing*, 15(3), 223-248.
- Ghadialy, Z. (2006). Frequently asked questions on 4G. Retrieved 05 January 2012 from <http://www.3g4g.co.uk/4G/faq.html>
- Goswami, D., & Raghavendran, S. (2009). Mobile-banking: can elephants and hippos tango?. *Journal of Business Strategy*, 30(1), 14-20.
- Goyal, V., Pandey, U. S., & Batra, S. (2012). Mobile Banking in India: Practices, Challenges and Security Issues. *International Journal*, 1(2).
- Grabner-Kräuter, S., & Faullant, R. (2008). Consumer acceptance of internet banking: the influence of internet trust. *International Journal of bank marketing*, 26(7), 483-504.
- Grönroos, C. (2004). The relationship marketing process: communication, interaction, dialogue, value. *Journal of Business & Industrial Marketing*, 19(2), 99-113.
- Grönroos, C., Heinonen, F., Isoniemi, K., & Lindholm, M. (2000). The NetOffer model: a case example from the virtual marketspace. *Management decision*, 38(4), 243-252.
- Gu, J. C., Lee, S. C., & Suh, Y. H. (2009). Determinants of behavioral intention to mobile banking. *Expert Systems with Applications*, 36(9), 11605-11616.
- Gummesson, E. (2002). Relationship marketing and a new economy: it's time for de-programming. *Journal of Services Marketing*, 16(7), 585-589.
- Gupta, P. (2005). *Web Services: An Enabler for Mobile Banking*. An Intellect White Paper.
- Hallowell, R. (1996). The relationships of customer satisfaction, customer loyalty, and profitability: an empirical study. *International journal of service industry management*, 7(4), 27-42.
- Harris, L. C., & Goode, M. M. (2004). The four levels of loyalty and the pivotal role of trust: a study of online service dynamics. *Journal of retailing*, 80(2), 139-158.

- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the Internet?. *Journal of interactive marketing*, 18(1), 38-52.
- Herington, C., & Weaven, S. (2007). Can banks improve customer relationships with high quality online services?. *Managing Service Quality*, 17(4), 404-427.
- Herr, P. M., Kardes, F. R., & Kim, J. (1991). Effects of word-of-mouth and product-attribute information on persuasion: An accessibility-diagnostics perspective. *Journal of consumer research*, 17(4), 454.
- Hoq, M. Z., Sulatana, N., & Amin, M. (2010). The Effect of Trust, Customer Satisfaction and Image on Customers' Loyalty in Islamic Banking Sector. *South asian journal of management*, 17(1).
- Hu, L., & Evans, D. (2003). Secure aggregation for wireless networks. In *Applications and the Internet Workshops, 2003. Proceedings. 2003 Symposium on* (pp. 384-391). IEEE.
- Hu, L.T. and Bentler, P.M. (1999), "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives," *Structural Equation Modeling*, 6 (1), 1-55.
- Hu, X., Li, W., & Hu, Q. (2008). Are mobile payment and banking the killer apps for mobile commerce?. In *Hawaii International Conference on System Sciences, Proceedings of the 41st Annual* (pp. 84-84). IEEE.
- Humphrey, D. B., Pulley, L. B., & Vesala, J. M. (2000). The check's in the mail: why the United States lags in the adoption of cost-saving electronic payments. *Journal of Financial Services Research*, 17(1), 17-39.
- Hung, K. H. & Li, S. Y. (2007). The Influence of eWOM on Virtual Consumer Communities: Social Capital, Consumer Learning, and Behavioral Outcomes. *Journal of Advertising Research*, 47(4), 485.
- Hutchinson, D., & Warren, M. (2003). Security for internet banking: a framework. *Logistics Information Management*, 16(1), 64-73.
- InMobi. (2011). Media impact on media consumption in Malaysia. Retrieved from www.inmobi.com/research/consumer-research-2/
- ITU (2007) Global ICT Developments, ITU [online], Available at: <http://www.itu.int/ITU-D/ict/statistics/ict/index.html>

- Jaradat, M. I. R., & Twaissi, N. M. (2010). Assessing the Introduction of Mobile Banking in Jordan Using Technology Acceptance Model. *International Journal of Interactive Mobile Technologies*, 4(1).
