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FACTORS INFLUENCING INTENTION TO USE MOBILE BANKING IN BANK SIMPANAN NASIONAL USING MODIFIED TECHNOLOGY READINESS ACCEPTANCE MODEL (TRAM)



UNIVERSITI UTARA MALAYSIA 2016

FACTORS INFLUENCING INTENTION TO USE MOBILE BANKING IN BANK SIMPANAN NASIONAL USING MODIFIED TECHNOLOGY READINESS ACCEPTANCE MODEL (TRAM)

BY:



Thesis Submitted to
School of Business Management (SBM),
Universiti Utara Malaysia,
In Partial Fulfilment of the Requirements for the
Master of Science (Management)

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ABSTRACT

The aspiration of this research is to study the factors that influence the intention to use mobile banking in Malaysian perspective by using integrated model TRAM. The theoretical framework of this research is the combination of technology readiness (TR) and technology acceptance model (TAM), where perceived usefulness completely mediates the impact of technology readiness towards the intention to use mobile banking. This research employed the full 16-item of technology readiness index (Parasuraman and Colby, 2014) to measure optimism, innovativeness, discomfort, and insecurity; whereas perceived usefulness and intention to use were adapted from Davis (1989) and Wang et al., (2006). Based on the research analysis, optimism and innovativeness have a positive effect on customer's perceived usefulness of mobile banking. Whereas, discomfort and insecurity indicate a weak correlation towards perceived usefulness. On the contrary, perceived usefulness has a strong correlation in influencing the customer's intention to use mobile banking. This research provides a useful understanding of customer's perceived usefulness and their intention to use mobile banking.

Key terms: Mobile Banking, Technology Readiness, Technology Acceptance, TRAM

Universiti Utara Malaysia

ABSTRAK

Kajian ini adalah untuk mengkaji faktor-faktor yang mempengaruhi niat untuk menggunakan perbankan mudah alih di Malaysia dengan menggunakan model TRAM bersepadu. Rangka kerja teori kajian ini adalah gabungan kesediaan teknologi (TR) dan teknologi model penerimaan (TAM), di mana tanggapan kebergunaan menjadi pemboleh ubah pengantara yang memberi kesan kepada kesediaan teknologi terhadap niat untuk menggunakan perbankan mudah alih. Kajian ini mempunyai 16 soalan yang melibatkan indeks kesediaan teknologi (Parasuraman dan Colby, 2014) untuk mengukur keyakinan, daya inovasi, rasa tidak selesa, dan tidak selamat; manakala soalan bagi tanggapan kebergunaan dan niat untuk menggunakan perbankan mudah alih diadaptasikan daripada kajian Davis (1989) dan Wang et al., (2006). Berdasarkan analisis kajian, keyakinan dan inovasi mempunyai kesan positif ke atas tanggapan kebergunaan pelanggan terhadap perbankan mudah alih. Manakala, rasa tidak selesa dan tidak selamat menunjukkan korelasi yang lemah ke arah perasaan kebergunaan perbankan mudah alih. Sebaliknya, tanggapan kebergunaan mempunyai korelasi yang kuat dalam mempengaruhi niat pelanggan untuk menggunakan perbankan mudah alih. Kajian ini membantu memberikan maklumat yang berguna tentang pandangan pelanggan terhadap tanggapan kebergunaan perbankan mudah alih dan hasrat mereka untuk menggunakannya. . Universiti Utara Malaysia

Kata kunci: Perbankan mudah alih, Kesediaan teknologi, Penerimaan teknologi, TRAM.

ACKNOWLEDGEMENT

In the name of Allah, the Most Gracious and Most Merciful. Praise to Allah S. W. T.

The Creator and Guardian of the universe. Praise and peace be upon Prophet

Muhammad S.A. W; the last messenger of Allah, his family and his companions,

from whom we gain the enlightenment.

My greatest gratitude to Allah SWT, the Most Gracious and the Most Merciful for giving me a chance, time, and ability to perform this study and for all the chances He has given to me until now. All my efforts will end for nothing without His blessing.

