

Adoption and Acceptance of M-Banking System in Kingdom of Bahrain

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ABSTRACT

This research work is oriented to measure the acceptance of mobile banking as a tool in Kingdom of Bahrain. Mobile banking is a rapidly growing method of banking that utilizes mobile devices to deliver banking services to clients. A self-administered questionnaire was used to gather the data. The study explains the important factors that influence acceptance of mobile banking among bank clients. The population of the survey was limited to 2 banks clients only, in particular “Ithmar Bank and National Bank of Bahrain”; this population was chosen because these are among few banks applied m-banking in Kingdom of Bahrain. Out of 400 clients contacted, response rate was high at approximately 90%. The study investigated the impact of a number of factors on clients' attitudes towards acceptance of m-banking in Kingdom of Bahrain, the client's perspective of future of m-banking, and the overall attitudes towards m-banking. The results show that some of the independent m-banking metrics affect clients' attitudes towards m-banking, like mobile usage in financial sector and wireless technology. While some other metrics found to have significant effect on client's attitudes, like: bank commitments, behavioral intentions and extrinsic influence. Also, the study exposes that clients generally have positive attitudes towards m-banking to bank from anywhere and 24 hours seven days a week.

Keywords: *m-banking, e-banking, performance of flexible banking.*

I. INTRODUCTION

Over the years, banking has transcended from a traditional brick-and mortar model of customers queuing for services in the banks to modern day banking where banks can be reached at any point for their services. Today, banks have welcomed wireless and mobile technology into their boardroom to offer their customers the freedom to pay bills, planning payments while stuck in traffic jams. [1], [2]. Today, more people than ever are banking on the move rather than attending bank offices. E-payment done by mobile banking (m-banking) is rapidly becoming one of the latest trends of e-banking [3], [4]. Figure (1) shows a diagram of banking system implemented in Kingdom of Bahrain.

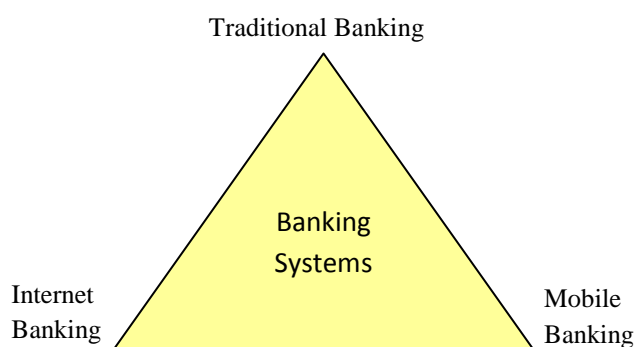


Figure 1: adopted banking systems in Kingdom of Bahrain

Adoption of tele-banking [5] as well as Internet banking [6] has received research attention in recent years. Much of the existing

research in electronic banking services has adopted an organizational perspective [7] or a distribution channel perspective [8], [9]. Consumers using these services have been focus in a large body of current research, nevertheless customer behavior in mobile banking context have remained rather uncharted territory.

This study designed to focus on the adoption and acceptance of mobile banking among the clients. The primary objectives of this study are to:

- Focus on the adoption of mobile banking services by clients, by encourage their clients to purchase smart phone compatible with the m-banking services through easily monthly installments bank plan.
- Identify factors influencing the adoption and preferences in connection with the acceptance of mobile banking as a banking tool in Kingdom of Bahrain

Figure (2) shows a block diagram m-banking elements and requirements, while figure (3) shows the information technology infrastructure in adopted m-banking system, in Kingdom of Bahrain, which supports the mobile banking services.