- Javadin *et al.* (2011). Ethics in banking activities and its impact on relations between the bank and the customer. *Journal of Management*-117-136
- Jayawardhena, C. and Foley, P. (1998), "Overcoming constraints on electronic commerce ± Internet payment systems", *Journal of General Management*, Vol. 24 No. 2, pp. 66-82.
- Jeon, W., Kim, J., Lee, Y., & Won, D. (2011). A practical analysis of smartphone security. In *Human Interface and the Management of Information. Interacting with Information* (pp. 311-320). Springer Berlin Heidelberg.
- Jones, T. O., & Sasser, W. E. (1995). Why satisfied customers defect. *Harvard business review*, 73(6), 88.
- Jun, M., & Cai, S. (2001). The key determinants of internet banking service quality: a content analysis. *International Journal of Bank Marketing*, 19(7), 276-291.
- Kabir, M. R., Alam, M. M. D., & Alam, Z. (2009). Factors determining the Customer Satisfaction & Loyalty: A Study of Mobile Telecommunication Industry in Bangladesh.
- Kapoulas, A., Murphy, W., & Ellis, N. (2002). Say hello, wave goodbye: missed opportunities for electronic relationship marketing within the financial services sector?. *International Journal of Bank Marketing*, 20(7), 302-310.
- Karjaluoto, H., Koivumaki, T., & Salo, J. (2003). Individual differences in private banking: Empirical evidence from Finland. In *System Sciences, 2003. Proceedings of the 36th Annual Hawaii International Conference on* (pp. 9-pp). IEEE.
- Karnouskos, S. (2004). Mobile payment: a journey through existing procedures and standardization initiatives. *Communications Surveys & Tutorials, IEEE*, 6(4), 44-66.
- 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.
- Khalfan, A. M. S., AlRefaei, Y. S., & Al-Hajery, M. (2006). Factors influencing the adoption of internet banking in Oman: a descriptive case study analysis. *International Journal of Financial Services Management*, 1(2), 155-172.

- Kiecker, P., & Cowles, D. (2001). Interpersonal communication and personal influence on the Internet: A framework for examining online word-of-mouth. *Journal of Euromarketing*, 11(2), 71-88.
- Kim, G., Shin, B., & Lee, H. G. (2009). Understanding dynamics between initial trust and usage intentions of mobile banking. *Information Systems Journal*, 19(3), 283-311.
- Kim, H. J., Shin, K. H., & Swanger, N. (2009). Burnout and engagement: A comparative analysis using the Big Five personality dimensions. *International Journal of Hospitality Management*, 28(1), 96-104.
- Kim, K., & Prabhakar, B. (2000). Initial trust, perceived risk, and the adoption of internet banking. In *Proceedings of the twenty first international conference on Information systems* (pp. 537-543). Association for Information Systems.
- Kleijnen, M., De Ruyter, K., & Wetzels, M. (2004). Consumer adoption of wireless services: discovering the rules, while playing the game. *Journal of Interactive Marketing*, 18(2), 51-61.
- Kleijnen, M., Wetzels, M., & de Ruyter, K. (2004). Consumer acceptance of wireless finance. *Journal of Financial Services Marketing*, 8(3), 206-217.
- Kline, R.B. (2005), *Principles and Practice of Structural Equation Modeling* (2nd Edition ed.). New York: The Guilford Press.
- Knox, S. D., & Denison, T. J. (2000). Store loyalty: its impact on retail revenue. An empirical study of purchasing behaviour in the UK. *Journal of retailing and consumer services*, 7(1), 33-45.
- Koo, C., & Wati, Y. (2010). Toward an Understanding of the Mediating Role of "Trust" in Mobile Banking Service: An Empirical Test of Indonesia Case. *J. UCS*, 16(13), 1801-1824.
