Integrating Mobile Commerce into Saudi-Based Companies: Opportunities and Challenges

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ABSTRACT:The introduction of mobile technologies in Saudi Arabia had an enormous impact on the business environment. In this research paper, we will concentrate on its effect in Saudi-based companies specifically in the airline and banking sectors. A case study has been presented for one of the leading names in each of these areas that focused on the customer response toward their adaptation of the technology which was found to be mostly positive. The purpose of this paper is to review the impact of mobile commerce has on businesses in Saudi Arabia. This research paper further attempts to provide a general overview of the main concepts related to mobile commerce in Saudi Arabia, presents the challenges and identify the opportunities of implementing mobile commerce within the local business environment.

KEYWORDS:Mobile commerce; Saudi Arabia; Airline,Banking,Case studies, Opportunities, Challenges.

I. INTRODUCTION

Nowadays, business and technology are moving forward in a staggering growing pace that has not been seen before. The advancement of Information Technology (IT) has altered the business landscape in many industries. With this advancement, new technologies and terms have been developed to showcase that change. For instance, Modern Information Communication Technologies (ICT) provides powerful tools for organizations that can significantly influence their operations, structure, and strategy. One of the most common ones is the mobile commerce or as more popularly known as m-commerce.

M-commerce is a broad term that reflects the different transactions, either an exchange of goods, services or information, done on a mobile device connected to the Internet. The most known device in conducting m-commerce nowadays is the smartphone. The emergence of mobile technologies has designed a new innovative gateway for companies to expand the frequency, availability, and speed of communication between the company and their customers [1].

Around the world, m-commerce is being rapidly adopted as the latest trend to do business. As the number of mobile phone holders is growing, the rate of products and services purchased is also increasing. Mobile usage in the Arab world is displaying substantial increase throughout the past few years, especially in Saudi Arabia [2].

The economy of Saudi Arabia is growing fast as well as mobile usage. All of which, play a significant role on m-commerce in Saudi Arabia. However, the adoption of m-commerce in KSA can be affected by some factors including technological and demographic factors. This research paper will focus on m-commerce in Saudi Arabia where it will give a general overview of the main concepts, present the challenges and identify the critical success factors of implementing m-commerce within the local business environment [3].

II. BACKGROUND

Internet and technology enabled applications are always on a steep and accelerating growth curve. They are providing businesses entirely new and innovative ways to grow markets and serve customers in ways that were unimaginable less than a short decade ago. The "e‑word" has also enabled new direct impacts at the individual level too. Individuals communicate with others and access essential information and contacts through online communities; they can keep abreast of changes in their expertise field through distance learning and web portals. By the year of 2001, Internet has grew to be the biggest network in the world and covered up more than 140 countries and areas, linking more than 25,000 networks and 520,000 mainframe computers. The flourishing of Internet makes possible for many enterprises to start in electronic commerce. E-commerce is considered as one of the most significant accomplishments of Internet [4]. In general, it is defined as the ability to buy and sell products or information on internet or other online

sources [5]. Since then thousands of enterprises have created their existence on the Internet through websites. Ease of access to the Internet for both enterprises and individuals was a critical factor that resulted in rapid adoption of E-commerce. Many enterprises across the globe have adopted E-Commerce to reach national and global markets at low operating costs. E-commerce enables many organizations to transfer their business into the world market to participate and compete globally. It breaks the boundaries of time and place and makes enterprises have an edge over others and make it possible for individuals to make purchases globally and receive their purchased items from almost anywhere in the world. While e-commerce has extremely impacted the global business environment, new technologies and applications have started to focus more on mobile and wireless transactions. With the exponential advancement in mobile device technologies and wireless networks, a new version of E-commerce has been introduced. It has rapidly gained popularity and is now known as Mobile commerce or m-commerce. Mobile commerce (m-commerce) has been defined as the exchange of goods and services via mobile phones [6].

In real life, the intercommunication between technologies such as the Internet and mobile network promotes the existence of m-commerce to provide a lot of services to mobile users[7]. According to Scharl, mobile devices have increased the speed, availability, and frequency of communication between companies and consumers. So, an innovative concept has been developed, via mobile devices, to deliver new services for consumers [1]. "M-commerce is directly linked to electronic commerce (e-commerce)" [7]. Vetter and Varshney have regarded mobile commerce as a form of electronic commerce using wireless devices [1]. "Whereas e-commerce provides "anytime" access to online services, m-commerce potentially allows users to perform online transactions "anytime and anywhere" " [7]. "The concept of "anytime and anywhere" transacting and accessing important business information can be considered as one of the most significant advantages of m-commerce that draws the attention of businesses and their employees" [7]. Now, m-commerce has become the default way that people do online transactions. "The annual number of smartphones shipped to consumers is greater than the combined sales of automobiles and PCs" [8].