Firstly, I would like to express my sincere gratitude to my advisor, Dr Nazim Baluch for the continuous support of my master study and related research, for his patience, motivation, and immense knowledge. His guidance helped me in all the time of research and writing of this thesis. I could not have imagined having a better advisor for my study.

I would like to thank my family: especially my dad, Abdul Rani Saad and my mum, Zuraini Zahid for supporting me spiritually throughout writing this thesis and my life in general. I am forever gratefully for their love, understanding, and encouragement. They are amazing parents ever!

Last but not least, I thank my fellow friends, Nurul Nadhrah Hasni, Siti Hanis Jamail, Maisarah Masri and Nur Afifa for the stimulating discussions, for the sleepless nights we were working together before deadlines, and for all the crazy jokes and fun we have had in the last two years. Also, I thank a special friend of mine, Muhd Lokman Kamaruzaman for endless support and encouragement even though from far.

There is no way I could have completed this research alone. I am deeply grateful for the help and assistance I received from my family, friends, and colleagues.

Thank you so much!

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LIST OF ABBREVIATIONS

ANOVA : Analysis of Variance

ATM : Automated Teller Machine

BAFIA : Banking and Financial Institution Act

BSN : Bank Simpanan Nasional

CIMB : Commerce International Merchant Bankers Berhad

DBS : The Development Bank of Singapore Limited

DIS : Discomfort

DV : Dependent Variable

HSBC : Hong Kong and Shanghai Banking Corporation

IBA : Islamic Banking Act

INN : Innovativeness

INS : Insecurity

ITU : Intention to Use

IV : Independent Variable

MV : Mediator Variable

NTRS : National Technology Readiness Survey

OPT : Optimism

PDA : Personal Digital Assistance

PU : Perceived Usefulness

SIM : Subscriber Identity Module

SPM : Sijil Pelajaran Malaysia

SPSS : Statistical Package for Social Science

SST : Self-Service Technology

STPM : Sijil Tinggi Pelajaran Malaysia

TAM : Technology Acceptance Model

TR : Technology Readiness

TRA : Theory of Reasoned Action

TRAM : Technology Readiness Acceptance Model

TRI : Technology Readiness Index

UK : United Kingdom

VIF : Variance Inflation Factor

CHAPTER 1

INTRODUCTION

This chapter consists of eight major sections namely; (i) introduction of mobile banking, (ii) background of study, (iii) statement of research problem, (iv) research questions, (v) research objectives, (vi) significance of the study, and (vii) organization of the thesis. The purpose of this chapter is to introduce the context of the research and the structure of the thesis, which explains the contents of the subsequent chapters briefly.

1.0 Introduction

Financial institution have undergone an endless innovation, exclusively in the past decade. The revolution in banking are catalysts to technology advancements, global commerce, competitiveness and customer demands. These financial service providers were required to act fast to develop and to adopt a new method of delivering the services to meet the customer expectations while maintaining competitiveness. The advancement of technology, especially in the mobile phone has provided windows of opportunities for the financial institutions to bring out new financial products and services to meet up the prospect. One of the favourite financial innovations is mobile banking.

Mobile banking viewed as a part of electronic banking with customers connecting to their bank via a mobile device such as cell phone. Drexelius and Herzig (2001) also defines mobile banking as the platform to conduct bank transactions via an electronic device, or more broadly – to carry out financial transactions via a portable terminal. Nowadays, mobile banking services are more accessible via devices such as smartphones and tablets to provide financial

