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EXAMINATION OF DIGITAL AND NON-DIGITAL FACTORS ON PERCEPTION OF MOBILE BANKING CUSTOMERS: A CASE OF DEVELOPING ECONOMY

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KEYWORDS	ABSTRACT
Mobile Banking, Digital Factors, Non- Digital Factors & M-banking Users Perceptions	The aim of current study is to investigate the perception of mobile banking customers about digital and non-digital factors in Pakistan. The population of current study consists of current and future users of mobile banking in Pakistan. In current study, mobile banking usage is measured as dependent variable and seven variables (5-digital & 2-non-digital) have been selected as independent variables. The SPSS (16 version) was used to analyse and report data collected over an administrative questionnaire. The results of current study indicated that non-digital factors (Need of service and service quality) has insignificant relationship with perception of mobile banking customers. Also, results indicated significant relationship between digital factors (effort expectancy, Performance expectancy, relative advantage, trust and security) with customers' perception about mobile banking. As practical implication of the study, current study facilitate banking sector to facilitate their customers and retain their customer base. Banks used these results to identify the "social norms of their banking customers and link them with mobile banking technology to facilitate" them.
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INTRODUCTION

Fast development of global banking industry followed by widespread of data and communication skills stress on standing of digital banking. Banks reducing their functioning costs by applying techniques through economies of scale to attain competitive edge (Laukkanen, 2016). The digital banking or mobile banking (M-banking) provides support to customers to carry-out banking practices through online banking. The mobile banking means banking activities using internet technology. Mobile banking is revolutionary advance in banking industry, combining mobile technology with financial and business services. Digital banking ease the customers who can queue up without having to wait for a switch to financial transactions. The banks offers different

mobile banking channels, that includes downloadable features, texting and collaborating vocal response for customers (Shankar & Kumari, 2016). In fact, digital banking allows customers to use their mobile banking for financial activities at anywhere and anytime (Tam & Oliveira, 2017). The acceptance technology model (Davis & Venkatesh, 1996; Davis, 1989) is the highly significant technology concept that explains acceptance of online technologies (Kelley, Singer, & Herrington, 2012; Silva Bidarra, Leiva, & Cabanillas, 2013). Moreover, neither TAM (Davis, 1989) nor TAM2 (Davis & Venkatesh, 1996) completely cover trust and risk parameters linked with the behaviours of acceptance of technology (Illia, Ngniatedema, & Huang, 2015). These parameters thus limits efficiency of theory to predict the behaviour's (Shen, Huang, Chu, & Hsu, 2010).

Now a days it is a common phenomenon to check the trust factor (Deb & Lomo-David, 2014) along with risk factor (Shankar & Kumari, 2016) to elaborate the reason why customers use mobile banking. In this regard, there are some digital and non-digital factors that are affecting M-banking. Need for service said to be someone's desire to intermingle with bank worker at any time during customer's transaction. According to literature, the need to interact with humans varies in non-users and users of SST (Dabholkar & Bagozzi, 2002). In this connection, quality of service means how customers suppose with bank employees their interpersonal interactions. Quality of service describe the difference between the value or service expected by employee and service provide by bank employees (Parasuraman, 1998). The mobile banking thus means the banking practices using advanced technologies. Performance expectancy is an extent to which innovative technologies increase performance of job. Effort expectancy can be explained as the level of comfort someone linked with utilization of a specified technique (Yu, 2012). It describe how much struggle is required to understand innovation (Tai & Ku, 2013). How much an innovation can be perceived as an alternative to currently available services is said to be relative advantage of that product (Hanafizadeh, Behboudi, Koshksaray & Tabar, 2014; Rogers, 1995).

