

The Appraisal of Mobile Banking Services Adoption in the Kingdom of Bahrain

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Abstract:-This study aimed to determine whether the customers are aware of the online mobile banking features; their intention to use the mobile banking system offered by the bank and their level of satisfaction of using the said apps. The sampling method used was non-probabilistic sampling. Data were from 100 respondents who were bank customers, having smart devices and access to the apps.

The study found out that bank customers are moderately aware that mobile banking service features such as and they are highly satisfied using them. Banks allow their customers using a mobile device and mobile banking application to conduct financial transactions. The mobile apps provide convenience, accessibility at anywhere and anytime, guaranteed safe wide range of product and services.

The factors studied in this research were perceived usefulness, the perceived ease of use of technology and technology task fit and all of them have significant impact on the behavior intention to use the online mobile banking. The study suggested that banks provide customer awareness on the usage of the system and continuously update the security features of the apps. Security enhances the trust of the customers in adopting the mobile banking system.

Keywords:- Mobile banking, Financial Technology, Behavioral Intention, Perceived Usefulness, Perceived Ease of Use and Technology Task Fit

I. INTRODUCTION

According to the study of Lagaras (2018), there is an emerging financial technology that are being developed which brings disruptive innovation particularly of the financial sector. The financial technology innovation changes the lifestyle of the customers, from traditional to automated business processes. This new technology quickly addresses the needs of the customers, at the time, increases their level of satisfaction.

According to Bahrain Association of Banks, the Kingdom of Bahrain is known to the seat of the financial industry of the Middle East countries. It is known for its center of the financial excellence and the bustling financial products and services. Financial institutions, particularly the banking sector are as the prime mover of nation's economy.

Technology changes how the banks operate particularly on the customer service, fund transfers and monitoring of funds. According to Accenture report (2014) digital disruption in financial services can shrink the role and relevance of the banks to create better, cheaper, faster services. Along this line, banks recognize that they need continually focus on technological innovation rather than to complacent and navigate to the waves of central bank's regulation.

According to International Finance Institutions, online mobile banking provides clients real-time services. It technically eliminates the constraints on time and space on doing bank transactions and makes business processes convenient, accessible on 24/7 and efficient. Further, the online mobile banking can help banks communicate with the clients and at the same time, generates revenue through increased customer's transactions.

However, banks are confronted with many challenges such as the customers' fears on frauds and other cyber-crimes. Many studies revealed that mobile banking users faced challenges on the security and privacy of customers particularly on the stolen PIN and password and the lost of mobile phone and wireless device. These fears causesome customers are still hesitant to use e-banking as they perceived it to be untrustworthy.

The perceptions of the technical flaws, cyber crime threats and the trust issues are impending problems that online mobile users are facing. With this perceived problems, the study aims to conclude whether the customers are aware of the online mobile banking features anddo they have an intention to use the mobile banking system offered by the bank.

The purpose of the study was to determine the intention of consumers to use mobile banking services of the banks in the Kingdom of Bahrain. It specifically aimed to examine the factors affecting the intention of the customers of the banking sector to use the services of the bank's mobile banking. It also determine the significant relationship of the following online mobile banking features such as the observed usefulness, to ease the use of technology and technology fit task on behavior intention to use mobile banking technology. It also examined the level of awareness of the customers on mobile banking technology features and assessed the level of satisfaction of the customers using mobile banking technology.

The study gives insights to the banks on the perception of the banks' customers regarding their online mobile banking services' features and behavioral intention to use mobile banking technology. The innovativeness of developing the mobile banking technology can be an avenue to provide high level of satisfaction to the customers, operational efficiency and increase online transactions that will generate more revenue to the banks. The online mobile banking is becoming a way of life of the people of the Kingdom of Bahrain because of its great feature and most banks are offering it. It serves also as reference materials related to the online mobile banking and the technology acceptance. The study focuses on the behavioral intention of the bank customers to use mobile banking facilities of the banks located and operating in the Kingdom of Bahrain only regardless of its size and nature.