The contents of the thesis is for internal user only

REFERENCE

- A.T. Kearney, Inc. (2013). Banking in a Digital World (pp. 1-23). Retrieved from https://www.atkearney.com/documents/10192/3054333/Banking+in+a+Digital+World.pdf/91231b20-788e-41a1-a429-3f926834c2b0 Assessed (30.01.2016)
- Aboelmaged, M., & R. Gebba, T. (2013). Mobile Banking Adoption: An Examination Of Technology Acceptance Model And Theory Of Planned Behavior. International Journal Of Business Research And Development, 2(1), 35-50.
- Ajzen I. (1991), "The Theory Of Planned Behavior". Organizational Behavior And Human Decision Processes, Vol.50(2), Pp. 179-211.
- Al-Jabri, I. & Sohail, M. (2016). Mobile Banking Adoption: Application of Diffusion of Innovation Theory. Journal Of Electronic Commerce Research, 13(4), 379-391.
- Amin, H. (2008). Factors Affecting The Intentions Of Customers In Malaysia To Use Mobile Phone Credit Cards. Management Research News, 31(7), 493-503.
- Amin, H., Baba, R., & Muhammad, M. (2007). An Analysis Of Mobile Banking Acceptance By Malaysian Customers. Sunway Academic Journal, 4, 1-12.
- Amin, H., Supinah, R., Mohd Aris, M., & Baba, R. (2012). Receptiveness Of Mobile Banking By Malaysian Local Customers In Sabah: An Empirical Investigation. Journal Of Internet Banking And Commerce, 17(1).
- Ashta, A. (2010), Evolution Of Mobile Banking Regulations, [Online] Available: Http://Www.Arraydev.Com/ Commerce /Jibc/ 0306-04.Html Assessed (15.12.2015).
- Bank Negara Malaysia, (2011). Financial Sector Blueprint 2011–2020. Bank Negara Malaysia. Retrieved From http://www.Bnm.Gov.My/Index.Php?Ch=En_Publication_Catalogue&Pg=En_Publication_Blueprint&Ac=7&Lang=En_Assessed (05.01.2016)
- Bank Negara Malaysia. (2016). Bank Negara Malaysia. Retrieved 18 March 2016, from http://www.bnm.gov.my/payment/statistics/pdf/04_internet_banking.pdf

- Banking and Financial Institutions Act. (1989). Bank Negara Malaysia. Retrieved 18 January 2016, from http://www.bnm.gov.my/documents/act/en_bafia.pdf
- Baron, R. & Kenny, D. (1986). The moderator—mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal Of Personality And Social Psychology, 51(6), 1173-1182. http://dx.doi.org/10.1037/0022-3514.51.6.1173
- Başgöze, P. (2015). Integration Of Technology Readiness (Tr) Into The Technology Acceptance Model (Tam) For M-Shopping. International Journal Of Scientific Research And Innovative Technology, 2(3), 26-35.
- Bitner, Mary; Ostrom, Amy; and Neuter, Natthew (2002). "Implementing Successful Self-service Technologies," Academy of Management Executive, November, 16(4), 96-109.
- BNM List of Licensed Banking Institutions in Malaysia. (2016). Bnm.gov.my.

 Retrieved 9 January 2016, from
 http://www.bnm.gov.my/index.php?ch=13&cat=banking
- British Bankers Association. (2015). World of Change (pp. 1-53). Old Broad Street, London: BBA, Pinners Hall. Retrieved from
- 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.
- Cheah, Teo, Sim, Oon & Tan (2011). Factors Affecting Malaysian Mobile Banking Adoption: An Empirical Analysis. International Journal of Network and Mobile Technologies 2(3).
- Chen, S., Chen, H., & Chen, M. (2009). Determinants Of Satisfaction And Continuance Intention Towards Self-Service Technologies. Industry Mgmt. & Data Systems, 109(9), 1248-1263.
- Chen, Z.X., Aryee, S. and Lee, C. (2005), "Test of a mediation model of perceived organizational support", Journal of Vocational Behavior, Vol. 66, pp. 457-70.
- Coakes, S. J. & Steed, L. G. (2003). SPSS: Analysis without Anguish. Australia: John Wiley & Sons, Ltd.

