

Examining the barriers to the development of m-commerce in Iran (Case study: Khash city)

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Abstract

The objective of this paper is to explore the challenges of m-commerce development adoption in Iran, with suitable infrastructure is available. Due to the high penetration of mobile and available for public exposure as a major instrument for m-commerce, in the world and the country in general attention was inclined towards mobile commerce. This article discusses the advantages of mobile trading by using a descriptive survey fieldwork to study the barriers to the development of mobile commerce will be discussed. The population of the city of Khash that teachers from mobile phones to pay utility bills and use or do financial transactions was selected. The limited sample size of 600 patients, 185 were but to ensure 200 questionnaires were distributed in July 2015 and after a month of 175 questionnaires were collected and analyzed with SPSS. What this analysis was found to indicate that information technology in the development of m-commerce challenges such as lack of Internet bandwidth, non-suitability of interfaces, user-friendly mobile equipment, lack of culture of commercial use of portable devices, lack of sense of security to use customer, technical limitations of mobile network equipment, as well as instability in the country is facing. And the importance of each from the perspective of different users. Finally, in order to overcome these barriers and to accelerate the development of m-commerce requirements of modern life, according to results presented solutions.

Keywords:

m – commerce, mobile tools, IT challenges, business applications CIA

1. Introduction

Mobile phone is probably the fastest adopted technology ever, adding nearly 5 billion subscribers in the last decade; from 2 billion in 2004 to 7 billion in 2014[1]. The dramatic adoption of mobile phone has opened up new opportunities and frontiers of M-commerce for the 21st century. M-commerce is considered to be a subset of e-commerce, sometimes it is called as mobile e-commerce Donegan, Liebmann, Schwartz cited in Zhang and Yuan. What is the frequency of mobile equipment, commercial companies and buyers in each level tend to use mobile devices that are smaller, and easy handling and the limitations of time and space seen in the light of the major reasons for the formation and public attention are the new kind of business. What m-commerce is widely popular, simple and easy to

use, personal being, beyond space and time beyond it and the real-time transfer and the lack of cash. M-commerce growth in direct proportion to the growth of mobile technologies such as mobile phones and PDA (personal digital assistance) devices, which are based on the use of mobile phone users are increasing dramatically. In mid-2005, it is predicted that annual mobile phone sales in 2009 will reach 1 billion units while which, according to IDC investigative center by the end of 2006 1.019 billion mobile devices sold globally by retailers and phone number mobile personal computers were sold in 2006, four times. (Mozhdehi and et. al, 2007)

The mobile business application tools such as e-commerce may be the Internet, private communication lines or other computer networks to be performed and the natural consequence of the development of e-commerce is mobile commerce. Mobile equipment development and an opportunity to provide customers new services may also be provided to attract new consumers.

What makes the necessary research and development of mobile trading its specific advantages compared to other modes of electronic commerce. Using this phenomenon, customers and vendors can easily travel while working or moving and do business. Company to use location-based systems and global positioning detectors to identify customers and provide offers and promotions appropriate to introduce their own products. Large and small companies and customers to easily have access to the system because the infrastructure costs are lower than e-commerce.

Along with all the benefits, that mobile commerce has multiple standards existing limitations such as bandwidth constraints, operational constraints, Limited size screen as well as challenges in the field of mobile commerce security are among the issues that are discussed. And should not be ignored. In Iran, according to the new character of this phenomenon has more to do necessarily need expertise and analysis of information technology challenges Information on the development of m-commerce in the areas of corporate, commercial, technical, and cultural security as a problem and a problem. Now is that, given the increasing development of IT infrastructure and mobile users in the country and consequently in Sistan-Baluchestan province,

which is a research scholar, m-commerce is still underdeveloped in the community. In this study, the researchers sought to examine the issue of scientific, paper methods, and explain its reasons and to provide solutions to overcome barriers. And given the nascent nature of this phenomenon in the country, lack of theoretical foundations strong in this area is to study the field work to strengthen the foundations of the theory of the subject to the challenges of information technology in the development of m-commerce with the face of see commercial users a new way to pay.

1.1 Research Objective

What are the opportunities and challenges of m-commerce uptake in Khash?

The objective of this paper is to get the answer of the above research question. An empirical paper including survey was conducted to see the consumer's perception on this issue. Field notes were collected during the face to face surveys. Data from secondary resources also contributed to the findings. The author had to review and analyze critically some areas of m-commerce in Khash to explore the answer of the research question. Studying the areas such as the history of mobile communication, network infrastructure and types of services (m-commerce) available in Khash helped author to judge how well Khash is prepared to deal with potential challenges and opportunities in the m-commerce arena.

