

A CONCEPTUAL INVESTIGATION OF E-BANKING USAGE AND ADOPTION IN NIGERIA

MARUF GBADEBO SALIMON¹, PROF. DR. RUSHAMI ZIEN YUSOFF², DR. ALIYU OLAYEMI
ABDULLATEEF³

School of Business Management, College of Business, Universiti Utara Malaysia, 06010, Sintok, Kedah, Malaysia.

¹Email: debosalimon@yahoo.co.uk

²Email: rzy278@uum.edu.my

³Email: aliyu@uum.edu.my

ABSTRACT

Practical and theoretical evidences have revealed that e-banking adoption in Nigeria is abysmally low when compared with some other African countries. This paper has therefore conceptually developed a framework that would investigate the causes and suggest some implications for going forward. This paper is basically a review of literature. Theoretical findings from this study indicate that for e-banking to be significantly adopted, issues relating to usefulness, ease of use, facilitating conditions and security must be seriously addressed by the banks management. Besides, efforts must be put in place to make sure that awareness about the availability of e-banking and its benefits spread to actual and potential users. When all this is done, the rate of satisfaction and trust among users will definitely improve and will significantly lead to high rate of adoption. The main limitation of this study is that it is conceptual in nature; future researchers can empirically test the proposed model of this study. The paper clearly shows the relationship between e-banking adoption, its determinants and mediating variables. This paper has added value to the current content of e-banking literature as well as offer some recommendations especially for banking practitioners, and policy makers about how to improve the rate of e-banking adoption.

Keywords: E-banking; TAM; e-Trust; e-Satisfaction.

I. INTRODUCTION

The era of internet has brought advancement in various facets of life. These developments have been witnessed in communication, trading, schooling, banking and other areas of human endeavors (Al-Majali, 2011; Chiou & Shen, 2012; Fonchamnyo, 2013; Odumeru, 2012). The tremendous influence of internet has been largely felt in financial institutions especially in banking where it has helped these organizations to embrace different forms of technology such as e-banking (Fonchamnyo, 2013).

E-banking service innovation has been implemented in the Nigeria banking sector since the year 2003. In doing so, Central Bank of Nigeria has continued to introduce different forms of strategies and policies in order to integrate and ensure that this new technology is widely embraced and adopted by Nigeria customers (Odumeru, 2013). Despite the benefits e-banking, evidence has shown that its usage and adoption is still very low in Nigeria as most transactions are still been carried out via physical cash handling (Anyanwu, Ezugwu, & Abdullahi, 2012). The phenomenon of low adoption of e-banking is however not limited to Nigeria alone as other developing and developed countries are also facing similar challenge (Al-Majali & Mat, 2011; Ndubisi & Sinti, 2006).

For instance different cases of low patronage have been reported in USA and some other developed countries (Chiou & Shen, 2012; Pikkarainen, Pikkarainen, Karjaluoto, & Pahlila, 2004; Polasik & Wisniewski, 2009). The case

of low adoption is however worrisome in developing countries (Adesina & Ayo, 2010; Auta, 2010; Odumeru, 2012; Safeena, Kammani, & Date, 2013) as over 50% of those who tried e-banking have either abandoned the usage or are not ready to become active users (Safeena et al., 2013).

Generally, series of factors have been identified for low adoption of e-banking. Some of these factors include insecurity, lack of awareness about full benefits of e-banking, insufficient facilitating support, ambiguity, complexity of e-banking channels, lack of satisfaction and trust in the e-channels (Adesina & Ayo, 2010; Auta, 2010; Ezeoha, 2007; Ndubisi & Sinti, 2006; Ibok & Ikoh, 2013). For instance, due to insecurity issue, a sum of one hundred and fifty nine billion Naira (N159.00 billion) was said to have been lost to e-banking fraud as at the first quarter of year 2013 in Nigeria (Business Day, 2014)

Despite the enormous of challenge being faced by e-banking, little scholarly efforts have however been made to ascertain what brings about low adoption in the context of developing countries (Adesina & Ayo, 2010; Agwu, 2012; Kurnia, Peng, & Liu, 2010; Ndubisi & Sinti, 2006) especially, Nigeria. In fact, Ibok & Ikoh, (2013) assert that no scholarly attempt has been made to find out what makes Nigeria customers to be dissatisfied with e-banking services.