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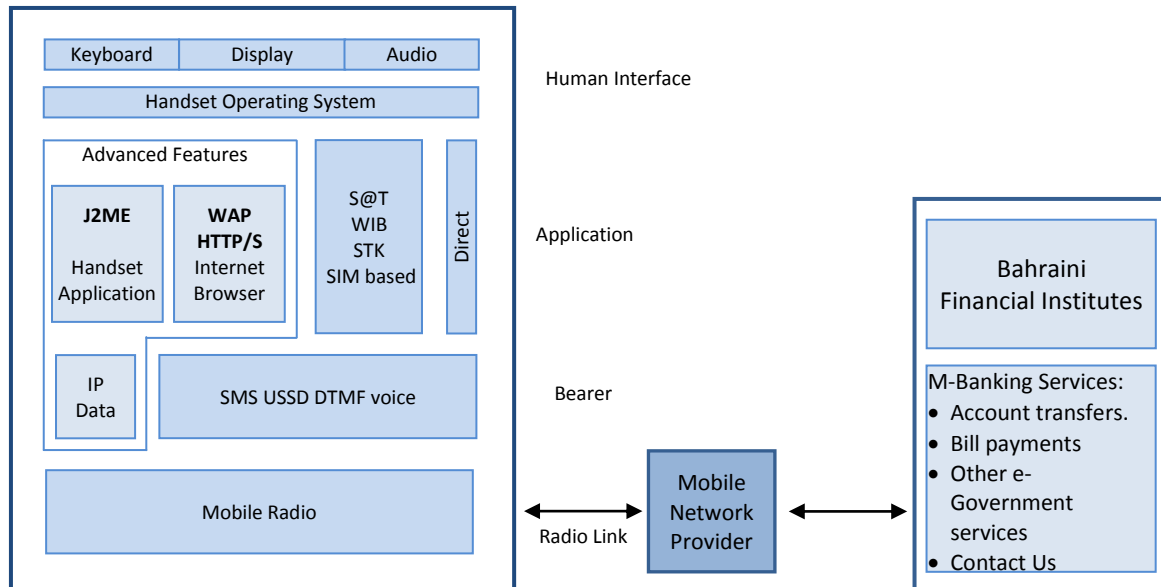


Figure 2: The m-banking elements and requirements

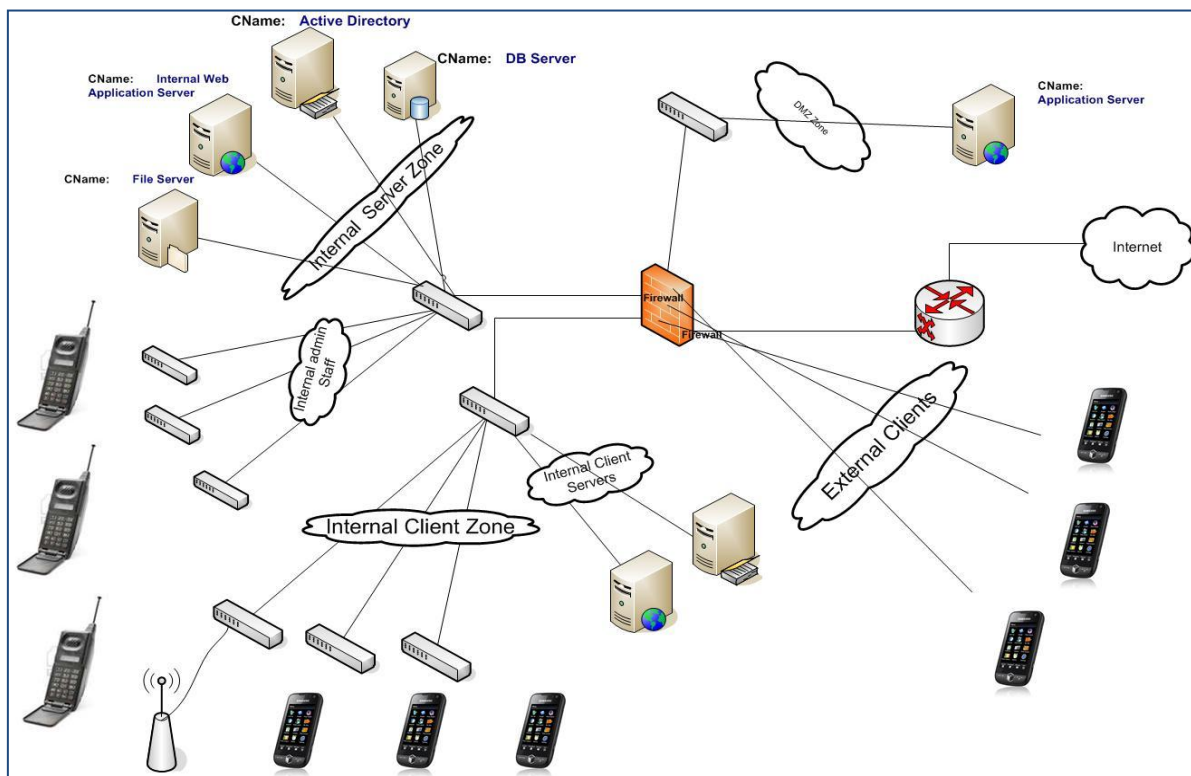


Figure 3: AOU – IT Infrastructure of m-banking system

II. METHODOLOGY

Around the world, there are many banks have been adopted m-banking technology as one of their methods in the banking. In Bahrain, it is found that there is little effort applied in this field. Ithmar Bank is among very few banks has applied m-banking as one of banking methods or services. In the coming years,