II. RELATED LITERATURE

There are significant impact to a country's economic development when it comes to technology, it also prepare for the consequences of the changes. According to Solis, B. (2012), there is a situation that is called Digital Darwinism which concludes that the society and technology evolves faster than the society's ability to adapt. There will be changes that lead for the business to either grow or deteriorate depending on the responses of the firm. Some factors of these changes are globalization, business complexity, rapid digital technologies, increase in regulations and management dynamics.

The impending emergence of new services, payments and business models will be vital for the banking sector. To make a closer look into it, experts have improved both non-financial and financial information's interconnectivity and performance by using data analytics. They have also improved real-time reporting and have increased the prognostic analysis. These types of technology are alleged to be influenced by the behavior intention which is why it is accepted in the society. Behavior intention is when an individual's perception if they wish to use the technology. This is considered to be the main reason of the increase usage of technology.

The study of Baptista & Oliveira (2015), found out that habit, motivation, and performance expectancy were significant antecedents of behavior intention. Habit and culture are considered as important drivers in mobile banking use. The performance expectancy is synonymous to perceived usefulness, to which defines as the degree on how the system will help the user improve his performance. This is considered as an influencing element in adopting and using information system (Khayati & Zouaoui, 2013). This can be viewed that the fast development of the mobile technologies and smart devices put the banking sector into innovative position. Banks took advantage of this development to provide better product and services to their customers.

The study of Luarn, P. & HuiLin, H. (2004) identified the users' acceptance of mobile banking using the technology acceptance model (TAM). The results showed that there is a strongly support on the technology acceptance model in determining the user's intention to use mobile banking. However, the users perceived the risk of fraud and privacy issues which the regulatory bodies need to address and the infrastructure investment. Trust was also considered as an important concern in mobile banking.

Sultana, R (2009) found out about the factors that determine the continued trust and element in developing the mobile banking. Loss of privacy, loss of service and regulation against risk of fraud were considered as the factors in mobile banking were adopted by the customers. Regulators must have an active role in policing the implementation of the mobile banking application to ensure the safety of the interests of the customers and as well as the banks. Moreover, the regulation is necessary to ensure the protection of interests of customer. Mobile banking service providers faced challenge of security and privacy of customers such as stolen PIN, password and privacy. On the other hand, mobile banking apps users faced challenges of losing the mobile devices.

Vijay, K. (2011), in his research "Determinants of Internet Banking Adoption" found out that service quality has relationship with customer's satisfaction as well as satisfaction in e-banking service. Employees, businessmen and professionals found to have higher satisfaction level of using e-banking services. In this vein, the usage of the technology depends on the level of education and their exposures to the technology. Understandability of the mobile banking system is one of the factors that will increase the usage of the technology.

Raza, S.A (2017) studied using the using the technology acceptance model (TAM) to determine the variables that affect the intention of customers in using mobile banking in Pakistan. The results suggested that resistance is significant and has negative association with perceived ease of use. Further, resistance is significant and positive association with perceived usefulness. It also indicates that perceived risk and compatibility have positive significant relationship with perceived usefulness and perceived ease of use. The level of awareness has positive and significant correlation with perceived ease of use but with insignificant relationship with perceived usefulness. The perceived ease of use is stated on how the user believes that using the system is easy.

The study of Awadhi, A.A. (2013) study on the adoption and acceptance of M-banking system in the Kingdom of Bahrain revealed that the mobile usage affects attitude towards acceptability of the m-banking. Further, it showed that there is no relationship between the acceptability of the m-banking and the wireless technology due to some bank's strategy in adopting the technology. The progression and improved information technology has upshot the banking technology such as ATMs, internet banking and mobile banking. Banks put more emphasis the

convenience, attractiveness and accessibility to satisfy the existing customers and at the same time, attracting new customers. Customers of any bank in any branch can make transactions regardless of physical location and time.