Furthermore, where e-banking acceptance has been scholarly investigated, various antecedents and predictors have been used and the findings are mixed and inconclusive (Al-Majali & Mat, 2011; Ndubisi & Sinti, 2006).

Based on the foregoing, the rest part of this paper is structured as follows: next section presents the conceptual framework, literature review and hypotheses of the study. The section that follows summarizes, concludes and makes recommendation for future research.

2. CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

The research framework of this study is based on the extension of Technology Acceptance Model that was first developed by Davis (1989) (Figure 1). The core constructs of TAM are perceived usefulness and Perceived ease of use that could influence individual attitude towards system usage. Though TAM is the most widely used model because its main constructs are robust, simple and parsimonious, there have been various academic debates on the need to extend it to suit different contexts and users situations (Chandio, Irani, Abbasi, & Nizamani, 2013). Based on different issues that have been identified therefore, this study tends to investigate e-banking adoption using five predictors (perceived usefulness, perceived ease of use, perceived security, facilitating condition and awareness) as well as establish the mediating effects of e-satisfaction and e-trust as depicted in conceptual framework below.

3. RESEARCH FRAMEWORK AND HYPOTHESES:

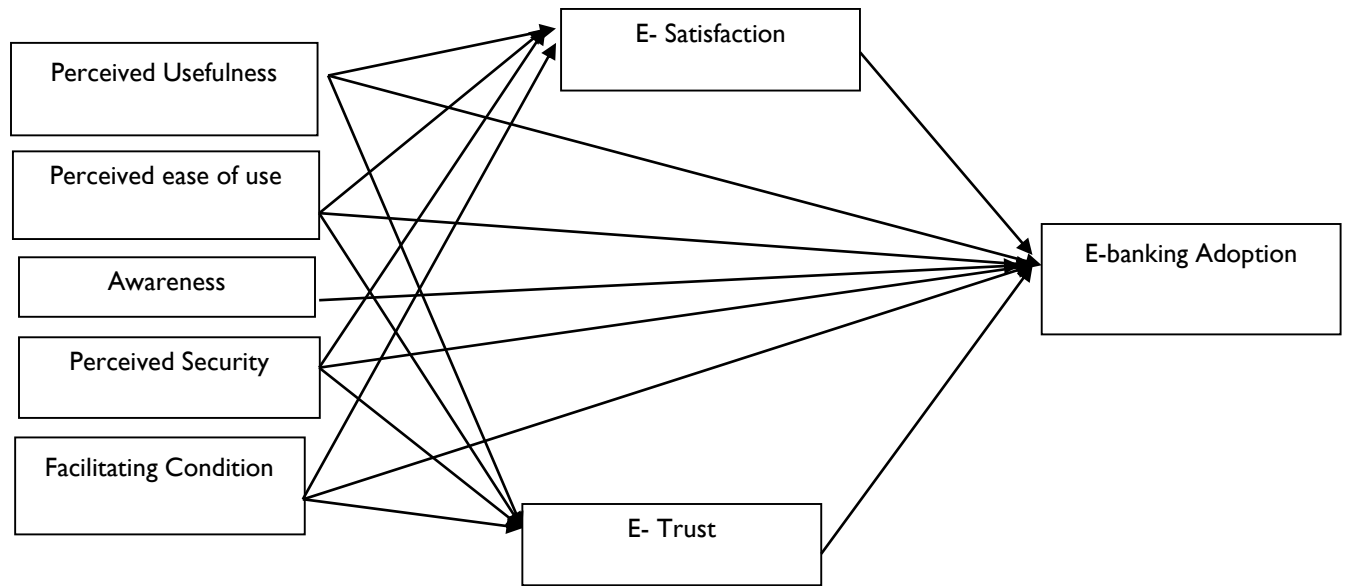


Figure 1: Conceptual Framework

3.1 PERCEIVED USEFULNESS, E-SATISFACTION, E-TRUST AND E-BANKING ADOPTION

Perceived usefulness is defined as “the potential user’s subjective probability that using a particular system will enhance job performance in an organizational context” (Davis, 1989). From the view of customers however, a system is perceived to be useful when it can be accessed in an easier and agile manner and when the benefits of the usage will help them to achieve their daily objectives (Liébana-Cabanillas, Muñoz-Leiva, & Rejón-Guardia, 2013). Other authors have also argued that perceived usefulness of a system has a greater influence on satisfaction and trust and subsequent adoption (Wu, 2013; Zhou, 2011).