- Kordnaeij, A., Bakhshizadeh, A., & Shabany, R. (2013). The Outcomes of Relationship Marketing Strategy in Banking Industry by Emphasizing on Word of Mouth.
- Kotler, P. & Armstrong, G. (2006). *Principles of Marketing*. New Jersey: Pearson Education.
- Kozinets, R. V. (2002). The field behind the screen: using netnography for marketing research in online communities. *Journal of marketing research*, 39(1), 61-72.

- Kuisma, T., Laukkanen, T., & Hiltunen, M. (2007). Mapping the reasons for resistance to Internet banking: A means-end approach. *International Journal of Information Management*, 27(2), 75-85.
- Laaksonen, M. (1993). Retail patronage dynamics: learning about daily shopping behavior in contexts of changing retail structures. *Journal of Business Research*, 28(1), 3-174.
- Laforet, S., & Li, X. (2005). Consumers' attitudes towards online and mobile banking in China. *International Journal of Bank Marketing*, 23(5), 362-380.
- Lam, R., Burton, S., & Lo, H. P. (2009). Customer tradeoffs between key determinants of SME banking loyalty. *International Journal of Bank Marketing*, 27(6), 428-445.
- Laroche, M., Rosenblatt, J. A., & Manning, T. (1986). Services used and factors considered important in selecting a bank: an investigation across diverse demographic segments. *International Journal of Bank Marketing*, 4(1), 35-55.
- LaRose, R., Rifon, N., Liu, S., & Lee, D. (2005). Understanding online safety behavior: A multivariate model. In *The 55th Annual Conference of the International Communication Association*, New York City.
- Laukkanen, T. (2007). Internet vs. mobile banking: comparing customer value perceptions. *Business Process Management Journal*, 13(6), 788-797.
- Laukkanen, T., & Cruz, P. (2009). Comparing consumer resistance to mobile banking in Finland and Portugal. In *e-Business and Telecommunications* (pp. 89-98). Springer Berlin Heidelberg.
- Laukkanen, T., & Lauronen, J. (2005). Consumer value creation in mobile banking services. *International Journal of Mobile Communications*, 3(4), 325-338.
- Lee, J., & Lee, J. N. (2009). Understanding the product information inference process in electronic word-of-mouth: An objectivity-subjectivity dichotomy perspective. *Information & Management*, 46(5), 302-311.
- Lee, J., Park, D. H., & Han, I. (2008). The effect of negative online consumer reviews on product attitude: An information processing view. *Electronic Commerce Research and Applications*, 7(3), 341-352.
- Lee, K. C., & Chung, N. (2009). Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective. *Interacting with computers*, 21(5), 385-392.

- Lee, M.K.O. and Turban, E. (2001), ``A trust model for consumer Internet shopping'', *International Journal of Electronic Commerce*, Vol. 6 No. 4, pp. 75-91.
- Lewis, B. R., & Soureli, M. (2006). The antecedents of consumer loyalty in retail banking. *Journal of consumer Behaviour*, 5(1), 15-31.
- Li, D., Lin, D., Zhao, G., & Huang, B. (2009). Design and correctness proof of a security protocol for mobile banking. *Bell Labs Technical Journal*, 14(1), 259-265.
- Li, X., & Hitt, L. M. (2008). Self-selection and information role of online product reviews. *Information Systems Research*, 19(4), 456-474.
- Lin, C. S., Wu, S., & Tsai, R. J. (2005). Integrating perceived playfulness into expectation-confirmation model for web portal context. *Information & management*, 42(5), 683-693.
- Lin, H. F. (2011). An empirical investigation of mobile banking adoption: the effect of innovation attributes and knowledge-based trust. *International journal of information management*, 31(3), 252-260.
- Lin, H. H., & Wang, Y. S. (2006). An examination of the determinants of customer loyalty in mobile commerce contexts. *Information & management*, 43(3), 271-282.
- Lin, M. Y., & Chang, L. H. (2003). Determinants of habitual behavior for national and leading brands in China. *Journal of product & brand Management*, 12(2), 94-107.