many banking organizations will be looking for creative ways to make mobile banking work as a powerful tool to support the banking services. The aim of the research is to measure clients' acceptance of m-banking by investigating a number of factors that influence client banking. This research is categorized as descriptive research. It describes data and characteristics about the population or phenomenon being studied. This research



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type is the most commonly used and the basic reason for carrying out is to elicit perceptions and attitudes of acceptance the mobile as banking tool in Bahrain. Survey research is a method that requires the researcher to derive descriptive, behavioral, and preferential data so that the differential complexities of the population from which a sample has been drawn can be obtained. The research in this study is survey-based, using a measurement instrument developed for collecting the data. Survey was the best method to be employed in this study as it enables us to gather data about client's attitudes, which is the main aim of the current study. In this research an online questionnaire distributed to the bank clients in order to answer the research questions. The study suggests some significant metrics to investigate client's attitudes towards m-banking, so the following metrics were used in the survey to measure the acceptance of mobile banking as banking tool:

- Types of mobile device(s) you own or plan to purchase such as Cell phone, PDA, Smartphone, iPhone or MP3 player/recorder.
- Average amount of time spent on your mobile device(s) on a daily basis such as less than 1 hour, 1-3 hours, 3-6 hours or more.
- Client's perspective of the future of mobile banking.
- Level of Client's attitude to acceptance of m-banking metrics like: extrinsic influence, behavioral intentions and banking commitments.

Table (1) shows the questions used to measure client's perspective of the future of mobile banking, while Table (2) shows the metrics used to measure level of client's attitude to acceptance of m-banking in extrinsic influence, behavioral intention, banking commitment and client's attitude toward m-banking.

Table 1: Client's Perspective of the Future of Mobile Banking

Client's perspective of m-banking metrics	Yes	No
1) Do you access to the internet using your mobile device(s)?		
2) Do you accept the idea of using m-banking services?		
3) Do you encourage the local banks to provide m-banking services?		
4) Do you feel secure to use m-banking services?		
5) Does wireless cost encourage you to access internet through your mobile?		
6) Have you used your mobile device(s) for banking purposes?		
7) Using m-banking enable me to accomplish banking tasks more quickly.		
8) Using m-banking help me perform my banking any place and any time.		
9) m-banking helps me increase access to banking services and financial resources.		
10) Using m-banking enhance effectiveness of kingdom in banking services development.		
11) Using m-banking transaction faster transactions process.		
12) Mobile device is not effective in banking field.		
13) Mobile technologies support banking experience that is collaborative, accessible and integrated with the world beyond the boundaries of a regular world.		
14) m-banking provides enhancement services to supplement the banking services.		
15) m-banking gives client an opportunity to get or provide information in case of urgent need.		
16) m-banking makes it easier to banking transactions.		
17) Using wireless would help me to access m-banking any-where any-time.		
18) Do you accept to purchase smart phone compatible with the m-banking services through easily monthly installments bank plan		
19) What brand of smart phone you prefer to use a) iPhone b) Samsung c) Nokia d) Ericson e) Other, Please specify: _____		
20) How long normally you spend daily on mobile banking? a) Less than 1 hour b) 1-2 hours c) 3-4 hours d) More than 4 hours		



Table 2: Level of Client’s Attitude to acceptance of M-Banking

Client’s attitude to acceptance of m-banking metrics	Yes	No
Metric1: Extrinsic influence		
My bank agent repeatedly refers to the importance of m-banking during my bank visits.		
The majority of my friend are using m-banking.		
Metric2: Behavioral intention		
I feel comfortable handling my tasks through m-banking.		
I prefer to manage all my banking transactions by the use of m-banking.		
Working through m-banking is an exhausting process.		
I am willing to volunteer in developing m-banking.		
I’m still performing my banking services by visiting the bank office personally.		
Metric3: Banking Commitment		
I know who I contact when I need any assistance in m-banking.		
I find m-banking session effective.		
The cost of m-banking connection service that imposed increases my willingness.		
Metric4: Client's attitude toward m-banking		
I evaluate the current m-banking that the bank applied an advanced technology.		