Perceived security meant for reactions of customer to both supposed and real threats to their online information (Yousafzai, Foxall, & Pallister, 2010). The approach of an individual that said technology will incessantly meet his expectations is said to be trust on that specific technology (Koksal, 2016). The current study objectives are to explore the perception of mobile banking customers regarding digital and non-digital factors in Pakistan. Clearly, the banks are service providers whose economic success is reliant upon the experience and perceived quality of their customers. The banks' service challenge marketing is to overwhelmed customers' averseness to use digital banking due to previous negative experiences. Despite "fact that digital banking" is now available at all conventional banks, there is need still to comprehend the impact of digital banking on banking customers. This will allow various banks to fine-tune marketing strategies in accordance with overall business model of banks. In current study, a theoretical gap is filled so as to explore how mobile banking relationship with new factors of customer behaviour and attitudes. As a practical implication of study, the current study facilitate the banking sector to facilitate customers and retain their customer base. Also, banks used these results to identify "social norms of banking customers and link them with mobile banking technology to facilitate" them.

LITERATURE REVIEW

A mobile banking said to be any facility given by a bank or any financial institution related to utilization of mobile phones, cell phones or tablets for monetary and non-monetary exchanges

(Shaikh & Karjaluoto, 2015). Mobile banking is a revolutionary advance in banking industry, combining mobile technology with financial and business services. Someone who can queue up without having to wait for switch to financial transaction. Banks offer customers diverse mobile banking channels, that includes the downloadable features, texting and the collaborating vocal response (Shankar & Kumari, 2016). The mobile banking is thus self-service, hardware-centric technology providing consumers with variety of services. This includes checking bank balances, paying bills, obtaining account information, transferring money, completing purchases at the store, obtaining bank statements and even investing in stocks (Masrek & Khairuddin, 2012). These features provide vital returns for banks and consumers. Tam and Oliveira (2017). Mobile banking is vital for banking business since it enables banks to deliver servicing to all regions, strengthen their comparative advantage, offer improved facilities to customers in banks, and enable them to set up advanced and uniting ways of correspondence (Amin, Baba & Muhammad, 2007).

Non-Digital Factors

The need for service said to be someone's desire to relate with bank employee at any time during customer's transaction. According to literature, need to interact with humans varies in the SST users and non-users (Dabholkar & Bagozzi, 2002). People that have a high need to interact with banking workers are not interested to use the SST, likewise mobile banking. Services are formed, dispersed, and supplied in compliant process amid provider and receiver of service (Svensson & Wamala, 2012). Similarly, researches indicate that several benefits have been obtained when employees understand customer mindset (Papasolomou-Doukakis, 2002; Myrden & Kelloway, 2015; George & Hegde, 2004; Plakoyiannaki, Tzokas, Dimitratos, & Saren, 2008). Leo et al. (1997) and Rhee and Rha (2009) observe that most of time employees fail to assess customers demand for specific quality attribute. After examining researches on customers and employees behavior approaches in the financial sectors, Johnson et al. (1996) and Karatepe et al. (2006) concluded that employees that are responsible for service encounters has no service quality attributes. Consequently, so as to gain deep sympathetic of how the customers and employees react to quality of service, therefore, it is necessary to emphasis upon how different facets of quality of service be perceived (Huang, 2008; Najjar & Bishu, 2006; Rohini & Mahadevappa, 2006).

Quality of service mean how customers supposed their interpersonal interactions with bank employees. The service quality describe the difference between the value or service expected by employee and service provide by bank employees (Parasuraman, 1998). The SST literature suggests that consumers that have high value of the social and personal interaction with bank employees may not consider it beneficial to shift to self-service technology (Curran & Meuter, 2005). Therefore, if there is high quality of service given by bank employee to customer, they can't be urged to use online banking. The services can be observed as a cooperative procedure (Grönroos, 1984), where needs of customers have been observed and then a relevant solution has been provided to fulfill those needs to remained them loyal with the concerned banks that further overwhelmed at the trustworthiness. According to Hatch (2014), there is an intensive competition in banking industry to attract and retain customers. Meanwhile, the modern TQM technologies are contributing in providing services and satisfying customers by fulfilling their financing needs (Arora & Sandhu, 2018) and considered to be an important factor to select a bank (Iqbal, Hassan & Habibah, 2018), and therefore banks provide better e-services to their customers.