In 2014, more than 26 billion (53%) will stem only form smartphones according to the internet retailer. Likewise, the percentage of the sales placed in online retails through mobile devices will raise from 11% to 25% from the year 2012 t 2017 [9]. Also, Cretio statistics for the first quarter of 2015 showed that mobile presents 29% of electronic commerce transactions in the US and 34% globally and by the end of 2015, mobile share is forecast to reach 33% in the US, and 40% globally [10]. Moreover, according to an analysis of data from Internet Retailer's newly published 2016 Mobile 500, M-commerce now accounts for nearly one-third of all e-commerce sales in the United States. In 2015, U.S. m-commerce sales exceeded $104 billion USD, an increase up to 38.7% from $75.03 billion USD in year before, exposes data from the 2016 Mobile 500. Internet Retailer expected that m-commerce in 2015 will grow 2.58 times faster than total e-commerce sales, which Internet Retailer projects will increase to more than $350 billion USD [11].

However, there is a couple of difficulties and problems that affect the progress of mobile commerce in respect to mobile terminals, i.e. small screen, tiresome input method, restricted power battery, low resolution, etc., in addition to the high costs accompanying the mobile services, and the complex use of several functions [12]. A study by Kisieloweska-Lipman found that m-commerce adoption is influenced by the constraints of technological means such as the screen size of the mobile phone, limitation of products and services available online, and some security issues. Also, the Australian Communications and Media Authority (ACMA) created a report that involved qualitative data on customer attitudes to mobile payment means and services that included the premium mobile services. The research concluded a number of important discoveries including that customers are trusting on mobile payment services handled by banks, instead of the ones delivered by telecommunications providers [13]. In regards to m-commerce in Saudi Arabia, a limited number of studies has been done to investigate this trend. One study is "An Initial Investigation of M-Government and M-Business" by Mutlaq B. Alotaibi [14]. Another study is "An Investigation of Mobile Services Acceptance in Saudi Arabia" by Mohammed Algethmi [1]. Accordingly, the overall aim of this paper is to examine and develop an understanding regarding the issues surrounding m-commerce adoption and provide some critical success factors of implementing m-commerce in Saudi Arabia[12].

III.LITERATURE REVIEW

Researches have been done focusing Saudi Arabia and discussing mobile commerce according to different point of views and different research interest. Here are some of these conducted researches related to this work.

In 2011, OmaimaBamasak conducted an empirical study on consumers to examine acceptance of mobile payments method in Saudi Arabia where she surveyed more than 180 mobile phone users. She proposed that security and trust

in traditional methods of doing things is the major reason that prevents Saudi users from using mobile means to conduct their business [15].

In 2013, A. Alkhunaizan and S. Love wrote a research paper dedicated to the effect of demographic factors on frequency of mobile commerce usage in Saudi Arabia. They analyzed individuals in terms of age, gender and their education. Based on their study they came up with their own hypotheses that reflect the effect of demography on mobile commerce acceptance where more than 500 users participated in the study from various cities across Saudi Arabia. It concluded that age is the main demographic factor effecting actual usage of mobile commerce [16].

In 2014, Mohammed Algethmi wrote his PhD thesis about mobile commerce acceptance in Saudi Arabia airline sector where he investigated the consumer behavior of using mobile services through their travels and the factors influencing it. He conducted a survey on more than 300 users that helped him conclude the reasons behind their intention of usage where compatibility, mobility and usefulness of the mobile services play a big role in it. This research can serve as road map for airline corporations to make better decisions regarding mobile commerce services [1].

In 2015, N. Alturaigi and A. Altameem discussed the main reasons that make mobile commerce successful for the organization's business specifically in the Saudi Arabia's private sector; the authors categorized all these factors into three distinctive groups, namely, acceptance, technological and business factors. They conducted case studies on five of the biggest Saudi companies that successfully invested and utilized mobile commerce to their advantage as part of their business. These companies extend to banks, online stores, airline corporations, and electricity and telecommunication companies [17].

Although the above mentioned researches cover some of the studies that have been conducted in the area of mobile commerce, still there is a visible shortage of study in this field.

IV. MOBILE COMMERCE OVERVIEW

The purpose of mobile commerce is to reach out for a large scale of people wherever and whoever they are. The flexible ability of mobile commerce is a result of amalgamation of emerging enterprise applications, the Internet, and wireless technology. This section focuses on giving an overview of mobile commerce and its usage in Saudi Arabia in comparison to the global view [18].

A. M-commerce and mobile usage worldwide

Mobile commerce has shown continuous growth over the years in most of the countries around the world. More than 600 billion dollars are estimated to be the sales in mobile commerce by the year 2018 which is a surprising number as it is close to the number of all the electronic commerce sales in the year 2013. Also, a statistic in 2014 stated that more than 500 million consumers worldwide made a purchase through a mobile device that year and more than 14% of earth population will make at least one purchase through a mobile device by the year 2018 [19].

In 2015, the highest percentage of users who use smartphones in mobile commerce by the month is found in South Korea; next in line is Chine and UAE, coming in third place is Singapore, and Hong Kong, in the sixth position is the USA and the UK. Now in this section, we will focus on the main game changers in the field, and they are South Korea, China, and lastly the USA.

In South Korea, the number of mobile users and subscribers are increasing by 3% each year where 70% of the population is using the internet through their mobile device; spending almost 2 hours daily each usage. Another statistic shows that 113% is the percentage of subscribers in comparison to the total number of the population where 43% of the Korean population is using it for mobile banking in particular. As for buying online, 43% of the national citizens have bought something online through their mobile devices on a monthly basis, and 78% have researched the information of a product online before buying [2].