2. Theoretical background

Wireless technology and m-commerce technology is the most interesting historical possibility that the growth and development of the cause traditional economic change and move toward a digital economy is mobile. The literature review showed that the technology is that the technology has gone so far three rounds. The first period began in 1972 and the personal computer era. The second period, from 1990 and continued until 2000, was the Internet era. The third period started in 2000 and is forecast to continue in 2014, which causes the formation of mobile technology and Internet-based mobile commerce (Mahata, 2005).

Chang reasons as reasons for the development of mobile commerce suggests that some of them are mentioned below.

1. The number of mobile terminals, the larger the number of users and very PC that will grow faster.
2. Intimacy is more user terminals. Terminal Services PCI show more comfort.
3. In every time and place, are available as well.
4. To information wherever they are employees can access them immediately, without limitation dry and implementation computer program decisions.

5. Mobile commerce eliminates many time-consuming tasks (Chang, 2007).

2.1 Definition of Mobile Commerce:

Our mobile commerce a commercial transaction defined as follows: any type of transaction has economic value through a mobile terminal is conducted, Terminal planets that of a wireless telecommunications network to communicate with the e-commerce infrastructure. (Vilanjin, Peteora, 2003) In the definition of m-commerce can say, "M-commerce is defined as any electronic transmission or the information exchange is performed by a mobile network and through mobile devices intercourse with the real value or prepaid money in exchange for goods, services or information is transmitted "(Nambeir and et al., 2004).

Although e-commerce has grown phenomenon, but m-commerce is still very early in his way. However, with the development of wireless network is expected to create new wireless networks for growth in m-commerce revenues wireless because patterns of new business for mobile operators, provided customers have requested a new trade. (Chang, 2007)

With all the unique features that m-commerce is, barriers and challenges in the way of development according to the conditions and existing infrastructure in various countries (Ji Nan, Shan Liang, 2010) to investigate the reasons for the rapid development of m-commerce in China due to its particular potential barriers to the development of m-commerce are considered as follows:

- A mobile network of development tools lag
- (B) Inappropriate recognition and understanding conservative values
- (C) Pressure to quickly develop e-commerce security certificate problems
- (E) The negative effects of the lack of credit
- (C) The delay in passing laws

While the development of mobile communication technology has a huge impact on the mobile market, mobile phones and the Internet has the advancement of these devices is an important factor in the development of mobile e-commerce and development. In recent years, China Mobile and China quickly developed into one of the superpowers of mobile phone production (producing more than 70 million units in July 2009). Now mobile phone users in China more than 700 million people. Among them more than 150 million people have used mobile phones through WAP (wireless application protocol). About 200 million people regularly use SMS more than 600 billion text messages sent in these years; the mean annual growth of over 16% has been estimated.

Wireless devices used in mobile phones, handheld computers, laptops and interfaces are installed on the vehicles. While the mobile terminals extent behave more

flexibility and mobility to exhibit, when compared with personal computers, they are lower in many ways. They are small and the stability of the display screen is low. Small keyboard and multi-functional input and user application difficult. Small, lightweight, because of the input, and output mechanisms inhibit the growth of user-friendly confrontation and geographic applications for the mobile device. In addition, mobile devices computing power, memory and disk capacity, battery life and limited information search. The barriers in mobile device applications and complex transactions do not support the use of m-commerce and supply chain management needs and demands of complex environments, limits. (Kong, Peng Lim, 2003)

The impact of various factors on m-commerce services and applications from the perspective of (Vijlaatin, Pitiora, 2003) (Figure 1) is shown. As shown in the diagram to majority of two-way arrows. This is because the effect is on both sides. More specifically, the limitations of mobile networks (e.g., relatively low bandwidth) or limitations of handheld terminals (such as small monitors) impose requirements on services and mobile commerce applications. However, the limitations of existing applications, and requires further development of the network and terminals are manually. Arrow of mobile network infrastructure to terminals manually drawn indicate that the hand-held terminals for the benefit of advanced network technologies (such as WAP) benefit should be changed accordingly.