Digital Factors

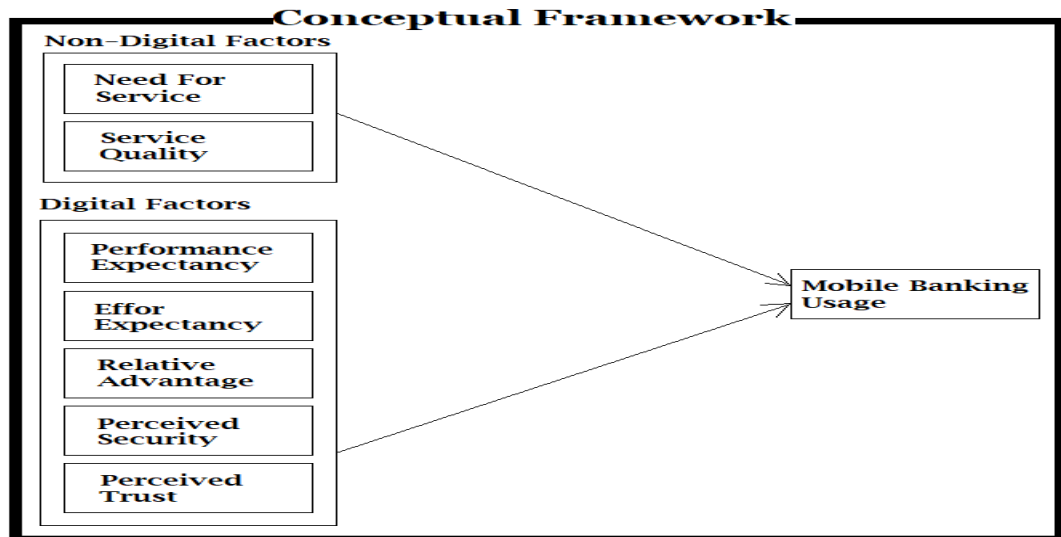
[Morris et al. \(2003\)](#) has distinct performance expectancy extent to that innovative technologies increase performance of the job. The performance expectancy is approach of a customer that improvement in technology tends to increase performance ([Jambulingam, 2013](#)). A customer will be more attractive towards mobile banking when he perceived that it will be helpful while performing transaction in comparison to any other facility provided by the bank ([Tan & Leby Lau, 2016](#)). In this connection, evidence has been observed from ([Reinhard & Dickhäuser, 2011](#)) that performance expectancies depend on someone personal mood. In above mention experiment, negative and positive moods were assessed using academic tasks. [Yang and Forney \(2013\)](#) find out that mobile functions enhance flexibility, allows customization and thus enhance customer perceived performance expectancies. In this connection, more an individual perceive that usage of mobile banking enhance his performance, greater are the chances that he will start using the services ([Boateng, Mbrokoh, Boateng, Senyo, & Ansong, 2016](#)). In this regard, effort expectancy can be explained as the level of comfort someone linked with utilization of a specified technique ([Yu, 2012](#)). It describe how much struggle is required to understand the innovation ([Tai & Ku, 2013](#)).

This concept contains supposed ease of use, methodical complication and simplicity of usage process ([Maduku, Mpinganjira, & Duh, 2016](#)) and can be measured through different factors, like the user-friendliness, usefulness and flexibility ([Chiwara, Chinyamurindi, & Mjoli, 2017](#)). Three constructs from UTAUT model: “perceived ease of use, complexity, and ease of use” used to understand effort expectancy ([Venkatesh, et al., 2003](#)). With high effort expectancy, higher is the intention shown by customers ([Farah, Hasni, & Abbas, 2018](#)). In this connection, how much an innovation can be perceived as an alternative to currently available services is said to be relative advantage of that product ([Hanafizadeh, et al., 2014](#); [Rogers, 1995](#)). One of the most widely study variable in case of the online banking technologies is relative advantage ([Al-Jabri & Sohail, 2012](#); [Lin, 2011](#); [Püschel, Afonso Mazzon, Mauro & Hernandez, 2010](#)) due to the fact it precisely describe behavior regarding adoption and the mobile banking usage technologies. [King, Sparks and Wang \(2016\)](#) find out that the advantage relative is not significant factor to predict the acceptance and usage behavior of customers. Whereas, on other hand, [Tan and Lau, \(2016\)](#) found relative advantage as the significant factor to predict the technology adoption behaviors.