China with its vast population is playing a major role in mobile commerce and is causing a shift in the market. They make a total of 99% of the population who are in possession of a mobile device so far; 43% of which is using it to access the internet and is used by 30% to conduct mobile banking activities. The number of people buying products through mobile devices is 34% while 42% is using it in searching for information about the product only [2].

The United States is having the highest growth number of subscription to mobile devices by the year; reaching more than 342 million subscribers in total so far. It is stated that 55% of Americans access the internet via their mobile and 31% of them use it for online banking. The surprising number is the percentage of people who purchased online using a mobile device which only reached 26% in comparison to 71% that uses it for researching information about the products [2].

This huge leap in sales and subscription in mobile devices have caused many businesses to be motivated and to prioritize their resources to reach consumer satisfaction; also, to dedicate their time to study their behavior. In general, most of the first world countries are taking the lead in using and spending on products and services bought through mobile devices and the number is still growing. However, other countries are catching up in that field as well.

B. **M-commerce and mobile usage in KSA**

The market for mobile commerce is growing at a fast rate and gaining a lot of attention in Saudi Arabia lately, in particular among the young population, since they are fast in accepting new technology and becoming the ones to set the trend. According to a PayPal study, mobile commerce is exploding in the Gulf countries especially in UAE, Saudi Arabia, and Qatar. In 2015, mobile transactions represented 20% of the electronic commerce in the area where the mobile commerce market reached 3 billion dollars in total. All of which represent how the sector has expanded in the area. Another reason for its popularity is dependent on external factors where the increase in mobile commerce consumers can push the vendors to operate on the platform more and that can lead more consumers to follow [20].

The primary driver for growth in mobile commerce, other than the convenience, is the increased number of subscriptions to mobile devices mainly smartphones; also the growing popularity of mobile applications and their technological characteristics. Smartphone features and technology, in general, helped in making mobile transaction much easier and convenient. There are other reasons to attract customers into mobile commerce. In a recent study, it is found that most of the shoppers in the Middle East tend to buy from companies based on a couple of reasons, some of which are the convenience, enhanced the user interface and low prices [13][20].

In the year of 2015, a study has been conducted in Saudi Arabia that stated that 14.7 million of the Saudi population (31.5 million) is using the internet through their mobile devices; that is more than 40% of the population. The average time spent in doing so is more than four hours where the mobile phone took first place with a percentage of 48% in web traffic priority. The monthly percentage of mobile users who search online for a product to buy is 19% only, 15% of them carry on with their purchase. The rate of growth in mobile subscriptions in Saudi Arabia is 3% since the first quarter of 2014. The number of people accessing their social media accounts through their mobile device is 8 million. The mobile subscription rate is 173% with more than 54 million of the population subscribed. One of the most known reason and example of mobile commerce is banking; the percentage representing the use of mobile banking in Saudi Arabia is 18% [21].

In the year of 2016, a more recent study has been published in January. It stated that 181% of the population is connected through mobile devices showing 9% of growth in subscriptions with 91% of mobile phone ownership is in the adult population of the country. The average time of daily use is almost 4 hours. Active mobile users on the internet are more than 15 million users. The web traffic is 55% occupied to serve web pages on the mobile phone making it the highest percentage so far in comparison to other devices. The rate of using mobile banking has increased reaching 26%. Online purchases through mobile devices have also increased to reach 23% [2].

It is concluded from the previous statistics, that KSA is among the highest in rates of mobile penetration where the young Saudi consumers are more adaptive to new technologies and transaction options. The number of users that have made a purchase through their mobile device has increased by 4% since last year reaching 23% of the population number as a whole. These statistics show the growing role of mobile devices as a payment channel and making it a great candidate for a competitive advantage over Saudi companies that are looking for unique marketing methods to expand their presence in the industry. In foreign countries, it is considered a necessity not an option where you can either sink or swim.

V. M-COMMERCE IMPLEMENTATION IN SAUDI-BASED COMPANIES

Since 2011 many Saudi companies started to launch mobile applications to their customers, but most organizations still at late in m-commerce adoption. [22] reported that 64.19% of the establishments use one or more of the following e-services: e-Government, e-Banking, e-Learning, e-Payment (receivables), Online Shopping. A survey by [22] in 2014 noted that among 1163 corporate and government establishments:

- 52.20% using e-services of Government agencies
- 46.28% using e-Banking
- 10.41% Placing orders (buying) through Internet
- 9.98% e-Learning
- 8.54% Online customer support

- 8.46% e-Payment for receiving orders
- 7.28% Receiving orders (selling) through Internet

Most of the establishments that are not providing e-payment facilities for receiving orders through electronic channels stated that e-payment is not needed (83.23%). SADAD is considered as the most widely used e-payment method followed by e-banking and credit cards. [23] noted that a big fraction of possible clients stay unbanked (people who use conventional means that involve no financial establishments to borrow or save their money) that can create a huge obstacle to online transactions. The regional instability scares away key investors and closes off whole markets to expand businesses. Also, acceptance ratios for ecommerce companies remain low as many startups begin without fully developed checkout pages. The largest challenges for online payments come from reliance on cash on delivery as a payment system, and high chargeback ratios.[24]

As a result, only few establishments are interested in e-commerce or m-commerce. Most organizations have their online presence through websites only. Websites with linked email facility and online order forms are the most used modes for receiving orders through electronic channels. Mobile apps are still the least used. While 15.84% of establishments receive more than 50% of their orders through electronic channels, 84.46% of establishments that are not selling products through electronic channels stated that the service is not needed [22].