Trust on the other hand has been widely researched and established to be an important predictor of customer patronage of services in offline transactions. However, it remains area of challenge as it has been under-researched in online context (Akhlq & Ahmed, 2013). To establish trust in online context, especially in the e-banking channels, a customer must be assured that transaction carried out in the online environment is highly secured and information supplied will not be compromised or traded for the benefit of a third party (Yap et al., 2010). The role which trust plays in the development of a customer and service provider relationship is very important especially in the context of e-banking where there is absence of personal interaction and where services involved are very complex (Chemingui & Lallouna, 2013). Previous studies of online banking have established that trust is an essential predictor of online adoption (Daniel, 1999; Özkan, Bindusara, & Hackney, 2010). For customers to develop trust in e-banking, they must therefore have confidence in the channel and found the channels to be useful to achieve their objectives (Aldás-Manzano, Lassala-Navarré, Ruiz-Mafé, & Sanz-Blas, 2009).

3.2 PERCEIVED EASE OF USE, E-SATISFACTION, E-TRUST AND E-BANKING ADOPTION

Perceived ease of use is one of the constructs of TAM that is used to describe the degree in which customers believe that certain system is easily operated and required less physical and mental effort (Davis, 1989). In the words

of Davis (1989), perceived ease of use is "the degree to which a person believes that using a particular system would be free of effort." The fact that a system is perceived to be useful does not automatically result to usage especially when the system is perceived to be difficult to comprehend (Davis, 1989; Mann & Sahni, 2013; Safeena, Date, & Kammani, 2011; Zhou, 2013).

Importantly, perceived ease of use has also been regarded as an important determinant of users' satisfaction and trust in information system and subsequent electronic services adoption (Akhlaq & Ahmed, 2013; Kim & Lee, 2013; Liébana-Cabanillas et al., 2013; Polites, Williams, Karahanna, & Seligman, 2012)

3.3 PERCEIVED SECURITY, E-SATISFACTION, E-TRUST AND E-BANKING ADOPTION

Perceived security refers to the perception which online banking users hold with respect to the vulnerability of their transaction details. The importance of security in online transaction has been emphasized by various studies and it is often regarded as the degree in which transaction that is carried out online is protected from intruders or unauthorized persons (Adesina & Ayo, 2010; Fonchamnyo, 2013; Juwaheer, Pudaruth, & Ramdin, 2012; Sohrabi, Yee, & Nathan, 2013). The fear of insufficient security has been regarded as a major impediment to the adoption of e-channels transaction as cases of frauds have continued to intimidate users (Chiou & Shen, 2012; Tan et al., 2010).

Furthermore, many previous studies have empirically established relationship between perceived security, online satisfaction, online trust and subsequent e-banking adoption (Adesina & Ayo, 2010; Akhlaq & Ahmed, 2013; Mann & Sahni, 2013; Pikkarainen et al., 2004; Ranjbarian, Fathi, & Rezaei, 2012; Yap et al., 2010)

3.4 FACILITATING CONDITION, E-SATISFACTION, E-TRUST AND E-BANKING ADOPTION

Facilitating conditions refer to consumers' perceptions of the resources and support available to perform a behavior (Venkatesh, 2012). It includes the degree and type of support that are provided for individual users and which has strong effect on their adoption of technology (Yu & Land, 2005). For internet services to be widely embraced some of the facilitating conditions that should be available include ease of access, excellent user interface, online support, government support in terms of regulation, internet facilities, power supply, training on how to use internet services and so on (Auta, 2010; Deb & Lomo-David, 2014; Venkatesh, 2012). These are important considerations as facilitating conditions have been found to have a direct influence on satisfaction, trust and subsequent adoption of e-services (Ajzen, 1991; Taylor and Todd, 1995; Tan, Chong, & Lin, 2013; Tan & Teo, 2000).