- Liu, Z., Min, Q., & Ji, S. (2009). An empirical study on mobile banking adoption: The role of trust. In *Electronic Commerce and Security, 2009. ISECS'09. Second International Symposium on* (Vol. 2, pp. 7-13). IEEE.
- Lu, Y., Yang, S., Chau, P. Y., & Cao, Y. (2011). Dynamics between the trust transfer process and intention to use mobile payment services: A cross-environment perspective. *Information & Management*, 48(8), 393-403.
- Luarn, P., & Lin, H. H. (2005). Toward an understanding of the behavioral intention to use mobile banking. *Computers in human behavior*, 21(6), 873-891.
- Luo, X., Li, H., Zhang, J., & Shim, J. P. (2010). Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: An empirical study of mobile banking services. *Decision support systems*, 49(2), 222-234.

- Macaithur credit union. (2010) Mobile banking fags Retrieved 4 September 2011 from <http://www.macarthurcu-com.au/mobile-banknig-faqs-html>
- MacCallum, R.C., Browne, M.W., and Sugawara, H., M. (1996), "Power Analysis and Determination of Sample Size for Covariance Structure Modeling," *Psychological Methods*, 1 (2), 130-49.
- Mägi, A. (1999). Store loyalty?: an empirical study of grocery shopping.
- Mahdi, M. O. S. (2012). Gender Views on Trust in E-Banking Services in Saudi Banks. *World Review of Business Research*, 2(1), 36-49.
- Malhotra, R. (2011). Factors Affecting the Adoption of Mobile Banking in New Zealand. Thesis Paper presented for Masters in Information Technology. Massey University, Albany Campus, New Zealand.
- Mallat, N. 2006. "Consumer and Merchant Adoption of Mobile Payments". Doctoral Dissertation, Helsinki School of Economics.
- Mallat, N., Rossi, M., & Tuunainen, V. K. (2004). Mobile banking services. *Communications of the ACM*, 47(5), 42-46.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734.
- McKnight, D. H., & Chervany, N. L. (2001). Trust and distrust definitions: One bite at a time. In *Trust in Cyber-societies* (pp. 27-54). Springer Berlin Heidelberg.
- Methlie, L., & Nysveen, H. (1999). Loyalty of online bank customers. *Journal of Information Technology*, 14, 375–386.
- Miles, J. and Shevlin, M. (1998), "Effects of sample size, model specification and factor loadings on the GFI in confirmatory factor analysis," *Personality and Individual Differences*, 25, 85-90.
- Min, H. & Galle, W.P. (1999) Electronic commerce usage in b2b business purchasing. *International Journal of Operation and Production Management*, 19, 909–921.
- Mizerski, R. W. (1982). An attribution explanation of the disproportionate influence of unfavorable information. *Journal of Consumer Research*, 301-310
- M-Metrics (2006), Report on Mobile Content Consumption in Western Europe.
- Mohd Daud, N., Kassim, M., Ezalin, N., Said, M., Wan, W. S. R., & Mohd Noor, M. M. (2011). Determining Critical Success Factors of Mobile Banking Adoption in Malaysia. *Australian Journal of Basic & Applied Sciences*, 5(9).

- Mols, N. (1998), "The behavioral consequences of PC banking", *International Journal of Bank Marketing*, Vol. 16 No. 5, pp. 195-201.
- Monica kaya, M. (2011). *Trust and security risks in mobile banking* (Doctoral dissertation, University of Oxford)
- Moorman, C., Deshpande, R. and Zallman. G. (1993), "Factor affecting trust marketing research relationships", *Journal of Marketing*, Vol. 57, January, pp. 81-101.
- Morawczynski, O., & Miscione, G. (2008). Examining trust in mobile banking transactions: The case of M-PESA in Kenya. In *Social Dimensions of Information and Communication Technology Policy* (pp. 287-298). Springer US.