III. DATA ANALYSIS

A total of 360 questionnaires were collected out of the 400 questionnaires distributed. The clients were asked to provide their attitude regarding m-banking as a tool in banking system in Kingdom of Bahrain. From figure (4) regarding the device ownership statistics reveal some interesting numbers that approximately 85% of clients own a Smartphone, with iPhone brand device as highest percentage of user, 54%.

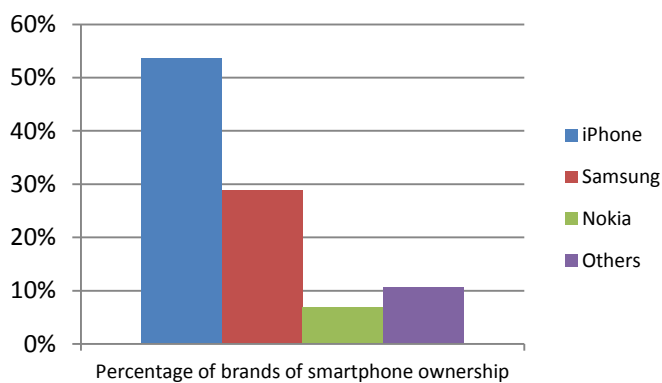


Figure 4: Type of mobile device(s) client own or plan to purchase

Regarding amount of time that client spent on his/her mobile device as notice in Figure (5) 82% of spent less than one hour daily for banking purposes, 10% spent 1-2 hours daily on banking activities, and 8% spent 3 hours or more. Most clients have mobile devices that can support many latest services such as SMS, GPRS, MMS, email, packet switching,

WAP, Bluetooth and many more. Also, they spend amount of time in using their mobile in banking purpose. We can summarize that the clients have the main ingredient to accept mobile in banking.

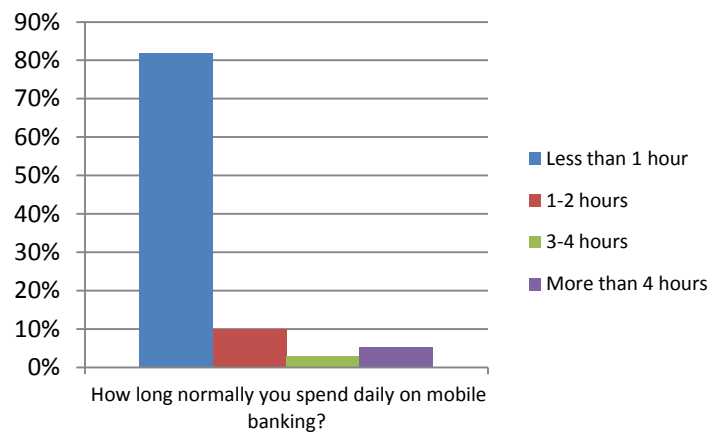


Figure 5: The average amount of time spent on your mobile device(s) on a daily basis

In order to define major ideas that the client has about his/her perspective of the future of mobile banking, some important descriptive statistics were calculated, especially the mean for clients' responses on questionnaire items. From the figure (6) it is clear that the highest percentage of respondents have positive attitude towards the future of mobile banking.