According to [25] the markets' largest segments are financial services and e-services (including online travel bookings (package holidays, hotels and vacation rentals) mobility tickets for services such as flights), with a market volume of 372,157.7M USD respectively in 2016.

As per the statistics given in [25] and also from the previous statistics provided by [22], we conclude that the potential growth of online market in Saudi Arabia will be huge for financial services and e-services sectors. Accordingly, our study will investigate m-commerce in Saudi Arabia through the two trading sectors: financial services represented by banking sector and e-services represented by airlines sector. Two case studies will be represented in the following parts to analyze successes and barriers factors for the implementation of m-commerce.

A. **Airline sector case study**

The airline sector in Saudi Arabia is of great importance to the country's economy. In 2011, [23] reported that the aviation sector contributes 30.2 billion SAR (1.8%) to Saudi Arabian Gross Domestic Product (GDP). The Airline sector represents the airlines directly; it funds around 11.3 billion SAR to the economy of Saudi Arabian. The sector also contributes indirectly with an additional 4.3 billion SAR over the output it funds down its supply chain. An additional 4.8 billion SAR originates from the expenditure of the airline staff and their supply chains. In total, the airlines contribute over 20.4 billion SAR to the country's economy. In 2016, [23] showed that Saudi Arabia is the largest market based on flight tickets' sales that amounted to 10.9 million tickets and stood at $4.1 billion during the first ten months of 2015.

According to a report [23], in 2016 for air passenger market analysis, the Middle East remains the notable exception, as was the case in 2015, with capacity growth continuing to outstrip the even double-digit annual increase in passenger traffic. It is argued that online expenditure in the MENA area is expected to rise from $9 billion to $15 billion from 2012 to 2015, and travel reserve its position as the biggest item purchased online, with a more than $1,500 spent each year per person. Also, the Arab air transport market grew from 3 million passengers in 1965, which constituted less than 1% of the global air transport market, to about 185 million passengers in 2015, constituting around 6% of the global air transport market [26]. Moreover, inside the Arab nations, the market of Saudi Arabia is thought of as one of the major domestic travel markets, with more than 22 million passengers in 2011 alone [1]. Furthermore, the only two companies for domestic aviation in Saudi Arabia: Saudi Arabian Airlines and Flynas reported an increase in some flights and passengers in the last two years. Saudi Arabian Airlines have issued its annual operational performance report for 2015 showing growth in flights during last December as it operated 16,559 flights in domestic and international networks with an increase of 5% compared to the same month in 2014 [27]. The report also showed an on-time performance rate of 85.23%. While Flynas verified a significant growth in passenger traffic in the year 2014, carrying more than 6 million passengers compared to 3.3 million the year before [27].

Air travel is the preferred way of travel in Saudi Arabia because of the lack of reliable public transportation structure. Hence, airline companies in Saudi Arabia should benefit from the high competition and value available in the market through the development of their products and services to suit the new generation based on technology.

It is debated that creating inventive and original travel services and products is an attractive space for passengers especially for frequent travellers such as academics, businessmen, and other practitioners. According to [1], airlines companies are functioning in a competitive international market filled with challenges. To face these challenges,

airlines ought to reorganize their companies by embracing new information technology, which involves innovations in their area. [1] Indicated that due to quick modifications in technology, many airline companies have been working hard to develop and improve their own websites to assist in the progress of e-business transactions. For that reason, online airlines and other travel companies must develop a service or a product that can make things easier where the buying procedures are simpler and can go beyond the value of predictable products and services. In 2013, a survey has been conducted about airline investments in information technology (IT) over the three coming years; it showed that more than 60% of airline companies were preparation to make a substantial investment to offer passengers information through their mobile devices. Also, a survey by [28] in the year 2012 showed that websites and mobile devices will be the two most significant channels for conducting passenger's processes beyond 2015. Now in 2016, most of the flights booking procedures are done on mobile devices.

Airlines in Saudi Arabia recognized the importance of mobile services to nowadays customers and launched their phone applications recently. Saudi Arabian Airline has launched its smartphone application for IOS devices in January 2015 and for Android devices in August 2015.

A study has been done to investigate SAUDIA mobile services acceptance in Saudi Arabia; the major airline company in the country. It aimed to measure the customers' willingness and intentions to use their mobile devices as the only way to acquire the company's services in Saudi Arabia; as there are five ways to experience the impact of their mobile services: making travel paperless, keeping passengers informed by notifying them of any flight changes, enabling m-payment, mobile self-service applications will offer passengers greater control throughout their journey and marketers will be able to send targeted content to passengers' mobile devices [1].

