

Mobile Banking Adoption in Ivory Coast: A Cultural Perspective Impeding its Expansion

MONN PAUL AVOAKA

Abstract

This research paper aims to analyze cultural factors impacting mobile banking adoption in certain countries. To scrutinize the presumption, we have narrowed our study to a developing country, Ivory Coast, which has been trying to develop mobile banking for the past few years. The high potential of the country in terms of technological innovations to improve people's lives and the slow adoption tendency of mobile banking in general prompted the need to investigate the cultural factors that affect mobile banking adoption. Perceived usefulness, perceived ease of use, e-wallet, cost of use and trust are considered. E-wallet and perceived usefulness are expected to be the most compelling elements revealing the slow track of mobile banking adoption.

Introduction

Since the advent of the Internet, doing business electronically has been one of the fastest growing industries in the market. It has driven notable changes in the Information and Communication Technologies (ICTs) field (Merhi and Koong, 2016). Technology has enabled the creation of innovative means to conduct business, provide banking and financial services through the use of mobile devices. Over the last few years, banks and financial institutions have started to develop and maintain online banking along with wealth management to bridge the gap between them and the customers. This paper examines factors impacting mobile banking adoption in general, as well as cultural effects specifically in Ivory Coast.

Mobile banking refers to the use of information systems that empower customers to perform a range of financial transactions through ICT (Anderson, 2010). Services vary from transfer of money and balance inquiries, to check deposit, etc. In many ways, mobile banking introduces smarter techniques of doing banking that benefit both the client and the bank.

Mobile banking benefits have been one of the major topics in research. Several studies focus on showing factors and advantages of adopting mobile banking as a smarter approach to financial services. Anderson (2010) investigated the creation of consumer value in developing markets through mobile banking. The study revealed that mobile banking is able to accommodate primary banking and electronic transactions services to unbanked consumers in developing markets. Other studies have shown that it drives technological innovation by allowing customers to do their banking operations with disregard to time or place and in an easy way (Laukkanen, 2007). Using mobile banking facilitates payments and helps to avoid lines and physical presence in a financial institution (Mallat, 2007). In fact, it has the power to harness higher productivity for banks while making user's lives much easier (Malaquias and Hwang, 2015).

Despite the fast growing electronic market and online banking, mobile banking is still having hard a time grasping the broad users of cellphones. Indeed, this issue is happening in Ivory Coast where we assume that there might be cultural and technological factors that affect mobile adoption. The research in this study shows that the lack of understanding of outcomes, ease of use, trust and security issues, and the use of another similar method of banking are the main components that challenges mobile banking adoption in Ivory Coast.

Mobile Banking in Ivory Coast

The Ivory Coast (Cote d'Ivoire) is an emerging country that bases its development on agricultural resources. With a population of more than 22 million inhabitants (22,671,333), Ivory Coast is the largest economy in Western Africa (The WorldBank.org). Despite several political disputes that considerably impacted the economy in the last decade, the country was able to maintain a consistent GDP growth up to 8% (Reuters, 2013). This result was possible through the influence of various successful and growing sectors. Information Technology and Telecommunications is one of the major domains that participates in Ivory Coast's economy with an input of more than two billions dollars (Huet, 2014). With more than 22.1 million mobile users, the country holds a high subscription to mobile service of 97 subscriptions per 100 inhabitants (CIA, n.d.). Although yielding this huge asset, Ivory Coast still faces a remarkably low banking adoption rate. The Central Bank of West Africa States reported a 16.14% banking adoption rate for Ivory Coast in 2015 (BCEAO, 2014). For many reasons, Ivoirians are not using banking and financial institutions services. As a result, the country cannot measure an accurate flow of financial transactions and implement a modern, appropriate way of banking. Furthermore, money is moving slowly, and people do not benefit from the broad advantages that banks offer. More importantly, this situation causes a huge number of illicit financial transactions. As a matter of fact, according to the World Economic Forum, African nations are losing more than \$50 billion annually because of this issue.

Mobile banking in Ivory Coast is characterized mostly by the use of mobile phones associated with a number acting as an e-wallet. Ivoirians use mobile banking to perform mostly limited financial transactions such as sending money to someone else and bill pay. This limited use of mobile banking can be caused by many cultural and economic implications that the country is still trying to resolve. Within the last few years, the country demonstrated outstanding growth and success rate in mobile banking and placed itself in the highest world rank. Data from the World Bank showed that Ivory Coast was the fifth country where mobile banking is most popular. Furthermore, the top five countries are African countries. Based on these facts and when analyzing this suitable environment for mobile adoption, it is undeniable to understand that there is a cultural implication in the slow expansion of mobile banking.