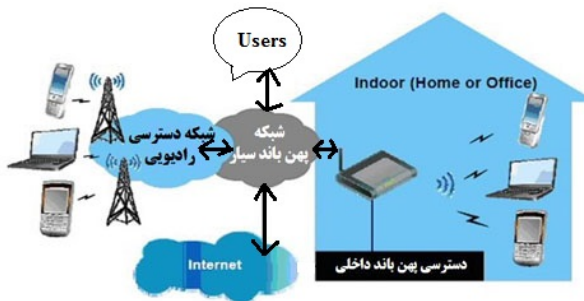


Figure 1. Various factors on m – commerce.

(1) The impact of various factors on m-commerce services and applications (Vijlaatin, Pitiora, 2003) the current legislation contains restrictions for certain aspects of m-commerce. For example, in some especially that the country does not allow users to place and situation to be introduced service providers. On the other hand, features strange m-commerce (such as the fact that very easy in any country can be a deal to stop it) needs to define some rules to support e-commerce and certainly needs of users on the expansion of services and applications for m-commerce Effect they let. At the same time services and applications offered on the requirements of the user influence, for example, since the user of the service benefits of regional

enjoys and may ask for help guides to reach places do, this user also wants a service area own language, when out of the country and can be met in a manner accessible.

3. Paper hypothesis

1. M-commerce development rate of broadband Internet connection there.
2. The relationship between the development of m-commerce and mobile network stability there
3. Between the development of commerce and the use of portable devices, there is a relationship
4. Commerce and the development of a sense of security among users, there is a relationship.
5. Between the developments of m-commerce, mobile equipment related technical constraints there.
6. User-friendly interface between the development of m-commerce and mobile equipment their relationship

4. Methodology

This paper method is descriptive. After collecting material for paper using library (refer to books, articles, theses, digital texts and publications for internal and external) by analyzing population to answer questions and describe the existing situation in the field of study and paper in this way through questionnaires to collect data. The study is due to the fact that at a given distance will only take place (2015) in terms of time horizon period.

5. The results of the analysis of data

In this study, after collecting, the questionnaires distributed in the sample data obtained by SPSS software were analyzed and the application of the output of the following tests in accordance with the table (1), (2) and Figure 2 were used.

1. T Student test

2. ANOVA analysis

Table 1. T-test results

Hypothesis (H)	Calculated T	Freedom degree	Meaningful level	Error level	Test result
H1	39.12	181	0.000	0.05	Rejecting the null hypothesis
H2	32.650	181	0.000	0.05	Rejecting the null

					hypothesis
H3	47.7	181	0.000	0.05	Rejecting the null hypothesis
H4	59.632	181	0.000	0.05	Rejecting the null hypothesis
H5	62.204	181	0.000	0.05	Rejecting the null hypothesis
H6	38.252	181	0.000	0.05	Rejecting the null hypothesis

Table 2. The results of T-test analysis

H1	According to the results with 96.6%, confidence is confirmed.
H2	According to the results with 96.6%, confidence is confirmed.
H3	According to the results with 96.6%, confidence is confirmed.
H4	According to the results with 96.6%, confidence is confirmed.
H5	According to the results with 96.6%, confidence is confirmed.
H6	According to the results with 96.6%, confidence is confirmed.

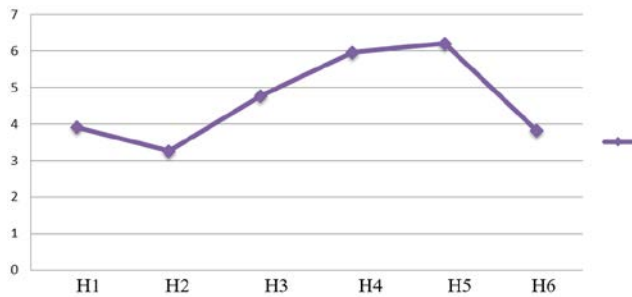


Figure 2. Data analysis for the average rank Friedman test

In Figure 2 it can be seen that the best ranking criteria are technical limitations of mobile devices and user-friendly interfaces is the worst. Verify assumptions for each type of paper is very important. Today, in most future paper is based on data collected from the subject of the paper, analyzed data from the main and most important are paper sectors. Raw data using statistical techniques are analyzed and after processing in the form of information are available

to all users. In the first study the data by descriptive statistics and then use the percentage and frequency tables answers to describe the status of the sample Finally, using inferential statistics, results and analysis were presented. Data collected by questionnaire of the population, were analyzed by SPSS. In order to rank each of the indicators related to the development of m-commerce Khash city of Friedman test was used. This study aimed to determine whether these markers on the development of m-commerce has affected the corresponding model and its components were analyzed by T-test.