The study targeted anyone who used SAUDIA's mobile services at least once, either through the company's own mobile application or their online website using a mobile device. A questionnaire was distributed among 142 travellers of both genders to conduct the survey, and their respondents were received and analyzed. The questionnaire is divided into two types of questions. The first part contained closed-ended questions to measure the level of users' satisfaction where both ordinal and nominal scale questions were included in this part; using a 5-point scale ranging from 1 point ('strongly disapprove') to 5 points ('strongly approve') for rating the users' experience with the mobile service. The second part was concerned with the consumer thoughts and comments when they used the mobile services of SAUDIA for completing their travel processes and if there is a lack in some areas; so it contained a comment section to express their concerns. The majority of the results found after conducting the survey approved of the company's mobile services where the majority of users were very satisfied with it; with an average of seven out of each ten customers giving the service a vote of five points out of five as seen in Figure 1 where It shows the percentage of people and the rate of their experience with the SAUDIA mobile services based on points where the more points were given, the more a customer is happy with the service.
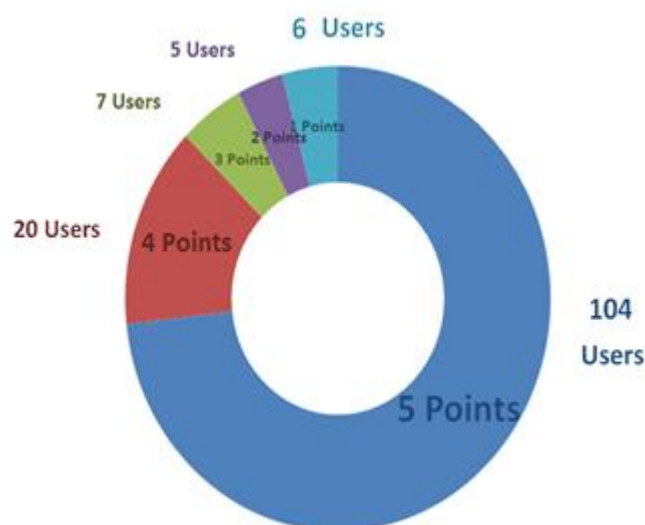

Fig. 1 Customers Rating of SAUDIA's Mobile Services

The results show that most of clients, 104 users out of 142, were content with the overall experience and found that the app does what is expected from it, and the content was satisfactory. Other customers, 32 users out of 142, have an

average response to the application ranging from 4 points to 2 points. The remaining users, 6 users out of 142, were unsatisfied with the application where they gave a one point rating only. The findings of this research's results revealed that most of the users who gave a low review on the mobile service complained commonly about a couple of factors; Figure 2 summarizes the problems the customers faced and their percentage of being complained about.
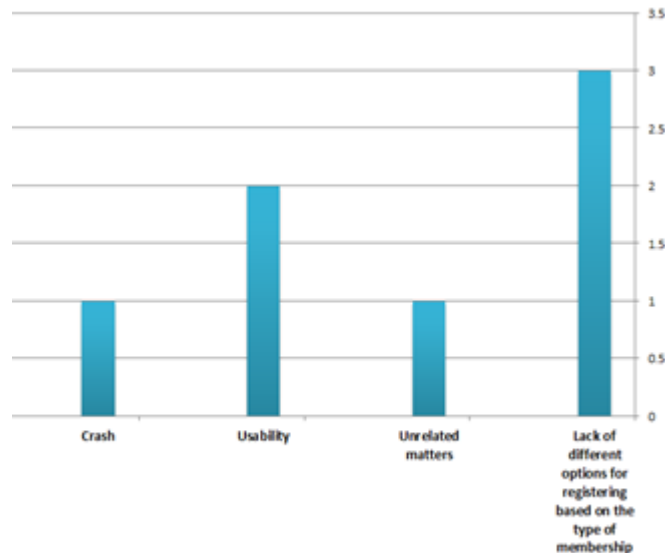

Fig. 2Reasons for Users Complaints

The most complained about problem is the lack of a separate option of registering and signing in into the application as a member of exclusive membership that is supposed to be available for high-priority customers specifically ALFURSAN, privileged passengers, membership holders. Second most complained about problems were concerning the usability of the mobile services available such as lack of more booking management features (e.g. seat selection and frequent flyer options) that is usually available online, the use of English language only in the company's mobile application and the limited platform support to mobile devices and not extending it to reach the smart watches. Some complained about unrelated matters to the application rating such as the food served in the airplane. Only one of the users experienced the application crashing; that was fixed when the application was closed and opened again.

Airline companies should see mobile commerce as a fresh and more cooperative way of doing business. Smartphones and mobile devices give travelers anywhere and anytime access and make them detached from their desktop PCs. However, not all new services and products are expected to thrive. Hence, understanding the aspects that impact the buyers' need for a new advanced mobile technology, and taking into account the travelers' needed mobile services, to complete travel processes from displaying travel information to selecting a trip, to book and choosing a seat and payment method until check-in, is considered to be of a significant value for customers.