Perceived security meant for reactions of customer to both supposed and real threats to their online information ([Yousafzai, et al., 2010](#)). [White and Nteli \(2004\)](#) find out that security is one of the important most characteristic towards the technology adoption behavior. It consist of “responsiveness of service delivery (speed and timeliness)”, credibility, ease of use of the bank, and “product variety”. [Yoon and Occeña \(2014\)](#) investigate the linkage amid usage and security of banking mobile technologies. The study conducted in USA, reveals that both the usefulness and security has impact significant on technology adoption of mobile banking. The approach of an individual that said technology will continuously meet his expectations is said to be trust on that the specific technology ([Koksal, 2016](#)). In this connection, the trust is a difficult as well as multi-directional concept and phenomenon ([Koksal, 2016](#); [Mayer, Davis & Schoorman, 1995](#); [McKnight, Choudhury & Kacmar, 2002](#)) which is relevant most in the risky and the uncertain situations ([Kraeuter, 2002](#)). The research in mobile banking expanded on ([Grabner-Kraeuter, 2002](#)) evidence uncertainty in online transactions can be reduced using trust factor. [Lu et al.](#)

(2010) observed that trust factor reducing uncertainty which in return enhance usage of mobile banking.

Figure 1
Conceptual Framework Model



METHODOLOGY

As part of your research, researcher want to identify your target population, which is the group of people from whom you'll be collecting data. As a result of this research, banking users who are currently using or plan to use digital banking in the next few years are the target audience. The current sample size for this study is 360 participants. Response to item theory is used to calculate the sample size. This study employed a convenience sampling technique. There are several reasons to use this technique such as limitation of time, cost reduction and access to data. Customers from different banks who use mobile banking services now or in the future were selected for data collection. Banking customers were chosen as our sample population because they are familiar with banking procedures. Mobile banking users, both current and future, have been surveyed so as to gain better understanding of their perceptions of using mobile banking.

Questionnaires for all variables in this study have been adapted from those used in previous surveys (Payne, Peltier & Barger, 2018). "Mobile banking and AI-enabled mobile banking": The "differential effects of technological and non-technological factors on digital natives' perceptions and behavior". "Journal of Research in Interactive Marketing", 12(3), 2018; Sair, 2018) and then "modified according to need or requirements of this research". The current survey questionnaire contained approximately 36 items. Two parts of questionnaire, A and B, are included. An entire section of study is devoted to demographic information, including whether or not participants intend to use digital banking, whether or not they have used digital banking in the past, as well as their age, gender and educational level in B section, you'll find the current study variables. this research relies on variety of data analysis tools and techniques to validate data. Reliability

analysis, descriptive statistics, correlation, and regression analysis were among the techniques used in the current study's data analysis. Thus, in this study, IBM SPSS was used to analyse the data.

RESULTS OF STUDY

Table 1
Variable-Wise Reliability analysis

Variable	Chronbach Alpha
NS	.848
QS	.835
PE	.818
EE	.831
RA	.818
SEC	.824
TR	.815
MB	.827

Each variable's internal consistency is checked using a reliability analysis. As shown in table, the overall reliability as well as reliability of each variable is above reliability threshold which is 0.70.

Correlation Analysis

Correlation demonstrates the association among variables and showed how much the variables are linked with each other. The “results show that there is a positive correlation between” all the research variables and there is no issue of Multicollinearity as no value of correlation exceed .80.

Table 2
Correlation Matrix Table

	NS	QS	PE	EE	RA	SEC	TR
NS	1						
QS	.453**	1					
PE	.532**	.308**	1				
EE	.400**	.574**	.452**	1			
RA	.343**	.227**	.438**	.418**	1		
SEC	.531**	.431**	.562**	.482**	.486**	1	
TR	.472**	.421**	.489**	.499**	.577**	.419**	1
MB	.474**	.528	.429**	.298**	.484**	.503**	.503**

Regression Analyses

As a research tool, “regression analysis examines the relationship between dependent variable and independent variables” of the study in order to examine the strength and direction among variables. Therefore, for this this, before applying the regression, researcher used correlation analysis.