Cultural Implications and factors

Culture is one of the most controversial subjects in the world. There have been multiple studies about culture and its influences in our daily lives. There exists many definitions of culture, depending on the context. According to Hofstede, culture is "the collective programming of the mind which distinguishes the members of one group from another" (Hofstede, 1984). There has been outstanding research on national culture and its factors. Former IBM employee Professor Geert Hofstede provides one of the most brilliant research studies on cultural insights. His comprehensive studies revealed dimensions that affect the workplace (Hofstede, 2001).

In respect with previous studies that identifies the main factors impacting technology in general, our study segments the key factors that specifically affect Ivory Coast. To our best knowledge, no research has investigated the adoption of mobile banking in Ivory Coast yet. Thus, in this study we hope to contribute to the body of knowledge by presenting a set of factors that impact the adoption of mobile banking by Ivoirians. We now present the factors:

Perceived Usefulness

Perceived usefulness (PU) is simply defined as the idea that using a technology will be useful

or improve performance (Davis et al., 1989). Before using new products, or buying new items everyone is looking for the outcomes. PU impacts mobile banking adoption because people are more willing to use a new technology when they understand it can make their life easier. A study of the market in China proved that the lack of knowledge and perception of outcomes were one of the main obstacles to mobile banking adoption (Laforet and Li, 2005). People use mobile banking as soon as they grasp the utility. In Ivory Coast, people do not really believe in the power of technology, especially in mobile banking to manage their money efficiently. They are used to old manners, keeping their money in cash at home, or somewhere else, and using it when needed. Sixty five percent of the population is illiterate which negatively affects the citizens because they do not know how to use the technology (National Institute of Statistics, n.d.). For this reason, we propose that perceived usefulness positively affects mobile banking adoption.

Perceived ease of use

By perceived ease of use we mean that the user's willingness to use the technology depends on how easy the system is to learn without making an effort. Perceived ease of use is said to be the most important of the factors and correlated to the adoption of technologies (Behboudi, Hanafizadeh, and Koshksaray, 2012). Studies that used the Technology Acceptance Model (TAM) showed that usefulness and ease of use are related to people's intention to use (Davis et al., 1989; Venkatesh and Davis, 1996; Hu et al., 1999). Technology features needs to be pretty simple to use and make the user feel comfortable to work with regardless of your knowledge of the technology (Behboudi, Hanafizadeh, and Koshksaray, 2012). Therefore, we propose that perceived ease of use positively affects mobile banking adoption.

Self efficacy

Associated with ease of use, perceived self-efficacy appears to be another argument for mobile adoption. It describes the user's self-esteem while using the system (Luarn and Lin, 2005). People are sometimes uncertain or afraid of a new technology; they don't want to feel stupid while trying to use that technology. Very often, people prefer to avoid embarrassing situations when they feel uncomfortable. Rather, believing that you can use mobile adoption or any new ICT is a big step in the adoption of that technology. Self-efficacy is simply how you believe in yourself, how you can master the technology to do tasks. Studies published by many researchers have demonstrated the high correlation between ease of use and perceived self-efficacy (Agarwal et al., 2000; Chau, 2001; Hong et al., 2001; Johnson & Marakas, 2000). We then propose that self-efficacy positively affects mobile banking adoption and perceived ease of use.

Perceived risk

Perceived risk relates to security and privacy concerns associated with using technology in banking. Fraud issues are common in online transactions; users tend to worry about how secure using mobile banking might be and whether it is the safest way to do their financial transactions. There are also privacy risks and people worry about whether their information is being securely held by the bank or possibly sold to another company. When someone puts his or her information online, he or she can never really know where it goes. Another concept in risk is related to reliability. Reliability expresses the user's trust in the technology to perform accurately the financial transactions. Since an important part of the population is illiterate and not familiar with the technology, they do not trust it at all. Therefore, we propose that perceived risk has a direct positive effect on mobile banking adoption