B. Banking sector case study

The banking sector in Saudi Arabia is standing in a high position in comparison to others sectors. Also the banks in the Middle East in general as they were one of the banks to survive the financial crisis unharmed. It is considered one of the most competitive in the banking market. Each bank is thriving to reach the top in its trade by upgrading and creating new services that can give their customer wide variety of alternatives to choose from according to their preference. Adapting to new changes in the environment is not an option, it has become a necessity.

The bank chosen for this case study was picked out after a lot of debating and thought since the competition is so fierce in the market. So we selected the bank that has a strong association with our subject and would better serve the purpose of this study. The bank that rose to the expectation is the Saudi Fransi Bank or as called by the bank itself 'Banque Saudi Fransi'; winner of "Best Use of Technology" title in 2015 from the top prestigious award ceremony in the region called The Banker Middle East product awards. Moreover, it was the winner of "Best Mobile App User Interface" from the "Best Mobile App Awards" in the category of business and finance in the same year; just to name a few of the bank accomplishments aside from the many other categories the bank has ranked first [29].

The Saudi Fransi Bank (to be referred onward in the study as BSF) provides for its customers many services that can be reached by electronic means; including their mobile banking facilities that give the users the comfort of conducting their banking business in their own time and place. The BSF has upgraded its mobile application services several times to accommodate the customer expectation based on their need. It provides its clients with many automated services to manage their account round the clock. Some of the services available are account balance inquiry, Credit Card management, money transfer and so forth.

The purpose of this study is to see the Saudi users' response and rating to the mobile banking services. The mobile commerce services the companies provide will be nothing without its consumers; the consumers' satisfaction is the most important success factor the company should worry about in that matter. That is why most companies value the tests they conduct of their new services and products on a sample of willing users to see their response before presenting it to the public. Based on that fact, a survey has been conducted to know how the users feel about the mobile services the companies they trust provide; and since the most popular form of mobile commerce the companies use to connect with their customers is to make their own application, the study was conducted based on the mobile application of these companies.

A survey has been distributed on 125 clients of the BSF who have an account in the BSF bank and have used the bank's mobile application at least once. These targeted clients were a mix of both genders. The survey was in the form of a questionnaire that consists of mostly closed-ended questions and a comment section that give the consumer space to express their feelings and concerns on the applications. The questions centered around the user response and reaction on the mobile services the companies give in their application. On an ordinal scale, the user was questioned about the frequency of usage, approval of the content and the areas the companies should focus on. On a nominal scale, the user was requested to rate the overall experience of using the application and how convenient it was.

The results found after conducting the survey came in favor of the bank service where more than half of the users were very satisfied with the bank mobile application; with an average of six out of each ten customers giving the service a vote of five points out of five as seen in Figure 3 where it shows the percentage of people and the rate of their experience with the BSF mobile services based on points where the more points were given, the more a customer is happy with the service.
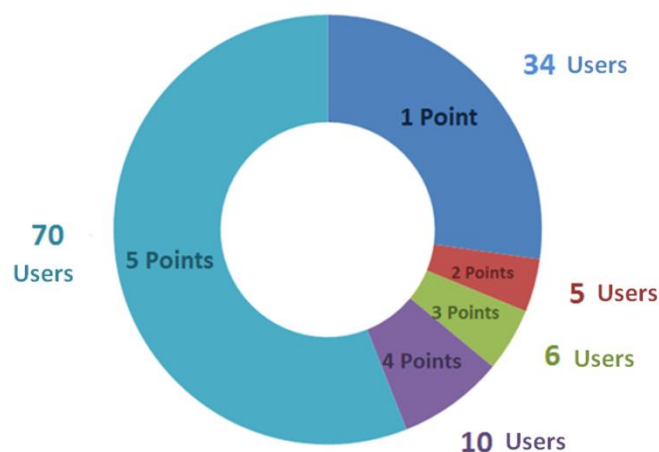

Fig. 3 Customers Rating of BSF Banking Services

The results show that most of the bank clients (70 out 125 customers) were satisfied with the overall experience and find that the app design was user friendly and the content was satisfactory. Other customers (21 out of 125 customers) have an average response to the application ranging from small adjustment to the application to a version update. The remaining users (34 out of 125 customers) were unsatisfied with the application. The result of the complained users was further analyzed to see where the company went wrong on the mobile application. These customers' response was

gathered and classified based on the reasons of their low review. Figure 4 summarizes the problems the customers faced and their percentage of being complained about.
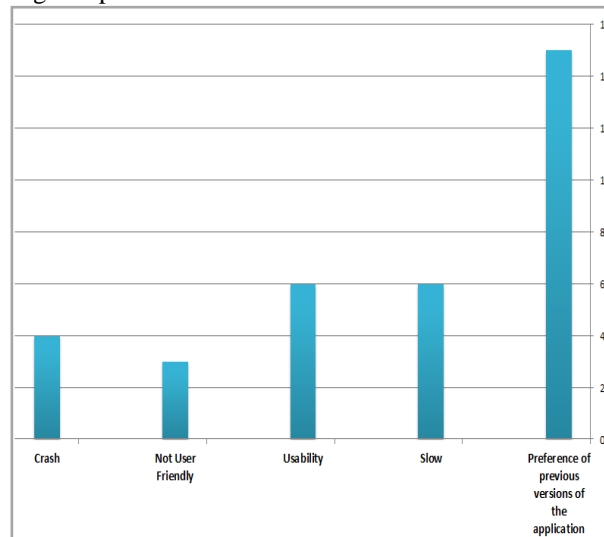