Mobile banking has eliminated the space between the banks and their customers. The customers' positive attitudes towards m-banking were primarily due to mobility and 24/7 accessibility. Al-Qatami, L., (2017) of Gulf Bank in Kuwait stated that in designing the mobile banking application, it has to be simple, convenient, efficient and with biometric security features. Hameed, S. (2017), Head of Retail Banking, UAE, at Standard Chartered explained that banks in GCC are changing and realigning to the digital environment. Banks are now providing customers with advanced digital banking services such as online video chat, online bill payment and money transfer, along with touch ID and other security features. He further mentioned that banks' digital capabilities are no longer the differentiating factor. In fact, most banks are running fast towards launching unique features such as Artificial Intelligence, Social payments, Wallets, and robots. Digital is, according to him, all about making banking simpler, faster, and better. As the speed of innovation gathers pace with no signs of slowing and as customers become more digitally-minded and expect their services to do the same, Middle East banks are confronted with the appropriateness and effectiveness of approaches to address the intermittent cyber security issues need to question whether they have an appropriate and effective approach to security.

Many studies examined relationship between service quality and customer satisfaction. Booth (2014) study found out about effect of mobile banking strategies on customer satisfaction in the Kenyan banking industry. The mobile banking application is designed to allow users to access their banking services via a mobile device. Interaction with the application is very important for system users and is considered as one of the features for the usability of the mobile banking services. The applicable should be easy to use, secure and constantly updated.

According to Kizza (2015), the quality and efficiency of the application justify its price. If the application is too expensive, the price is likely to put off potential customers. Bank applications must be in high quality due to valuable information. Also customer should feel that they have a secure application to use it. If the application is not in high quality there will be a lot of risk to join the specific bank or to use their mobile application. Customers prefer the modern way of banking rather than the traditional way. Mehmet (2016) elucidates the trend by relating the technology to the cost of its products. The dynamic nature of mobile banking technology would likely reduce the cost of operation particularly the long queue of customers inside the bank.

Awadhi, A. (2013) in his research about Adoption and Acceptance of M-Banking System in Kingdom of Bahrain says "In Bahrain, it is found that there is little effort applied in this field". Ithmar Bank was among very few banks have applied m-banking as one of banking methods or services. However, currently most of the banks provide innovative approaches to make mobile banking a powerful tool in delivering banking services. AlSoufi, A. & Ali, H. (2014) in his study on "customers' perception of m-banking adoption in the Kingdom of Bahrain" found out that there was increasing usage of mobile banking and it is expected to increase tremendously. Most of the banks had already launched mobile banking services to provide better services to customers. Mashhour, A & Saleh, Z., (2015) in their research on the "perception of the community on the security and acceptance of mobile banking services in the Kingdom of Bahrain", found out the most effective challenges that banks are facing were trust, inexperience and inadequate knowledge in using the mobile apps. Users do not trust the mobile banking technology. Banks were recommended to enhance the security features of the mobile applications, as well as users of the mobile device. It was found out that the growth in smart phones industry and banking apps that have been attributed to the development of the technology applications.