E-wallet

E-wallet describes the use of mobile phones to perform a certain range of financial transac-

tions such as bill pay or sending money to someone. People use their mobile phone number which serves as an account to fulfill a task. Credit is put on that account, and people can send money to a family in another city, a friend in a country where the phone carrier is implemented, pay their electric and water bill etc. It is very spread out in the country, and people are doing most of their transactions through this means. By doing this, they are saving time and do not need services of a bank to manage their day-to-day transactions. In this case, bank accounts seem useless to them and so mobile banking allows people who prefer to keep their money in cash with them, and whenever they need to do a transaction, they just add credit to their phone number and perform the operation. This procedure constitutes daily routines of several Ivoirians. Banks are totally affected by this factor. Thus, we propose that E-wallet positively impacts mobile banking adoption.

Cost Of Use

Mobile banking usage involves several costs such as device and data. Users are facing a spectrum of unknown cost that generally affects their decision making on adopting mobile banking (Hung et al., 2003; Wu and Wang, 2005). People that are using it need a smartphone with a platform that accepts apps and has a good connectivity to internet services. In developing countries like Ivory Coast, purchasing a smartphone is not a given for everyone. Indeed, technology devices are not accessible to all of the population. One of the reasons for this is that more than 42% of the population lives below the national poverty line (The World Bank). Moreover, due to high taxes on the retail of technology devices, smartphones are very pricy and retailers do not offer financing options. An iPhone 6 with basic features is commonly priced around \$965. With nearly half of the population living in poor conditions, it becomes difficult to spread smartphones and so this may be another reason mobile banking is so popular. However, in order to perform transactions you will need an internet connection for which you will have to pay. But only 2.7% of the population has access to internet services (CIA, n.d.). On average, it costs about \$22 for subscribing to a monthly three gigs of internet service. According to the National Institute, the poverty threshold is \$1.23 per day. Someone living below or even at this point would not be able to afford mobile banking and further even a bank account. It appears that the cost of use and mobile banking are asymmetrically related (Hanafizadeh et al, 2012). Therefore, we propose that cost of use has a direct negative effect on mobile banking adoption

Trust

Trust is the basis for any relationship in the world. In business, trust is very crucial to sustaining the liaison between businesses and customers. Studies have shown that trust is one of the key factors that impacts adoption of mobile services (Kim et al., 2009; Koenig-Lewis et al., 2010). Alongside perceived risk, trust is an important decision making factor for users. Ivoirians do not believe in technology because of their uncertainty about the usefulness, and also how to use it. They have never been exposed to a high-tech environment where everyone sees the input of technology in the growth of the country and also at the personal level. Moreover, only 45% of the population is literate and even within those 45%, a large percentage is not familiar with technology use on a daily basis (National Institute of Statistics). In addition, the urbanization rate is about 50%, which means that half of the population does not live in cities where technology is really helpful and can be fully utilized (National Institute of Statistics). Moreover, the high rate of electronic fraud and cybercrimes in the country has increased the fear of relying on technology for transactions especially financial transactions. Thus, we propose that trust has a positive direct effect on mobile banking adoption.

Conclusion

Mobile banking is one of the smartest innovations of our era. The last decades have demonstrated outstanding results and effectiveness in remodeling financial services, and improving people's lives. While there are various benefits, mobile banking presents flaws that are mainly caused by cultural factors. This paper focused on elaborating and contrasting some of these factors with the situation of the Ivory Coast. With a fast growth this past five years and a good long-term orientation, the country appears to be the perfect match for an appropriate mobile adoption market. However, solid cultural constraints are impeding its expansion. These cultural factors are: perceived usefulness, perceived ease of use, cost of use, e-wallet, risk and trust. And then, to conclude since there appears to be little research done on this topic, more will be required to prove our assertions.