3.5 AWARENESS AND E-BANKING ADOPTION

Awareness refers to the extent to which the users of online banking are informed about the availability, benefits and challenges of the new innovation (Fonchamnyo, 2013). This position is also corroborated by other authors who assert that adoption of online banking will highly be influenced by the amount of information that customers possess (Pikkarainen et al., 2004). In fact low awareness about the benefits and challenges of e-banking has been major hindrance to adoption as most customers are uncertain about the channel and are even afraid of committing errors in the course of using the alternative channel (Juwaheer et al., 2012).

Consequently, several authors have established positively relationship between e-service adoption and awareness stating that when customers are aware of the availability, challenges and benefits of e-banking, the rate of usage and adoption will be high (Al-Majali & Mat, 2011; Pikkarainen et al., 2004; Polasik & Wisniewski, 2009; Sathye, 1996).

Based on the above discussions, the following hypotheses are hereby presented:

H1a: Perceived usefulness positively relates to e-satisfaction

- H1b:** Perceived usefulness positively relates to e-trust
- H1c:** Perceived usefulness positively relates to e-banking adoption
- H2a:** Perceived ease of use positively relates to e-satisfaction
- H2b:** Perceived ease of use positively relates to e-trust
- H2c:** Perceived ease of use positively relates to e-banking adoption
- H3a:** Perceived Security positively relates to e-satisfaction
- H3b:** Perceived Security positively relates to e-trust
- H3c:** Perceived Security positively relates to e-banking adoption
- H4a:** Facilitating Conditions positively relate to e-satisfaction
- H4b:** Facilitating Conditions positively relate to e-trust
- H4c:** Facilitating Conditions positively relate to e-banking adoption
- H5a:** E-Satisfaction positively relates to e-banking adoption
- H5b:** E-satisfaction positively mediates between Perceived Usefulness and e-banking adoption
- H5c:** E-satisfaction positively mediates between Perceived ease of Use and e-banking adoption
- H5d:** E-satisfaction positively mediates between Perceived Security and e-banking adoption
- H5e:** E-satisfaction positively mediates between Facilitating Conditions and e-banking adoption
- H6a:** E-Trust positively relates to e-banking adoption
- H6b:** E-Trust positively mediates between Perceived Usefulness and e-banking adoption
- H6c:** E-Trust positively mediates between Perceived ease of Use and e-banking adoption
- H6d:** E-Trust positively mediates between Perceived Security and e-banking adoption
- H6e:** E-Trust positively mediates between Facilitating Conditions and e-banking adoption
- H7:** Awareness positively relates to e-banking adoption

4. CONCLUSION, LIMITATION AND SUGGESTION FOR FUTURE STUDIES

Practical and theoretical evidences have revealed that e-banking adoption in Nigeria is very low when compared with some other African countries. This paper has theoretically investigated the causes and suggests practical implications that can help to improve the rate of adoption. Findings from this study has therefore indicate that for e-banking to be significantly adopted, issues relating to usefulness, ease of usage, facilitating conditions and security must be seriously addressed by the banks management. Asides, efforts must be put in place to make sure that awareness about the availability of e-banking and its benefits spread to actual and potential users. When all this is done, the rate

of satisfaction and trust among users will definitely improve and will significantly lead to high rate of adoption. The conceptual framework of this study which has not been tested empirically opens door for further research as academic scholars can use it to explain relationship among the variables and to predict e-banking adoption.