- Mulaik, S.A., James, L.R., Van Alstine, J., Bennet, N., Lind, S., and Stilwell, C.D. (1989), "Evaluation of Goodness-of-Fit Indices for Structural Equation Models," *Psychological Bulletin*, 105 (3), 430-45.
- Muñoz-Leiva, F., Luque-Martínez, T., & Sánchez-Fernández, J. (2010). How to improve trust toward electronic banking. *Online Information Review*, 34(6), 907-934.
- Nah, F. F. H., Siau, K., & Sheng, H. (2005). The value of mobile applications: a utility company study. *Communications of the ACM*, 48(2), 85-90.
- Narendiran, C., Rabara, S. A., & Rajendran, N. (2008). Performance evaluation on end-to-end security architecture for mobile banking system. In *Wireless Days, 2008. WD'08. 1st IFIP* (pp. 1-5). IEEE.
- Narendiran, C., Rabara, S. A., & Rajendran, N. (2009). Public key infrastructure for mobile banking security. In *Global Mobile Congress 2009* (pp. 1-6). IEEE.
- Ndubisi, N. O. (2007). Relationship marketing and customer loyalty. *Marketing intelligence & planning*, 25(1), 98-106.
- Neal, A., Griffin, M. A., & Hart, P. M. (2000). The impact of organizational climate on safety climate and individual behavior. *Safety Science*, 34(1), 99-109.
- Nie, J., & Hu, X. (2008). Mobile banking information security and protection methods. In *Computer Science and Software Engineering, 2008 International Conference on* (Vol. 3, pp. 587-590). IEEE
- Nunnally, J. C., Bernstein, I. H., & Berge, J. M. T. (1967). *Psychometric theory* (Vol. 226). New York: McGraw-Hill.

- Oliver Richard, L. (1997). *Satisfaction: A behavioral perspective on the consumer*. New York ' NY: Irwin-McGraw-Hill.
- Oliver, R. L. (1999). Whence consumer loyalty?. *Journal of marketing*, 63(4).
- Omar, A. B., Sultan, N., Zaman, K., Bibi, N., Wajid, A., & Khan, K. (2011). Customer Perception towards Online Banking Services: Empirical Evidence from Pakistan. *Journal of Internet Banking & Commerce*, 16(2).
- Ondiege, P. (2010). Mobile banking in Africa: Taking the bank to the people. *Africa Economic Brief*, 1(8), 1–16.
- Panjwani, S., & Cutrell, E. (2010). Usably secure, low-cost authentication for mobile banking. In *Proceedings of the Sixth Symposium on Usable Privacy and Security* (p. 4). ACM.
- Park, C., & Lee, T. M. (2009). Information direction, website reputation and eWOM effect: A moderating role of product type. *Journal of Business Research*, 62(1), 61-67.
- Park, D. H., & Kim, S. (2009). The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews. *Electronic Commerce Research and Applications*, 7(4), 399-410.
- Paul, P. (1996) Marketing on the internet. *Journal of Consumer Marketing*, 13, 307–320. Pauleen, D.J. (2003) An inductively derived model of leader-initiated relationship building with virtual team members. *Journal of Management Information Systems*, 20, 227–257.
- Pavlou, P. A., & Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: an extension of the theory of planned behavior. *MIS quarterly*, 115-143.
- Petrick, J. F., & Backman, S. J. (2002). An examination of the determinants of golf travelers' satisfaction. *Journal of Travel Research*, 40(3), 252-258.
- Petrova, K. (2007). Mobile learning as a mobile business application. *International Journal of Innovation and Learning*, 4(1), 1-13.
- Polatoglu, V. N., & Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of Internet banking services. *International Journal of Bank Marketing*, 19(4), 156-165.
- Pousttchi, K. (2003). Conditions for acceptance and usage of mobile payment procedures.

- Pousttchi, K., & Schurig, M. (2004). Assessment of today's mobile banking applications from the view of customer requirements. In *System Sciences, 2004. Proceedings of the 37th Annual Hawaii International Conference on* (pp. 10-pp). IEEE.