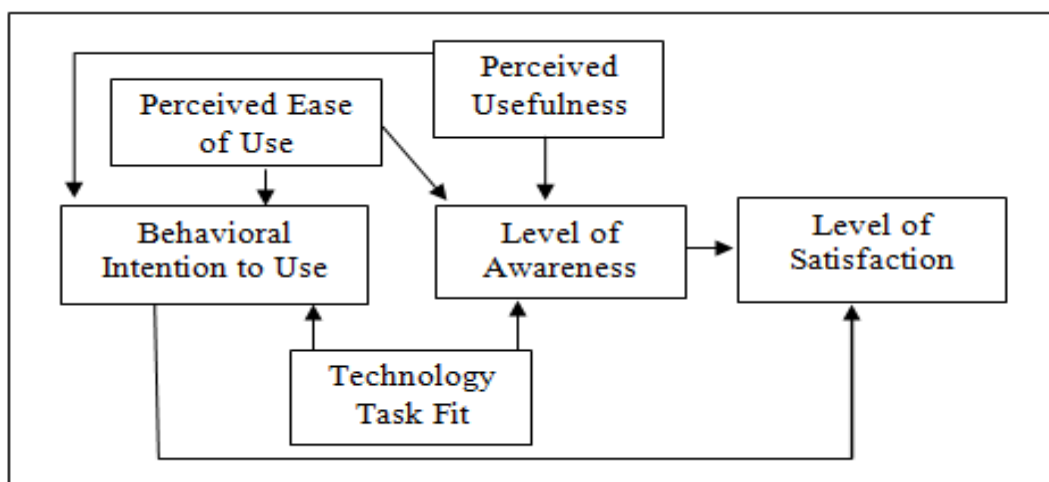


Fig 1:- The Conceptual Framework of the Study

Technology acceptance model (TAM) was theorized to be the reasoned action on how the users would agree with the information technology. This was used to determine the acceptance of the users to the tools and to conclude the adjustments to the system for better acceptability. As determined by the model, the acceptability of the information technology is determined by perceived ease of use and usefulness to the business. The perceived ease of use is stated on how the user believes that using the system is easy, while the perceived usefulness is determined on how the system will help the user improve his performance.

Technology acceptance model's basic framework only describes the impact of the performance expectancy and ease of technology to use towards behavioral intention. Behavioral intention is an individual's insight if they are willing to use technology in the future. Based on Goodhue (1997), technology task fit is when an individual is assisted by technology in completing the task. For other researchers (Lam, Cho & Qu, 2007), technology task fit indicates the degree of the individual wanting to use technology if it matches the job requirement. The significant influence by using technology in a country is the increase of development in the economy and also, the adaptation to conquer consequences in the future.

According to Solis, 2018, when technology is applied in the society and was able to adapt the changes faster than businesses, it is called Digital Darwinism. Using Digital Darwinism, business may wither grow or deteriorate when changes happen however, this depends on the firm's responses. The business needs to consider the pressure coming from globalization, business complexity, management dynamics, rapid digital technology and increase in regulations. The approaching rise of new services, payments and business models will be vital for the business sector. To make a closer look into it, experts use data analytics for better real-time reporting, raising prognostic analysis and better interconnectivity of both non-financial and financial information and performance (Borthick & Pennington, 2017).

III. METHODOLOGY

This study made use of the descriptive and inferential method of research to examine the bank customers' views regarding the factors affecting their intention to use mobile banking services offered by the banks located and operating in the Kingdom of Bahrain. The researchers used written survey questionnaires to gather data for this study with a sample size of 100. Using non-probabilistic sampling of 100, this allows enough data to conclude a statistical significance. The written questionnaire determines the level of knowledge in mobile banking features; the effect of the perceived usefulness, the ease of using technology; and technology fit task to behavior intention to use mobile banking technology; and, assesses the level of satisfaction of bank customers on using mobile banking technology. The researcher conducted a pretest of the instrument in order to test its understandability to the prospected respondents and the reliability was measured using the Cronbach-Alpha

coefficient. The variables used in this study demonstrated acceptable reliability since the value ranges from .667 to .895.

IV. FINDINGS AND ANALYSIS

The results of the study show that, of the total respondents (n=100), 58% were female and 90% have Bachelor's degree. The result of the study shows that respondents were moderately aware of the mobile banking technology features. They are aware that mobile banking is secured and private, 24/7 accessibility anywhere and anytime, view transaction history, inquiry platforms, provides better banking services.

They are aware that mobile banking is secured and private, 24/7 accessibility anywhere and anytime, view transaction history, inquiry platforms, provides better banking services. The study confirms previous studies that the banking industry should continually offers innovative features through digital channels to provide better services to customers.

The study shows that respondents would probably use the mobile banking for their banking service's needs and/or other business processes. Based on the gathered data, the respondents agreed to use mobile banking due to its perceived usefulness. They perceived that mobile banking can save time and improve business processes. The improved mobile banking technology can lower the "cost of trust". The users perceived the risk of fraud and privacy issues need to be addressed by the government agencies concerned to raise the trust of the bank customers on mobile banking.