REFERENCES

- Adesina, A. A., & Ayo, C. K. (2010). An empirical Investigation of the Level of Users' acceptance of E-Banking in Nigeria. *Journal of Internet Banking and Commerce*, 15(1), 1–13.
- Agwu, E. (2012). A Qualitative Study of Problems and Propsects of Online Banking in Developing Economies- Case of Nigeria. *Journal of Internet Banking and Commerce*, 17(3), 1–20.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.
- Akhlaq, A., & Ahmed, E. (2013). The effect of motivation on trust in the acceptance of internet banking in a low income country. *International Journal of Bank Marketing*, 31(2), 115–125. doi:10.1108/02652321311298690
- Aldás-Manzano, J., Lassala-Navarré, C., Ruiz-Mafé, C., & Sanz-Blas, S. (2009). Key drivers of internet banking services use. *Online Information Review*, 33(4), 672–695. doi:10.1108/14684520910985675
- Al-Majali, M. M. (2011). The Antecedents of Internet Banking Service Adoption in Jordan: Using Decomposed Theory of Planned Behaviour.
- Al-Majali, M., & Mat, N. K. N. (2011). Modeling the antecedents of internet banking service adoption (IBSA) in Jordan : A Structural Equation Modeling (SEM) approach. *Journal of Internet Banking and Commerce*, 16(1), 1–15.
- Al-smadi, M. O. (2012). Factors Affecting Adoption of Electronic Banking : An Analysis of the Perspectives of Banks ' Customers. *International Journal of Business and Social Science*, 3(17), 294–309.
- Anyanwu, A. C., Ezugwu, A. E., & Abdullahi, S. E. (2012). Electronic Payment System (EPS): Facilitating the Development and Adoption in Nigeria. *International Journal of Computer Science*, 9(2), 462–467.
- Auta, E. M. (2010). Applications of Quantitative Methods to e-Commerce E-BANKING IN DEVELOPING ECONOMY : EMPIRICAL EVIDENCE FROM NIGERIA Applications of Quantitative Methods to e-Commerce. *Journal of Applied Quantitative Methods*, 2(5), 212–223.
- Chandio, F. H., Irani, Z., Abbasi, M. S., & Nizamani, H. A. (2013). Acceptance of online banking information systems: an empirical case in a developing economy. *Behaviour & Information Technology*, 32(7), 668–680. doi:10.1080/0144929X.2013.806593
- Chemingui, H., & Lallouna, H. Ben. (2013). Resistance, motivations, trust and intention to use mobile financial services. *International Journal of Bank Marketing*, 31(7), 574–592. doi:10.1108/IJBM-12-2012-0124
- Chiou, J.-S., & Shen, C.-C. (2012). The antecedents of online financial service adoption: the impact of physical banking services on Internet banking acceptance. *Behaviour & Information Technology*, 31(9), 859–871. doi:10.1080/0144929X.2010.549509
- Daniel, E. (1999). Provision of electronic banking in the UK and the Republic of Ireland. *International Journal of Bank Marketing*, 17(2), 72–82. Retrieved from <http://www.emeraldinsight.com/journals.htm?articleid=854975&show=abstract>
- Davis, F. D. (1989). Perceived Usefulness , Perceived Ease of Use , and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319–340.
- Deb, M., & Lomo-David, E. (2014). An empirical examination of customers' adoption of m-banking in India. *Marketing Intelligence & Planning*, 32(4), 475–494. doi:10.1108/MIP-07-2013-0119
- Fonchamnyo, D. C. (2013). Customers ' Perception of E-banking Adoption in Cameroon : An Empirical Assessment of an Extended TAM. *International Journal of Economics and Finance*, 5(1), 166–176. doi:10.5539/ijef.v5n1p166