- Pousttchi, K., & Zenker, M. (2003). Current mobile payment procedures on the german market from the view of customer requirements. In *Database and Expert Systems Applications, 2003. Proceedings. 14th International Workshop on* (pp. 870-874). IEEE.
- Pritchard, M. P., Havitz, M. E., & Howard, D. R. (1999). Analyzing the commitment-loyalty link in service contexts. *Journal of the Academy of Marketing Science*, 27(3), 333-348.
- R.C. MacCallum, M.W. Browne, H.W. Sugawara, Power analysis and determination of sample size for covariance structure modeling, *Psychological Methods* 1, 1996, pp. 130–149.
- Ratnasingham, P. (1998) The importance of trust in electronic commerce. *Internet Research: Electronic Networking Application and Policy*, 8, 313–321.
- Reichheld, F. F., & Teal, T. (1996). *The Loyalty Effect*": Boston. Rogers, EM (1962): *Diffusion of Innovations*, New York.
- Reichheld, Frederick F. (1993). Loyalty-based management. *Harvard Business Review*, 71(2), 64–73.
- Ribbink, D., Van Riel, A. C., Liljander, V., & Streukens, S. (2004). Comfort your online customer: quality, trust and loyalty on the internet. *Managing service quality*, 14(6), 446-456.
- Riivari, J., 2005. Mobile banking: a powerful new marketing and CRM tool for financial services companies all over Europe. *Journal of Financial Services Marketing*, 10 (1), 11–20.
- Rust, R. T., Zeithaml, V. A., & Lemon, K. N. (2001). *Driving customer equity: How customer lifetime value is reshaping corporate strategy*. Simon and Schuster.
- Saleh, Z., & Alsmadi, I. (2010). Using RFID to enhance mobile banking security. *International Journal of Computer Science and Information Security (IJCSIS)*, 8(9), 176-182.
- Saunders, M., Lewis, P. and Thornhill, A. (2003), *Research Methods for Business Students*, 3rd ed., Pearson Education, Harlow.
- Sekaran, U. (1992). *Business Research Methods*.

- Sekaran, U. (2006). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Sen, S. (2008). Determinants of Consumer Trust of Virtual Word-of-Mouth: An Observation Study from a Retail Website. *Journal of American Academy of Business, Cambridge*, 14(1), 30.
- Sen, S., & Lerman, D. (2007). Why are you telling me this? An examination into negative consumer reviews on the web. *Journal of interactive marketing*, 21(4), 76-94.
- Shen, Y. C., Huang, C. Y., Chu, C. H., & Hsu, C. T. (2010). A benefit–cost perspective of the consumer adoption of the mobile banking system. *Behaviour & Information Technology*, 29(5), 497-511.
- Shirali-Shahreza, M. (2007). Improving mobile banking security using steganography. In *Information Technology, 2007. ITNG'07. Fourth International Conference on* (pp. 885-887). IEEE.
- Silverman, G. (2001). *The Secrets of Word-of-Mouth Marketing: How to Trigger Exponential Sales Through Runaway Word-of-Mouth*. New York: American Marketing Association.
- Singh, J. (1988). Consumer complaint intentions and behavior: definitional and taxonomical issues. *The journal of Marketing*, 93-107.
- Smith, D., Menon, S., & Sivakumar, K. (2005). Online peer and editorial recommendations, trust, and choice in virtual markets. *Journal of interactive marketing*, 19(3), 15-37.
- Srinivasan, S. S., Anderson, R., & Ponnavaolu, K. (2002). Customer loyalty in e-commerce: an exploration of its antecedents and consequences. *Journal of retailing*, 78(1), 41-50.
- Steffes, E. M., & Burgee, L. E. (2009). Social ties and online word of mouth. *Internet Research*, 19(1), 42-59.
- Stratigos, A. (1999). Measuring end-user loyalty matters. *Online*, 23(6), 74-78.
- Suoranta, M., & Mattila, M. (2004). Mobile banking and consumer behaviour: new insights into the diffusion pattern. *Journal of Financial Services Marketing*, 8(4), 354-366.