- Dabholkar, P.A. and Bagozzi, R.P. (2002), "An attitudinal model of technology-based self-service: Moderating effects of consumer traits and situational factors", Journal of the Academy of Marketing Science, 30(3), pp. 184-201.
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease Of Use, And User Acceptance Of Information Technology. MIS Quarterly, Vol. 13, No. 3.Pp. 319-340
- DBS Group Research, (2015). Regional Industry Focus Asean Banks (Pp. 1-26). Singapore.
- Drexelius, K. & Herzig, M. (2001). Mobile banking and mobile brokerage Successful Applications of Mobile Business?. International Management & Consulting, 16(2), 20-23.
- Ensor, B., Montez, T. And Wannemacher, P. (2012), The State Of Mobile Banking 2012, Forrester Research, Usa http://Interact.F5.Com/Rs/F5/Images/Forrester%20report%20the%20state%20of%20mobile%20banking%202012.Pdf Assessed (24.12.2015)
- Erdoğmuş, N. & Esen, M. (2011). An Investigation Of The Effects Of Technology Readiness On Technology Acceptance In E-Hrm. Procedia Social And Behavioral Sciences, 24, 487-495.
- Godoe P. and Johansen, T.S. (2012). Understanding Adoption of New Technologies: Technology Readiness and Technology Acceptance as an Integrated Concept, Journal of European Psychology Students, 3, 38-52.
- Guhr, N., Loi, T., Wiegard, R., & Breitner, M. (2013). Technology Readiness In Customers' Perception And Acceptance Of Mobile-Payment: An Empirical Study In Finland, Germany, The Usa And Japan. In 11th International Conference On Wirtschaftsinformatik (Pp. 119-133). Leipzig, Germany.
- Hair, J., Bush, R., & Ortinau, D. (2002). Research Within a Changing Information Environment (2nd ed.). The McGraw-Hill Companies, Inc.
- Hair, Jr., J. F., Money, A. H., Samouel, P. & Page, M. (2007). Research methods for business. Chichester: John Willey & Sons Ltd.
- Hamzah, Z. (2005). Managing Legal Risks In Mobile Banking. New Straits Times, P.12, September 22, 2005.
- Hernandez, J. (2011). The Regulatory Landscape Of Mobile Banking. Presentation, 11th Global Symposium For Regulators "Smart Regulation

- For A Broadband World" Armenia, Colombia, 21 September 2011. Available At Https://Www.Itu.Int/Itu-D/Treg/Events/Seminars/Gsr/Gsr11/Documents/Session_1_Hernandez.Pd f. Accessed (06.04.2016)
- House Of Lords. (2015). Make Or Break: The UK's Digital Future. London: Authority Of The House Of Lords.
- Hunter, G.K. and Perreault, W.D. Jr (2007), "Making sales technology effective", Journal of Marketing, Vol. 71 No. 1, pp. 16-34.
- Islamic Banking Act. (1983). Bank Negara Malaysia. Retrieved 10 December 2015, from http://www.bnm.gov.my/documents/act/en_ib_act.pdf
- Karahanna, E., Straub, D.W. And Chervany, N.L. (1998), "Information Technology Adoption Across Time: A Cross-Sectional Comparison Of Pre-Adoption And Post-Adoption Beliefs", Mis Quarterly, Vol. 23 No. 2, Pp. 183-213.
- Kleijnen, M., Wetzels, M., and Ruyter, K. (2004). Consumer acceptance of wireless finance.
- Kohli, K. (2004). SMS In Banking. Paladion Knowledge Series, Issue January 2004.
- Krejcie, R. V., and Morgan, D. W. (1970). Determining Sample Size for Research Activities. Educational and Psychological Measurement.
- Krishanan, Khin & Teng (2015). Attitude towards Using Mobile Banking in Malaysia: A Conceptual Framework. British Journal of Economics, Management & Trade 7(4).
- Lai & Ahmad (2015). Consumers' Intention to Use a Single Platform E-Payment System: A Study Among Malaysian Internet and Mobile Banking Users. Journal of Internet Banking and Commerce 20(1).
- Lam, S. Y., J. Chiang, and A. Parasuraman. (2008), The Effects of the Dimensions of Technology Readiness on Technology Acceptance: An Empirical Analysis, Journal of Interactive Marketing, 22(4), pp 19-39.
- Laukkanen, T., Sinkkonen, S., Kivijärvi, M., & Laukkanen, P. (2007). Innovation resistance among mature consumers. Journal Of Consumer Marketing, 24(7), 419-427. http://dx.doi.org/10.1108/07363760710834834 Assessed (06.04.2016).