- Ibok, I. N., & Ikoh, I. M. (2013). Determinants of Customers Satisfaction with Internet Banking Services. *British Journal of Arts and Social Sciences*, 14(2), 178–186.
- Juwaheer, T. D., Pudaruth, S., & Ramdin, P. (2012). Factors influencing the adoption of internet banking: a case study of commercial banks in Mauritius. *World Journal of Science, Technology and Sustainable Development* (Vol. 9, pp. 204–234). doi:10.1108/20425941211250552
- Kim, J. A. E. Y., & Lee, H. S. (2013). Key factors influencing customer satisfaction in Korea's Mobile service Sector. *Journal of Internet Banking and Commerce*, 18(3), 1–13.
- Kurnia, S., Peng, F., & Liu, Y. R. (2010). Understanding the Adoption of Electronic Banking in China. *2010 43rd Hawaii International Conference on System Sciences*, 1–10. doi:10.1109/HICSS.2010.421
- Liébana-Cabanillas, F., Muñoz-Leiva, F., & Rejón-Guardia, F. (2013). The determinants of satisfaction with e-banking. *Industrial Management & Data Systems*, 113(5), 750–767. doi:10.1108/02635571311324188
- Mann, B. J. S., & Sahni, S. K. (2013). Profiling Adopter Categories of Internet Banking in India: An Empirical Study. *Vision: The Journal of Business Perspective*, 16(4), 283–295. doi:10.1177/0972262912460187
- Ndubisi, N. O., & Sinti, Q. (2006). Consumer attitudes, system's characteristics and internet banking adoption in Malaysia. *Management Research News*, 29(1/2), 16–27. doi:10.1108/01409170610645411
- Odumeru, J. A. (2012). The Acceptance of E-banking by Customers in Nigeria Odumeru. *World Review of Business Research*, 2(2), 62–74.
- Özkan, S., Bindusara, G., & Hackney, R. (2010). Facilitating the adoption of e-payment systems: theoretical constructs and empirical analysis. *Journal of Enterprise Information Management*, 23(3), 305–325. doi:10.1108/17410391011036085
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnla, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet Research*, 14(3), 224–235. doi:10.1108/10662240410542652
- Polasik, M., & Wisniewski, T. P. (2009). Empirical analysis of internet banking adoption in Poland. *International Journal of Bank Marketing*, 27(1), 32–52. doi:10.1108/02652320910928227
- Polites, G. L., Williams, C. K., Karahanna, E., & Seligman, L. (2012). A Theoretical Framework for Consumer E-Satisfaction and Site Stickiness: An Evaluation in the Context of Online Hotel Reservations. *Journal of Organizational Computing and Electronic Commerce*, 22(1), 1–37. doi:10.1080/10919392.2012.642242
- Ranjbarian, B., Fathi, S., & Rezaei, Z. (2012). Factors Influencing on Customers' E-satisfaction : A case Study from Iran. *Interdisciplinary Journal of Comtemporary Research in Business*, 3(9), 1496–1511.
- Safeena, R., Date, H., & Kammani, A. (2011). Internet Banking Adoption in an Emerging Economy : Indian Consumer 's Perspective. *International Arab Journal of E-Technology*, 2(1), 56–64.
- Safeena, R., Kammani, A., & Date, H. (2013). Assessment of Internet Banking Adoption: An Empirical Analysis. *Arabian Journal for Science and Engineering*, 39(2), 837–849. doi:10.1007/s13369-013-0707-x
- Sathye, M. (1996). Adoption of Internet banking by Australian consumers : an empirical investigation. *International Journal of Bank Marketing*, 17(7), 324–334.
- Sohrabi, M., Yee, J. Y. M., & Nathan, R. J. (2013). Critical Success Factors for the Adoption of e-Banking in Malaysia.
- Tan, G. W.-H., Chong, C.-K., Ooi, K.-B., & Chong, A. Y.-L. (2010). The Adoption of Online Banking in Malaysia : An Empirical Analysis ♣. *International Journal of Business and Management Science*, 3(2), 169–193.
- Tan, K. S., Chong, S.-C., & Lin, B. (2013). Intention to use internet marketing: A comparative study between Malaysians and South Koreans. *Kybernetes*, 42(6), 888–905. doi:10.1108/K-12-2012-0122
- Tan, M., & Teo, T. S. H. (2000). Factors Influencing the Adoption of Internet Banking. *Journal of the Association for Information Systems*, 1(5), 1–42.
- Venkatesh, V. (2012). C ONSUMER A CCEPTANCE AND U SE OF I NFORMATION T ECHNOLOGY : E XTENDING THE U NIFIED T HEORY. *MIS Quarterly*, 36(1), 157–178.

- Wu, I.-L. (2013). The antecedents of customer satisfaction and its link to complaint intentions in online shopping: An integration of justice, technology, and trust. *International Journal of Information Management*, 33(1), 166–176. doi:10.1016/j.ijinfomgt.2012.09.001
- Yap, K. B., Wong, D. H., Loh, C., & Bak, R. (2010). Offline and online banking – where to draw the line when building trust in e-banking? *International Journal of Bank Marketing*, 28(1), 27–46. doi:10.1108/02652321011013571
- Yu, C., & Land, S. (2005). FACILITATING CONDITIONS , WIRELESS TRUST AND ADOPTION INTENTION. *Journal of Computer Information Systems*, 17–25.
- Zhou, T. (2011). Examining the critical success factors of mobile website adoption. *Online Information Review*, 35(4), 636–652. doi:10.1108/14684521111161972
- Zhou, T. (2013). Understanding continuance usage of mobile sites. *Industrial Management & Data Systems*, 113(9), 1299. doi:10.1108/IMDS-01-2013-0001