- Swan, J. E., & Oliver, R. L. (1989). Postpurchase communications by consumers. *Journal of Retailing*.

- Tabachnick, B.G. and Fidell, L.S. (2007), *Using Multivariate Statistics* (5th ed.). New York: Allyn and Bacon.
- Tan, C. T., & Chua, C. (1986). Intention, attitude and social influence in bank selection: a study in an oriental culture. *International Journal of Bank Marketing*, 4(3), 43-53.
- Tavasoli, S. (2011), investigation on the role of website usability and customer satisfaction in customer loyalty and WOM, master thesis ,Zanjan university,Iran.
- Tiwari, R., & Buse, S. (2007). *The mobile commerce prospects: a strategic analysis of opportunities in the banking sector* (p. 33). Hamburg: Hamburg University Press.
- Turnbull, P. W., & Gibbs, M. J. (1989). The selection of banks and banking services among corporate customers in South Africa. *International Journal of Bank Marketing*, 7(5), 36-39.
- Turner, L. W. and Reisinger, Y. (2001). Shopping satisfaction for domestic tourists. *Journal of Retailing and Consumer Services*, 8, 15-27.
- UNCTAD. (2007) *Science and Technology for Development: A New Paradigm for ICT*, Information Economy Report, New York.
- van Rensburg, H. (2007). If7rv mobile banking is not Internet banking. Retrieved <http://www.finextra.com/community/fullblog.aspx?id=158>
- Vasudevan, A., Owusu, E., Zhou, Z., Newsome, J., & McCune, J. M. (2011). Trustworthy Execution on Mobile Devices: What security properties can my mobile platform give me?(CMU-CyLab-11-023).
- Walker, R.H., Craig-Lees, M., Hecker. R. and Francis, H. (2002), " Technology-enabled service delivery: an investigation of reasons affecting customer adoption and rejection", *International Journal of Service Industry Management*, Vol. 13 No. 1, pp. 91-106.
- Wang, H., Lee, M. K., & Wang, C. (1998). Consumer privacy concerns about Internet marketing. *Communications of the ACM*, 41(3), 63-70.
- Wang, N., Shen, X. L., & Sun, Y. (2013). Transition of electronic word-of-mouth services from web to mobile context: A trust transfer perspective. *Decision Support Systems*, 54(3), 1394-1403.

- Weigold, T., & Hiltgen, A. (2011). Secure confirmation of sensitive transaction data in modern internet banking services. In *Internet Security (WorldCIS), 2011 World Congress on* (pp. 125-132). IEEE.
- Wessels, L., & Drennan, J. (2010). An investigation of consumer acceptance of M-banking. *International journal of bank marketing*, 28(7), 547-568.
- Yaya, L. H. P., Marimon, F., & Casadesus, M. (2011). Customer's loyalty and perception of ISO 9001 in online banking. *Industrial Management & Data Systems*, 111(8), 1194-1213.
- Yee, B. Y., & Faziharudean, T. M. (2010). Factors affecting customer loyalty of using Internet banking in Malaysia. *Journal of Electronic Banking Systems*, 2010(2010), 21.
- Yin, R.K. (2004). *Case Study Research, Design and Methods*. 4th ed., Newbury Park: Sage Publications.
- Zhou, T. (2011). An empirical examination of initial trust in mobile banking. *Internet Research*, 21(5), 527-540.
- Zhou, T. (2012). Examining mobile banking user adoption from the perspectives of trust and flow experience. *Information Technology and Management*, 13(1), 27-37.
- Zhou, T. (2012). Examining mobile banking user adoption from the perspectives of trust and flow experience. *Information Technology and Management*, 13(1), 27-37.
- Zhou, T., Lu, Y., & Wang, B. (2010). Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior*, 26(4), 760-767.
- Zhuo, Q., & Li, Y. (2010). Chinese Mobile Banking Service Evaluation Based on AHP Method. In *E-Product E-Service and E-Entertainment (ICEEE), 2010 International Conference on* (pp. 1-5). IEEE.