Fig. 4 Reasons for Users Complaints

Out of the 34 people who gave a poor review on the application, 15 of them complained about the updates and the adjustments the bank adds with each new version of the application, how they are unfamiliar with it and their preference for the older versions in conducting their banking procedures. Usability and low speed have the same amount of complaint with 6 people objecting on how the operations should be done faster; they complained about the speed and the long wait to log into the application which the internet provider can be partly responsible for most of the time, not the application itself. An incident of the application jamming has been experienced by 4 users which can be caused by the mobile device itself. The lowest amount of objections was on the user interface with 3 consumers criticizing its design. Other comments the application received was on its non-support to new information systems update and new platforms, difficulties in switching between languages, Arabic and English in particular, and their messages being sent mostly in English which can be inconvenient for non-English speakers.

There is nothing perfect; in every good there is the bad. What makes a successful mobile service is the company's sincere effort in providing easy to use services, clear user interface and fast processing capabilities. As long as the mobile banking services provided by BSF are aligned with the bank strategy and the bank is committed to their vision of providing effective mobile banking solutions and focusing on their customers to give them a better experience, the strategy is successful. By that, they continue to set the bars higher for their competition while maintaining their strong position in the Saudi Arabia banking sector.

VI. CHALLENGES

M-commerce is a new trend for businesses in Saudi Arabia. No previous case studies have been presented to prove companies' growth and expansion by adoption of m-commerce. Here are some factors for this new model of doing business in KSA, which may influence the adoption of m-commerce. These issues include technical issues, business issues, customers' readiness and more.

A. Languages

It is rarely found that a company provides Arabic and English languages of its mobile channel. Most of the companies lean towards running their mobile services with the English language in consideration to its foreign customers. However, neglecting the country's mother tongue language is a big problem in itself. While some of these companies' goal is to reach a global market with using the English language; they cannot achieve that if they started off with neglecting the dominant consumers' language in Saudi Arabia since not all of the citizens in the country are fluent in English. This can be a result of hiring and depending on foreign employees to develop the mobile services and

applications for the company which can be considered as a one of the challenges that Saudi companies are facing in itself.

B. Features available

Mobile services and applications that the companies provide usually do not include all of the company's services that can be accessed by other means either reaching for the service physically or online. The reason behind that can be either fear of exposing their resources to such a sensitive channel so they cannot afford to do that, or they plan to add those features in the future updates.

C. Technical issues

Technical issues are presented in many forms (including interface compatibility, network speed and availability, skills and knowledge of employees and users, and security). Companies require skilled employee to be able to handle online transaction and services in m-commerce; that can be the main reason in limiting the ability to deliver effective services for consumers and after-sales services that follow the online purchases [30]. Also, the high business risk and vague business models have to a certain degree limited the development of the application developer industry in the country [31]. In addition, the new platforms of smartphones that keep developing and evolving to adapt with user's wants, adds more challenges for the developers of mobile commerce where they find themselves forced to adapt to these new platforms and technologies such as the smart watch [32]. Hence, companies require integration scenarios with multiple technologies and interfaces. Furthermore, customers require specific requirements in interface to be able to use their mobile devices to do online transactions. According to [32] the essential features that should be taken into consideration in the process of designing the user interface are: interface customization, capability to save payment and private information, customer reporting for recommendation, graphical view of the presented products, browsing ability, and detailed information of each produce.

Moreover, network availability and speed are considered as a major concern for both companies and customers. A study by [31] about mobility showed that the number one inhibitorfor individuals is the low mobile Internet speed while businesses noted that low network performance is a major inhibitor for mobility.

A further issue is security. Security and privacy are key concerns in the adoption of m-commerce applications. Unlike security concern connected to the general usage of the Internet, there are concerns that are explicit to smart devices: because they are mobile, they have a higher probability of being lost; they can provide access to the owner's personal information that can lead to misusing it. Enterprises must secure their own data as well as for the information of their customers and partners. As establishments embrace mobile applications and devices management functionality, they must update their devices and systems [31]. Another issue with security is in e-payments; 76% of payments in Saudi Arabia are done through cash on delivery (COD) and that means that only 24% are made through credit cards [33]. The lack of online payment choices other than credit cards affects the perceived usability and security of the process with which online purchases can be made of [30].

D. Business issues

On the other hand, there some business factors that limit the adoption of m-commerce. The cost is a significant issue for customers and also for businesses. Smart devices prices continue to fall but they are still unreachable for citizens with low-income. In addition, the most obvious continuing cost aspect for consumers is the price paid to the internet service provider. The prices of the mobile communication bandwidth services are getting lower to support growth of mobile availability and usability [31].