6. Results

After reviewing and analyzing the results of the following (3) as a conceptual model is presented by the researcher.

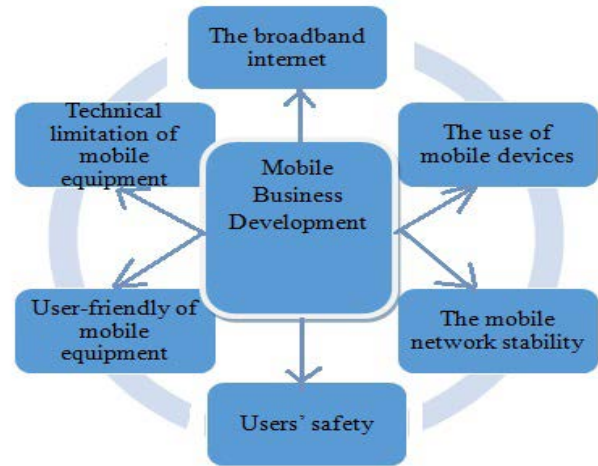


Figure 3. Conceptual Model of Mobile Business Development

Referring to confirm the first hypothesis and results of survey paper and statistical data obtained showed that the development of m-commerce and broadband Internet direct relationship exists and the broadband is higher compared to the same speed of receiving and sending data in mobile increase. In addition, it decreases the time to make a deal; search the Internet for a commodity, loading sites, as well as improving the quality of graphics is voluminous. Financial transactions carried out more quickly and consent use will be more fortunate.

According to the second hypothesis and results of the questionnaire can be argued that the development of m-commerce direct relevance to the stability of the network and the network has coverage more and more areas covered, as well as any amount in strengthening their infrastructure spend. As well as the traffic lines is reduced and the disconnection mobile to is minimized and this makes users from anywhere without the limitations of time and place to

do business transactions were without worrying about the possibility of reaching posted or low speed transmission this will be the message was the development of e-commerce.

According to the third hypothesis and results of the questionnaire can be argued that the development of mobile commerce and business culture, there is a direct relationship and the culture of higher public importance and benefits of mobile for financial transactions expressed in the society and people's knowledge of mobile Internet and the benefits increase. The concept of mobile banking and simplicity of its application to be developed within the general community as well as in the development of m-commerce will make change.

According to the fourth hypothesis and results of the questionnaire can be argued that the development of m-commerce with consumers directly related to the sense of security. In addition, the mobile users to pay by mobile phone more confident and reserved codes of credit have confidence, or if there is a conflict or problem reference specific legislation to address the problem. There is a tendency to use the phone for transactions increase and the development of m-commerce will be more smoothly.

According to the hypothesis fifth results of the questionnaire, argued that users m-commerce to technical equipment and limitations care about the issues of small screen size and limited keyboard constraints and deficiencies of mobile phones and their incompatibility with the new software. New operating system, barriers that cause the rate of interest for users to use mobile banking to do business and to reduce barriers so any kind of action to eliminate the above step to develop m-commerce.

Thus, it can be argued that the relational database software and service provider organizations easier and smoother, and less need for typing and time-consuming to have to be more easy and commonplace features like easy to install and compatible with most mobile phone models. In addition, attractive working environment software users and developers an important role in increasing trade will be this way.

7. Conclusion

In this paper, we investigated the unique abilities of mobile commerce as the best alternative to the business practices of the past. The increasing number of mobile users and features the possibility of wireless Internet devices mobile phone for financial transactions and commercial use special bed to move society towards mobile commerce has created. However, as is the case in this study were as this was due to the rapid growth, inclusive business practices with respect to existing infrastructure and capabilities, and m-

commerce is particularly beneficial. The results of the questionnaire revealed the numerous barriers to the use of new methods of business that has created some concerns for users and any action in order to overcome them could pave the development of mobile trading. The growing number of mobile Internet users and mobile phone makes the emergence of a new wave in banking and payment system of the country and the challenges that have been studied in this paper has been more pronounced.

Suggestions for further paperes

What is certain, according to the newly-commerce and the lack of strong theoretical foundations in the country, assess the need for further paper on the subject, and is its constraints. The following are suggested for future paper.

1. The impact of private sector participation in the development of m-commerce
 2. Comparative study of barriers to the development of m-commerce in Iran and leading countries
 3. Impact of the revision of traditional banking systems in the development of m-commerce
- The effect of outsourcing on the development of m-commerce in businesses.

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