- Leclercq, A. (2007). The perceptual evaluation of information systems using the construct of user satisfaction: case study of a large French group. ACM SIGMIS Database, 38(2), 27-60.
- Lee, H. and Yang, K. (2013), "Interpersonal service quality, self-service technology (SST) service quality and retail patronage", Journal of Retailing and Consumer Service, 20(1), pp. 51-57.
- Liljander, V., Gillberg, F., Gummerus, J. and van Riel, A. (2006), "Technology readiness and the evaluation and adoption of self-service technologies", Journal of Retailing and Consumer Services, 13(3), pp. 177-91
- Lin, C., Shih, H., & Sher, P. (2007). Integrating Technology Readiness Into Technology Acceptance: The Tram Model. Psychology And Marketing, 24(7), 641-657.
- Lin, J. & Chang, H. (2011). The Role Of Technology Readiness In Self-Service Technology Acceptance. Managing Service Quality, 21(4), 424-444.
- Lin, J., & Hsieh, P. (2012). Refinement of the technology readiness index scale.

 Journal Of Service Management, 23(1), 34-53.

 http://dx.doi.org/10.1108/09564231211208961
- Ma, Q. & Liu, L. (2004). The Technology Acceptance Model. Journal Of Organizational And End User Computing, 16(1), 59-72. http://dx.doi.org/10.4018/joeuc.2004010104
- Mallat, N., Rossi, M., and Tuunainen, V.K. (2004) Mobile banking services, Communicates of the ACM 47(5) 42-46.
- McKinsey (2014). The Road Back (pp. 1-40). McKinsey & Company. Retrieved from http://www.mckinseypanorama.com/media/18237/McKinsey-Global-Banking-Annual-Review-2014.pdf Assessed (18.01.2016)
- Meuter, M.L., Bitner, M.J., Ostrom, A.L. and Brown, S.W. (2005), "Choosing among alternative service delivery modes: an investigation of customer trial of self-service technologies", Journal of Marketing, Vol. 69, 61-83.
- Meuter, M.L., Ostrom, A.L., Bitner, M.J. and Roundtree, R. (2003), "The influence of technology anxiety on consumer use and experiences with self-service technologies", Journal of Business Research, 56(11), 899-907.
- Mishkin, F., And Eatkins, S. (2008), Financial Markets And Institutions, 6th Ed., Addison Wesley, New York.

- Mohd Daud, N., Mohd Kassim, N., Wan Mohd Said, W., & Mohd Noor, M. (2011). Determining Critical Success Factors Of Mobile Banking Adoption In Malaysia. Australian Journal Of Basic And Applied Sciences, 5(9), 253-265.
- Padgett, D. and Mulvey, M.S. (2007), "Differentiation via technology: strategic positioning of services following the introduction of disruptive technology", Journal of Retailing, 83(4), pp. 375-391.
- Pallant, J. (2007). SPSS Survival Manual (3rd ed.). Great Britain: Open University Press.
- Parasuraman, A. & Colby, C. (2001). Techno-ready marketing. New York: Free Press.
- Parasuraman, A. (2000). Technology Readiness Index (Tri): A Multiple-Item Scale to Measure Readiness to Embrace New Technologies. Journal Of Service Research, 2(4), 307-320.
- Parasuraman, A., & Colby, C. (2014). An Updated And Streamlined Technology Readiness Index: Tri 2.0. Journal Of Service Research, 18(1), 59-74.
- Paul Raj, A. (2014). Digital Banking To Advance More Rapidly In Malaysia. The Edge Malaysia, P. 27.
- Püschel, J., Mazzon, J.A, & Mauro C., Hernandez, J. (2010). Mobile Banking: Proposition Of An Integrated Adoption Intention Framework. Intl
- Raja U, Johns G, Ntalianis F (2004). The impact of personality on psychological contracts. Acad. Manage. J., 47: 350-367
- Ramaseshan, B., Kingshott, R., & Stein, A. (2015). Firm Self-Service Technology Readiness. Journal Of Service Management, 26(5), 751-776.
- 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.
- Sakun Boon-Itt, (2015), Managing Self-Service Technology Service Quality To Enhance E-Satisfaction, International Journal Of Quality And Service Sciences, 7(4), 373 391