The results of the study indicate that mobile banking features are perceived to be easy to use because of accessibility, mobility, efficiency and effectiveness features. It confirmed many studies that accessibility, mobility, and the wide range of services are the key factors in adopting the mobile banking technology.

It also revealed that on the aspect of technology task fit feature of mobile banking, the respondents probably would use since it is time efficient and costs less transactions; it simplifies the process of verification and notifies real-time fraud schemes. E-Mobile banking application has perceived that it is time and cost efficient; it simplifies the process of verification and notifies real-time fraud schemes. The results of the study negate the study of Mashhour, A & Saleh, Z., (2015) that users do not have the experience of using and knowledge in using the mobile apps; lack of trust on the mobile banking technology. Banks over the years have improved their information technology systems particularly of real-time fraud detection. They simplify the mobile banking apps to become user-friendly.

Mobile banking users were very satisfied in using the mobile banking technology. The study indicates that respondents intend to use the mobile banking. Behavioral intention is an individual's insight if they are willing to use technology in the future.

	PU	PEU	TTF
Level of Pearson Correlation	.675**	.733**	.638**
Awareness Sig. (2-tailed)	.000	.000	.000
N	100	100	100

Table 1:- Significant Relationship between Level of Awareness of Mobile Banking Technology and Intention to Use the Mobile Banking Services (** - at .01 level of significance)

The study shows that level of awareness of the mobile banking technology has significant relationship with the behavioral intention of the respondents to use the mobile banking services. It confirms the study of Raza, S.A that the level of awareness has positive and significant correlation

with perceived ease of use (PEU). Perceived ease of use can be attributed to the design and development of the application. Banks need to design the online mobile banking application based on simplicity and efficiency of movement without losing its aesthetics and security features.

	PU	PEU	TTF
Behavioral Pearson Correlation	.687**	.747**	.744**
Intention (BI) Sig. (2-tailed)	.000	.000	.000
N	100	100	100

Table 2:- Relationship between Mobile Banking Technology Features and the Intention to Use the Mobile Banking Services

The results revealed that all determinant factors; namely, perceived usefulness (PU), perceived ease of use (PEU) and technology task fit (TTF) have significant relationship to the behavioral intention to use the mobile banking services. The key factors that customers use the mobile banking technology because of its usefulness, ease of using the technology and the technology task fit. The banking industry has intensified the security features to detect the real-time fraud. The results also affirmed the study of Gu, et.al (2009) that the determining factors of behavioral intention on mobile banking are perceived usefulness, perceived ease of use and trust.

that the unwillingness of customers to use mobile banking due to their lack of appreciation of the benefits of the mobile applications. Bankers need to orient the users or raise the awareness on the technology based banking services.

RECOMMENDATIONS

Based on the findings of the study, it is recommended that banks should continually provide orientation or customer’s awareness campaign on the usage of online mobile campaign. Banks should continually improve their technologies to safeguard the interests of the banks and as well as their customers. Users must be aware that using this technology has corresponding responsibilities and accountability particularly on securing their mobile devices, passwords and privacy. Further, they have to be vigilant on emergent cyber attacks or threats.

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Technology has transformed the human lives of the people. With the technology, business processes become accessible anywhere and at anytime. More security features were added to address the threat of cybercrime and other perceived risks. With the improved technology, the customers believed that using the system is effortless. Respondents are willing to use and take advantage of a technology.

Level of Satisfaction and Behavioral Intention to Use Mobile Banking Services. The study reveals that the respondents’ level of satisfaction of using mobile banking technology has significant relationship with their behavioral intention to use. The banking industry has realized the importance of customers’ satisfaction. They focused on the significance of customer-centered approaches to help manage the business. The results confirmed the study of Aghdaie, S.F. &Faghani, F., (2012) that customer satisfaction is viewed to be the intervening construct in the area of service marketing.

The awareness of the online mobile banking features which is an indicator that they are using or intend to use the technology. Lack of awareness and understanding the benefits of mobile banking were identified as main barriers (Laforet& Li (2009) to mobile banking. It can be viewed

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