References

- Agarwal, R. & Karahanna, E. (2000). Time flies when you're having fun: Cognitive absorption and beliefs about information technology usage. *MIS Quarterly*, 665-694.
- Anderson, J. (2010). M-banking in developing markets: competitive and regulatory implications. *Info*, 12(1), 18-25.
- BCEAO (2014). Note d'information. Available online at: http://www.bceao.int/IMG/pdf/note_d_information_4e_trimestre_2014.pdf. Accessed on February 12, 2016.
- Chau, P. Y. (2001). Influence of computer attitude and self-efficacy on IT usage behavior. *Journal of Organizational and End User Computing*, 13(1), 26.
- CIA (n.d.). The World Factbook: Cote D'ivoire. Available online at: <https://www.cia.gov/library/publications/the-world-factbook/geos/iv.html>. Accessed on February, 05, 2016.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319-340.
- Doney, P. M., Cannon, J. P., & Mullen, M. R. (1998). Understanding the influence of national culture on the development of trust. *Academy of Management Review*, 23(3), 601-620.
- Hanafizadeh, P., Behboudi, M., Ahadi, F., & Ghaderi Varkani, F. (2012). Internet advertising adoption: a structural equation model for Iranian SMEs. *Internet Research*, 22(4), 499-526.
- Hanafizadeh, P., Behboudi, M., Koshksaray, A. A., & Tabar, M. J. S. (2014). Mobile-banking adoption by Iranian bank clients. *Telematics and Informatics*, 31(1), 62-78.
- Hofstede, G. (1984). *Culture's consequences: International differences in work-related values* (Vol. 5). sage.
- Hofstede, G. H., & Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Sage.
- Hong, W., Thong, J. Y., & Wai-Man Wong, K. Y. T. (2002). Determinants of user acceptance of digital libraries: an empirical examination of individual differences and system characteristics. *Journal of Management Information Systems*, 18(3), 97-124.
- Hu, P. J., Chau, P. Y., Sheng, O. R. L., & Tam, K. Y. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems*, 16(2), 91-112.
- Huet, J-M. (2014). Les TIC en Côte d'Ivoire: Un levier de développement pour un pays en pleine reconstruction available at <http://www.journaldunet.com/ebusiness/expert/59377/les-tic-en-cote-d-ivoire---un-levier-de-developpement-pour-un-pays-en-pleine-reconstruction.shtml>. Accessed on January 26, 2016.

- Hung, S.Y., Ku, C.Y., and Chang, C.M., (2003). Critical factor of WAP services adoption: an empirical study. *Electronic Commerce Research and Applications*, 2 (1), 42–60.
- Johnson, R. D., & Marakas, G. M. (2000). Research report: the role of behavioral modeling in computer skills acquisition: toward refinement of the model. *Information Systems Research*, 11(4), 402–417.
- 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.
- Koenig-Lewis, N., Palmer, A., Moll, A., (2010). Predicting young consumers' take up of mobile banking services. *International Journal of Bank Marketing* 28 (5), 410–432
- Laforet, S., & Li, X. (2005). Consumers' attitudes towards online and mobile banking in China. *International Journal of Bank Marketing*, 23(5), 362–380.
- Laukkanen, T. (2007). Internet vs mobile banking: comparing customer value perceptions. *Business Process Management Journal*, 13(6), 788–797.
- 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.
- Malaquias, R. F., & Hwang, Y. (2015). Firms' size and use of information and communication technologies Empirical evidence on small businesses in Brazil. *Information Development*, 0266666915616165.
- Mallat, N. (2007). Exploring consumer adoption of mobile payments—A qualitative study. *The Journal of Strategic Information Systems*, 16(4), 413–432.
- Merhi, M.I. and Koong, K.S. (2016) E-government effectiveness: a rocket model of contributing user related factors, *International Journal Services and Standards*, 11(1)
- Reuters (2013). Ivory Coast fibre optic network to boost growth. Available online at: <http://www.reuters.com/article/ivorycoast-telecoms-idUSL6N0FP2EQ20130720>. Accessed on January 5, 2016.
- Samantha Spooner (2015). Could mobile banking help Africa tackle illicit financial flows? Available at <http://www.weforum.org/agenda/2015/07/could-mobile-banking-help-africa-tackle-illicit-financial-flows>. Accessed on January 10, 2016.
- The Business Dictionary (n.d). Available online at: <http://www.businessdictionary.com/definition/national-culture.html>. Accessed on January 12, 2016.
- The World Bank (n.d). Available online at: <http://data.worldbank.org/country/cote-divoire>. Accessed on January 20, 2016
- Van Everdingen, Y. M., & Waarts, E. (2003). The effect of national culture on the adoption of innovations. *Marketing Letters*, 14(3), 217–232.
- Venkatesh, V., & Davis, F. D. (1996). A model of the antecedents of perceived ease of use: Development and test. *Decision Sciences*, 27(3), 451–481.
- Wu, J.H., Wang, S.C. (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information and Management* 42 (5), 719–729