Table 3
Regression Table

Model	Beta	t	sig.	tolerance	VIF
(Constant)			2.170	.031	
Need for Service	.076	1.364	.174	.645	1.549
Quality of Service	.005	.096	.924	.614	1.630
Performance Expectancy	.170	2.847	.005	.562	1.780
Effort Expectancy	.202	3.635	.000	.645	1.550
Relative advantage	.145	2.422	.016	.557	1.794
Security	.182	3.006	.003	.547	1.829
Trust	.173	2.693	.007	.486	2.059

The Above table shows that Need for service and quality of service has an insignificant impact on M-banking user perception as their significant values are .645 and .614 respectively which is greater than 0.05. The results show that all other variables have significant impact on the M-banking customer's perception as their significant values are lower than the threshold which is 0.05.

DISCUSSION

The perception of mobile banking usage is unaffected by need for service. As in previous studies, self-service technologies do not have a significant impact on need for service (Peltier, & Barger, 2018). The perceptions of mobile banking usage are not significantly affected by service quality, according to regression analysis. The past studies on online technologies have shown the same thing. As result of studies such as Curran and Meuter (2005) and Lepkowska (2017). Differences in perceptions and behaviour of the digital natives when it comes to the mobile banking and AI-enabled mobile banking. There is a positive correlation between the performance expectancy and effort expectancy. In this regard, results indicate that performance expectations and effort expectations have significant impact on mobile banking users' perceptions. In this connection, it has also been established through prior research that perception of mobile banking usage is positively affected by the performance expectations and the effort expectations (Geo, Shaikh & Karjaluoto, 2017; Makanyeza, 2017; Mortimer, Neale, Hasan, & Dunphy, 2015; Tan & Leby Lau, 2016).

According to mobile banking users, relative advantage is a major factor in their perception of the service. Relative advantage argument is supported by other studies (Abdinoor & Mbamba, 2017; Payne et al., 2018). The perceived security in the mobile banking activities has a positive significant impact on perception of mobile banking usage. Sreejesh, Anusree and Mitra (2016); Yoon and Ocea (2014) are some of other studies that support this argument. Mobile functions enhance flexibility, allows customization and thus enhance the customer perceived performance expectancies. In this connection, more an individual perceive that usage of the mobile banking enhance his performance, greater are the chances that they will start using the services. In addition, previous studies have shown that security in specific mobile banking activities has a significant impact on mobile banking usage behaviour. In this connection, perceptions of the mobile banking are significantly affected when mobile banking activities are trusted. In this connection, this argument has been supported in the past by (Sahoo & Pillai, 2017; Zhou et al., 2010).

CONCLUSION

Research was conducted to compare digital and non-digital factors on mobile banking users' perceptions. Mobile banking users, both current and future, can be surveyed. Seven independent variables (five digital factors and two non-digital factors) were selected, with mobile banking usage as the dependent variable, in an effort to determine the impact of independent variables on mobile banking perception. SPSS version 16 was used to report data collected through an administrative questionnaire. Reliability analysis, descriptive statistics, correlation and regression analysis were among the techniques used in current study data analysis. Mobile banking usage perception is not significantly affected by two variables, need for service and quality of service, which are non-digital variables. There is significant impact on mobile banking usage perception from the five digital factors that include performance expectancy, effort expectation, relative advantage, security, and trust. Banks and technology are focus of this research. Technological advances are critical to banking industry. Managers can use our findings to maintain efficient management by following suggestions. Banking services are easier to use, that makes customers more receptive to them. The study sample size and time frame are both limited. Customer perspective can be expanded in future by using different variables for the digital and non-digital factors.