Moreover, cost is the main worrying factor between companies that have deployed their own mobile services, next is the security risks and loss of control and employee misuse of services. Companies experience extra operational costs in maintaining their mobile employees, solutions, and device bases. Device and connectivity costs are found as one of the most significant features that control the adaptation rate of mobile services. Device expense is one of the most vital criteria in purchasing related to mobility between individuals in Saudi Arabia [31].

Another issue is keeping the same quality of services between online and physical office services, [23] showed that this issue has proven to be the most challenging aspect.

Logistics also is a concern for companies that offer tangible products. According to [23], the time between payment and purchase can easily change a customer's view of the provider and can lead to choosing others in the market fast.

Another thing that might make customer change their mind in purchasing anything is the payment options. Limited payment options affecting level of acceptance of customer, therefore companies are regarding other methods to give their customers more options for conducting payments such as SADAD.

E. Customers' readiness and acceptance

User's readiness and acceptance of new technology is a critical aspect within the information systems discipline and considered as the main driver for any new technology. [22] Showed that more than 51% of non-users of e-services see that there is no need to consume any type of electronic services while more than 26% do not have the knowledge to apprehend the way to use them. Also, the study revealed that more than 25% of people, who do not buy or place any king of order online, don't know the processes of buying over the Internet whereas 36% doesn't find the need and urge to buy products or services online.

F. Change of Regulations

Many rules are updated and created to suit the changes in the country including those that involves companies and organizations which they must apply to avoid any fines or punishments by the law. Government and authorities are responsible for regulating the company's operations. Also, any changes in policies of the Saudi government may hugely affect the companies' approach to doing their work, and it can slow the growth rate of the company; which can force them to revise their strategies. Moreover, the legal proceedings in itself take time which can cause a lot of harm to the company timeline and deadline which can in return have a significant risk to the business [34].

VII. OPPORTUNITIES

Saudi Arabia has ranked as one of the world's 30 largest economies and the largest economy in the Middle East and North Africa (MENA). It is considered as one of the world's fastest growing countries in the world, with an average per person income forecast up to $33,000 USD by 2020 [35]. With a number of global enterprises and consumers that exceeded over 20 million, Saudi Arabia has one of the biggest information and communications technology market in the Middle East. Saudi Arabian telecommunications and information technology industries represent more than 50% of the total Middle East markets, respectively [36]. The budget reserved for ICT remains in one of the top priorities, despite the current changes in oil prices. In 2016, the amount of money spent on ICT is projected to exceed $35 billion USD due to the government's decision to invest in smart and digital technologies [37]. The main factors that contribute to the success of m-commerce include: IT spending, market size, young demography, IT market, and transition of the economy.

A. Power of Spending

In 2016, people will see Saudi Arabian IT spending soar to 35.9 billion USD. Lavish spending has been cut, and funds are channeled into digitization initiatives, making the government the biggest spender [37].

B. Market Size

Over 50% of the Middle Eastern ICT spending is represented by Saudi Arabia, however there are not enough local players to meet the demand for IT solutions. This presents an opportunity for not only local businesses, but also international solution providers [37].

C. Young and Tech-Savvy Demographic

Nearly 50 percent of the population is aged under 25 and the national median age is 26.8 years. These digital natives want more services to be delivered via channels like smart phones and communicate with the government via social media [37]. According to [38] in Saudi Arabia Internet users now spend almost as much time online via their phones instead on their computers. In 2012, the percentage of access to mobile applications and services through the use of a mobile device particularly smartphones exceeded 50% in Saudi Arabia [31].

D. Evolving IT Market

Saudi Arabia has quickly become a well-informed market for IT products and services. In accordance with the government's vision, the Kingdom has transformed from e-government to m-government in the last decade and is now readily planning its move to going fully digital [37]. [31] Revealed that service sector applications that focus on business-to-consumer (B2C) transactions in areas such as retail, banking, public facilities, airlines, and communications sectors, are growing more rapidly in significance and importance among Saudi businesses. This gives a clear evidence of the huge growth in the market which will be realized in five years' time from now in mobile commerce amongst retail business divisions [30].

E. Transition into Knowledge Economy

Fluctuating oil prices is no longer news. The Kingdom has expedited its efforts to transform from an economy based on oil to a knowledge-based economy. This has increased the ICT dependence and presents an influx of business opportunities for first movers [37].

VIII.CONCLUSION

After reviewing the situation of mobile commerce in Saudi Arabia and as per the presented case studies that targeted the airline and banking sectors; we conclude that most of the response from the consumers is positive toward the mobile adaptation of businesses in the country and have their own suggestion to provide a better mobile service. Aside from the complaints and challenges the area is facing, the advantages and opportunities that can come from utilizing this technology can outshine the negatives on the long term perspective; as mobile-enabled developments are taking the priority in most of the establishments in the country to gain more customers and keep up with their ever-growing demands.

The companies in Saudi Arabia are eager to evolve themselves so they can catch up to the new changes and trends in the international market. Mobile commerce, in particular, is an excellent example of a new concept that is adapted in a fast rate by the country and has a great potential in the users' acceptance prospect since nowadays it is considered if you don't have a mobile device, you almost don't exist.

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