- Scheier, M. & Carver, C. (1987). Dispositional Optimism and Physical Well-Being: The Influence of Generalized Outcome Expectancies on Health. J Personality, 55(2), 169-210.
- Sekaran U. (2009). Research Methods for Business: A Skills-Building Approach. (6th Ed). New York: John Wiley & Sons, Inc.
- Sekaran, U. & Bourgie, R. (2013). Research methods for business. Chichester, West Sussex: Wiley.
- Sharma, N. (2015). An Empirical Study On Mobile Banking Technology: Factors Affecting Its Adoption In Indian Context. International Journal Of Computer Science And Technology, 6(1), 53-56.
- Shin, S., & Lee, W. (2014). The Effects Of Technology Readiness And Technology Acceptance On Nfc Mobile Payment Services In Korea. Journal of Applied Business Research, 30(6), 1615.
- Sophonthummapharn, K., & Tesar, G. (2007). Technology Readiness And Propensity Of Cell Phone Users To Subscribe To Commercial Messaging Services. Marketing Management Journal, 17(2), 81-95.
- Sulaiman, A., Lim, C., & Wee, A. (2005). Prospects And Challenges Of E-Banking In Malaysia. The Electronic Journal On Information Systems In Developing Countries, 22(1), 1-11.
- Thakur, R., & Srivastava, M. (2014). Adoption Readiness, Personal Innovativeness, Perceived Risk And Usage Intention Across Customer Groups For Mobile Payment Services In India. Internet Research, 24(3), 369-392.
- Tim Berners, L. (2016). Number of Internet Users (2016) Internet Live Stats. Internetlivestats.com. Retrieved 24 June 2016, from http://www.internetlivestats.com/internet-users/
- Tsang, T. (2015). Mediating and Moderating Variables Explained. Psychology In Action. Retrieved 4 May 2016, from http://www.psychologyinaction.org/2015/02/06/mediating-and-moderating-variables-explained/
- Venkatesh V., F. D. Davis, (2000) "A Theoretical Extension Of The Technology Acceptance Model: Four Longitudinal Field Studies", Management Science, 46(2), 186-204.

- Verhoef, P., Lemon, K., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. (2009). Customer Experience Creation: Determinants, Dynamics and Management Strategies. Journal Of Retailing, 85(1), 31-41.
- Walczuch, R., Lemmink, J. And Streukens, S. (2007), "The Effect Of Service Employees' Technology Readiness On Technology Acceptance", Information & Management, 44(2), 206-215.
- Wang, W., Hsieh, P., Butler, J. And Hsu, S.H. (2008), "Innovate With Complex Information Technologies: A Theoretical Model And Empirical Examination", Journal Of Computer Information Systems, 49(1), 27-36.
- Wang, Y. S., Lin, H. H., And Luarn, P. (2006). Predicting Consumer Intention To Use Mobile Service. Information Systems Journal, 16(2), 157-179.
- Wang, Y., Wang, Y., Lin, H., & Tang, T. (2003). Determinants of user acceptance of Internet banking: an empirical study. Int J Of Service Industry Mgmt, 14(5), 501-519.
- Wise, J. & Parrish, M. (2016). Marketing Strategy For The Mobile Mind Shift.

 Retrieved from https://www.forrester.com/report/Marketing+Strategy+For+The+Mobile+Mind+Shift/-/E-RES93501
- Yen, H.R. (2005), "An attribute-based model of quality satisfaction for internet self-service technology", The Service Industries Journal, 25(5), pp. 641-59.