REFERENCES

- Abdinoor, A., & Mbamba, U. O. (2017). Factors influencing consumers' adoption of mobile financial services in Tanzania. *Cogent Business & Management*, 4(1), 1392273.
- Al-Jabri, I. M., & Sohail, M. S. (2012). Mobile banking adoption: Application of diffusion of innovation theory. *Journal of electronic commerce research*, 13(4), 379-391.
- Amin, H., Baba, R., & Muhammad, M. Z. (2007). An analysis of mobile banking acceptance by Malaysian customers. *Sunway academic journal*, 4, 1-12.
- Armbrust, M., Xin, R. S., Lian, C., Huai, Y., Liu, D., Bradley, J. K., . . . Ghodsi, A. (2015). Spark sql: Relational data processing in spark. Paper presented at the Proceedings of the 2015 ACM SIGMOD international conference on management of data.
- Arora, S., & Sandhu, S. (2018). Usage based upon reasons: the case of electronic banking services in India. *International Journal of bank marketing*, 36(4), 680-700.
- Boateng, R., Mbrokoh, A. S., Boateng, L., Senyo, P. K., & Ansong, E. (2016). Determinants of e-learning adoption among students of developing countries. *The International Journal of Information and Learning Technology*, 33(4), 248-262.
- Chandon, J.-L., Leo, P.-Y., & Philippe, J. (1997). Service encounter dimensions-a dyadic perspective: Measuring the dimensions of service encounters as perceived by customers and personnel. *International Journal of Service Industry Management*, 8(1), 65-86.
- Chiwara, J. R., Chinyamurindi, W. T., & Mjoli, T. Q. (2017). Factors that influence the use of the Internet for job-seeking purposes amongst a sample of final-year students in the Eastern Cape province of South Africa. *SA Journal of Human Resource Management*, 15(1), 1-9.
- Choubey, J., & Choubey, B. (2013). Secure user authentication in Internet Banking: a qualitative survey. *International Journal of Innovation, Management and Technology*, 4(2), 198.
- Collier, J. E., & Kimes, S. E. (2013). Only if it is convenient: Understanding how convenience influences self-service technology evaluation. *Journal of Service Research*, 16(1), 39-51.
- Cruz, P., Barretto Filgueiras Neto, L., Munoz-Gallego, P., & Laukkanen, T. (2010). Mobile banking rollout in emerging markets: evidence from Brazil. *International Journal of bank marketing*, 28(5), 342-371.

- Curran, J. M., & Meuter, M. L. (2005). Self-service technology adoption: comparing three technologies. *Journal of Services Marketing*, 19(2), 103-113.
- Dabholkar, P. A., & 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), 184-201.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- Davis, F. D., & Venkatesh, V. (1996). A critical assessment of potential measurement biases in the technology acceptance model: three experiments. *International journal of human-computer studies*, 45(1), 19-45.
- Deb, M., & Lomo-David, E. (2014). An empirical examination of customers' adoption of m-banking in India. *Marketing Intelligence & Planning*, 32(4), 475-494.
- Farah, M. F., Hasni, M. J. S., & Abbas, A. K. (2018). Mobile-banking adoption: empirical evidence from the banking sector in Pakistan. *International Journal of bank marketing*, 36(7), 1386-1413.
- Fornell, C., Johnson, M., Anderson, W., Cha, J., & Bryant, B. E. (1996). The American customer satisfaction index: nature, purpose, and findings. *Journal of Marketing*, 7-18.
- George, B. P., & Hegde, P. G. (2004). Employee attitude towards customers and customer care challenges in banks. *International Journal of bank marketing*, 22(6), 390-406.
- Glavee-Geo, R., Shaikh, A. A., & Karjaluo, H. (2017). Mobile banking services adoption in Pakistan: are there gender differences? *International Journal of bank marketing*, 35(7), 1090-1114.
- Grabner-Kraeuter, S. (2002). The role of consumers' trust in online-shopping. *Journal of Business Ethics*, 39(1-2), 43-50.
- Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of marketing*, 18(4), 36-44.
- 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.
- Hatch, M. (2014). *The maker movement manifesto: rules for innovation in the new world of crafters, hackers, and tinkerers*: McGraw-Hill Education New York.
- Huang, W.-H. (2008). The impact of other-customer failure on service satisfaction. *International Journal of Service Industry Management*, 19(4), 521-536.
- Illia, A., Ngniatedema, T., & Huang, Z. (2015). A conceptual model for mobile banking adoption. *Journal of Management Information and Decision Sciences*, 18(1), 111-122.
- Jambulingam, M., 22(9), 1262-1271. (2013). Behavioural intention to adopt mobile technology among tertiary students. *World applied sciences journal*, 22(9), 1262-1271.
- Karatepe, O. M., Yavas, U., Babakus, E., & Avci, T. (2006). Does gender moderate the effects of role stress in frontline service jobs? *Journal of Business Research*, 59(10-11), 1087-1093.
- Kelley, D. J., Singer, S., & Herrington, M. (2012). *Global entrepreneurship monitor 2011 global report*: Global Entrepreneurship Research Association, London Business School.
- Kishore, S. K., & Sequeira, A. H. (2016). An empirical investigation on mobile banking service adoption in rural Karnataka. *Sage Open*, 6(1), 2158244016633731.
- Koksal, M. H. (2016). The intentions of Lebanese consumers to adopt mobile banking. *International Journal of bank marketing*, 34(3), 327-346.
- Laukkanen, T. (2016). Consumer adoption versus rejection decisions in seemingly similar service innovations: The case of the Internet and mobile banking. *Journal of Business Research*, 69(7), 2432-2439.

- 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(5-6), 385-392.
- Lepkowska-White, E. (2017). Exploring the challenges of incorporating social media marketing strategies in the restaurant business. *Journal of Internet Commerce*, 16(3), 323-342.
- 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.
- Maduku, D. K., Mpinganjira, M., & Duh, H. (2016). Understanding mobile marketing adoption intention by South African SMEs: A multi-perspective framework. *International Journal of Information Management*, 36(5), 711-723.
- Makanyeza, C. (2017). Determinants of consumers' intention to adopt mobile banking services in Zimbabwe. *International Journal of bank marketing*, 35(6), 997-1017.
- Manser Payne, E., Peltier, J. W., & Barger, V. A. (2018). Mobile banking and AI-enabled mobile banking: The differential effects of technological and non-technological factors on digital natives' perceptions and behavior. *Journal of Research in Interactive Marketing*, 12(3), 328-346.
- Manser Payne, E., Peltier, J. W., & Barger, V. A. (2018). Mobile banking and AI-enabled mobile banking: The differential effects of technological and non-technological factors on digital natives' perceptions and behavior. *Journal of Research in Interactive Marketing*, 12(3), 328-346. (2018).
- Masrek, N., & Khairuddin, I. (2012). Trust in mobile banking adoption in Malaysia: A conceptual framework. *Journal of Mobile Technologies, Knowledge and Society*, 2012, 1.
- 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., Choudhury, V., & Kacmar, C. (2002). The impact of initial consumer trust on intentions to transact with a web site: a trust building model. *The journal of strategic information systems*, 11(3-4), 297-323.
- Mortimer, G., Neale, L., Hasan, S. F. E., & Dunphy, B. (2015). Investigating the factors influencing the adoption of m-banking: a cross cultural study. *International Journal of bank marketing*, 33(4), 545-570.
- Myrden, S. E., & Kelloway, E. K. (2015). Leading to customer loyalty: A daily test of the service-profit chain. *Journal of Services Marketing*, 29(6/7), 585-598.
- Najjar, L., & Bishu, R. R. (2006). Service quality: A case study of a bank. *Quality Management Journal*, 13(3), 35-44.
- Papasolomou-Doukakis, I. (2002). The role of employee development in customer relations: the case of UK retail banks. *Corporate Communications: An International Journal*, 7(1), 62-76.
- Parasuraman, A., Zeithaml, A., & Leonard, L. (1998). "SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *journal of retailing*, 64(1), 12-40.
- Plakoyiannaki, E., Tzokas, N., Dimitratos, P., & Saren, M. (2008). How critical is employee orientation for customer relationship management? Insights from a case study. *Journal of Management Studies*, 45(2), 268-293.
- Püschel, J., Afonso Mazzon, J., & Mauro C. Hernandez, J. (2010). Mobile banking: proposition of integrated adoption intention framework. *International Journal of bank marketing*, 28(5), 389-409.

- Reinders, M. J., Dabholkar, P. A., & Frambach, R. T. (2008). Consequences of forcing consumers to use technology-based self-service. *Journal of Service Research*, 11(2), 107-123.
- Reinhard, M.-A., & Dickhäuser, O. (2011). How affective states, task difficulty, and self-concepts influence the formation and consequences of performance expectancies. *Cognition and Emotion*, 25(2), 220-228.
- Rhee, S.-K., & Rha, J.-Y. (2009). Public service quality and customer satisfaction: exploring the attributes of service quality in the public sector. *The service Industries journal*, 29(11), 1491-1512.
- Rogers, E. M. (1995). Diffusion of Innovations: modifications of a model for telecommunications Die diffusion von innovationen in der telekommunikation (pp. 25-38): Springer.
- Rohini, R., & Mahadevappa, B. (2006). Service quality in Bangalore hospitals-an empirical study. *Journal of services Research*, 6(1), 59.
- Sahoo, D., & S. Pillai, S. (2017). Role of mobile banking servicescape on customer attitude and engagement: An empirical investigation in India. *International Journal of bank marketing*, 35(7), 1115-1132.
- Sair, S. A., & Danish, R. Q. (2018). Pakistan Journal of Commerce and Social Sciences (PJCSS), 12(2), 501-520. (2018). Effect of performance expectancy and effort expectancy on the mobile commerce adoption intention through personal innovativeness among Pakistani consumers. *Pakistan Journal of Commerce and Social Sciences*, 12(2), 501-520.
- Shahid Iqbal, M., Ul Hassan, M., & Habibah, U. (2018). Impact of self-service technology (SST) service quality on customer loyalty and behavioral intention: The mediating role of customer satisfaction. *Cogent Business & Management*, 5(1), 1.
- Shaikh, A. A., & Karjaluo, H. (2015). Mobile banking adoption: A literature review. *Telematics and Informatics*, 32(1), 129-142.
- Shankar, A., & Kumari, P. (2016). Factors affecting mobile banking adoption behavior in India. *The Journal of Internet Banking and Commerce*, 21(1).
- 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.
- Silva Bidarra, S. H., Muñoz-Leiva, F., & Liébana-Cabanillas, F. (2013). The determinants of mobile banking acceptance: conceptual development and empirical analysis. *International Journal of Management Science & Technology Information*, (8).
- So, K. K. F., King, C., Sparks, B. A., & Wang, Y. (2016). Enhancing customer relationships with retail service brands: The role of customer engagement. *Journal of Service Management*, 27(2), 170-193.
- Sreejesh, S., Anusree, M., & Mitra, A. (2016). Effect of information content and form on customers' attitude and transaction intention in mobile banking Moderating role of perceived privacy concern. *International Journal of bank marketing*, 34(7), 1092-1113.
- Svensson, J., & Wamala, C. (2012). M4D: Mobile communication for development. Paper presented at 3rd Sanord International Symposium 2012, Aarhus University, Denmark, 6-7 June 2012.
- Tai, Y.-M., & Ku, Y.-C. (2013). Will stock investors use mobile stock trading? A benefit-risk assessment based on a modified UTAUT model. *Journal of electronic commerce research*, 14(1), 67.

- Tam, C., & Oliveira, T. (2017). Understanding mobile banking individual performance: The DeLone & McLean model and the moderating effects of individual culture. *Internet Research*, 27(3), 538-562.
- Tan, E., & Leby Lau, J. (2016). Behavioural intention to adopt mobile banking among the millennial generation. *Young Consumers*, 17(1), 18-31.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
- White, H., & Nteli, F. (2004). Internet banking in the UK: why are there not more customers? *Journal of Financial Services Marketing*, 9(1), 49-56.
- Yang, K., & Forney, J. C. (2013). The moderating role of consumer technology anxiety in mobile shopping adoption: differential effects of facilitating conditions and social influences. *Journal of electronic commerce research*, 14(4), 334.
- Yoon, H. S., & Occeña, L. (2014). Impacts of customers' perceptions on internet banking use with a smart phone. *Journal of computer information systems*, 54(3), 1-9.
- Yousafzai, S. Y., Foxall, G. R., & Pallister, J. G. (2010). Explaining internet banking behavior: theory of reasoned action, theory of planned behavior, or technology acceptance model? *Journal of applied social psychology*, 40(5), 1172-1202.
- Yu, C.-S. (2012). Factors affecting individuals to adopt mobile banking: Empirical evidence from the UTAUT model. *Journal of electronic commerce research*, 13(2), 104.
- 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.