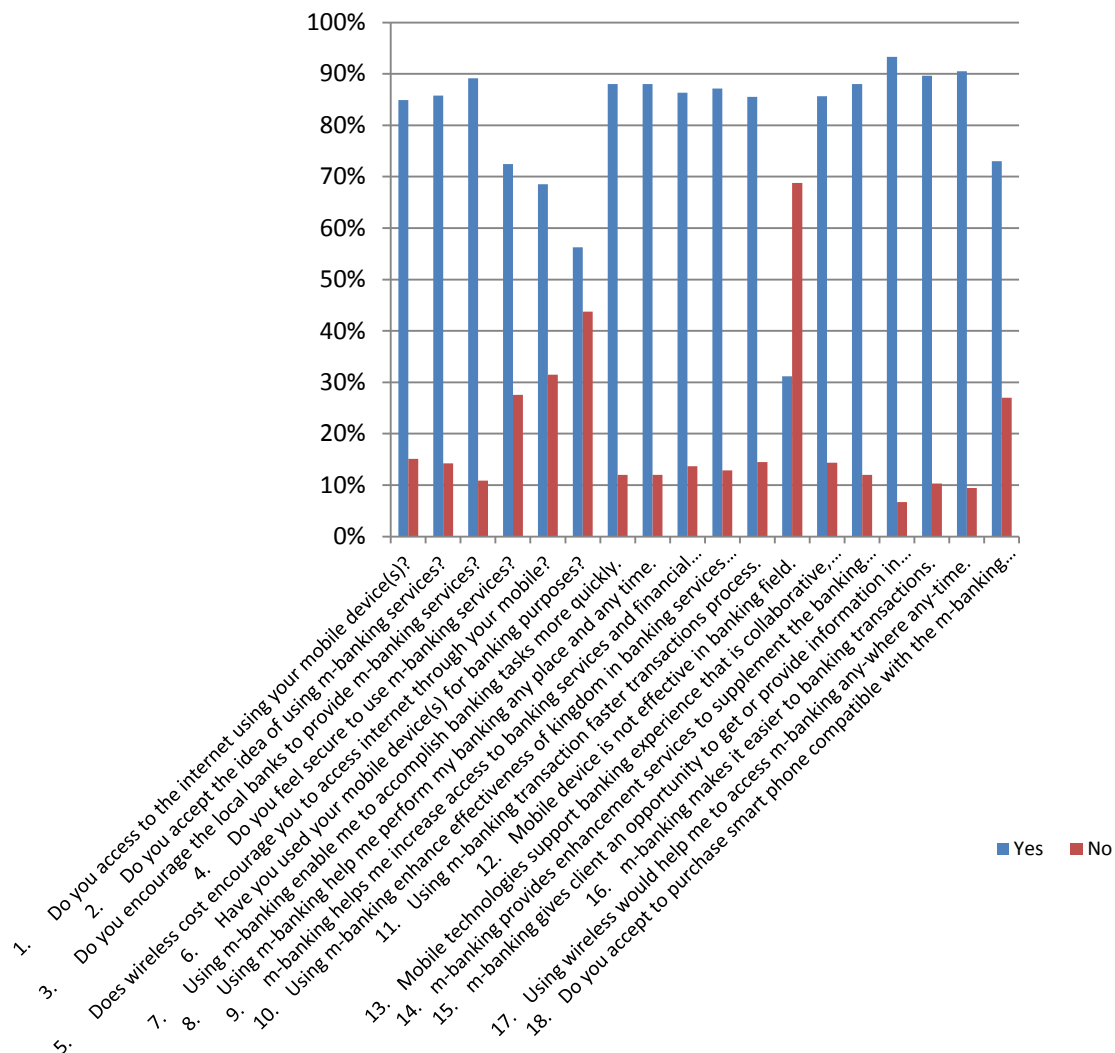


Figure 6: Client’s perspective of the future of mobile banking

From figure (7) it is clear that 42% of clients agreed on the bank agent’s influence in mobile banking. 43% of clients agreed that their friends are using m-banking in their study. This shows the positive influence of m-banking in participants.

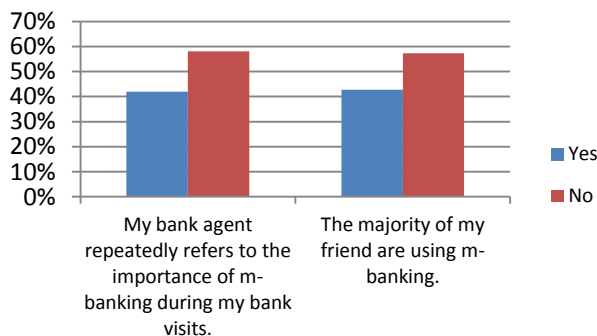


Figure 7: Client’s extrinsic influence in mobile banking

Figure (8) shows that 76% of clients are comfortable in handling their tasks through m-banking, 69% of clients prefer to manage all banking transactions by using m-banking methodology. 61% of clients are willing to volunteer in developing m-banking system and 55% are still performing banking services by visiting the bank office personally. But 37% said that working through m-banking is an exhausting process.

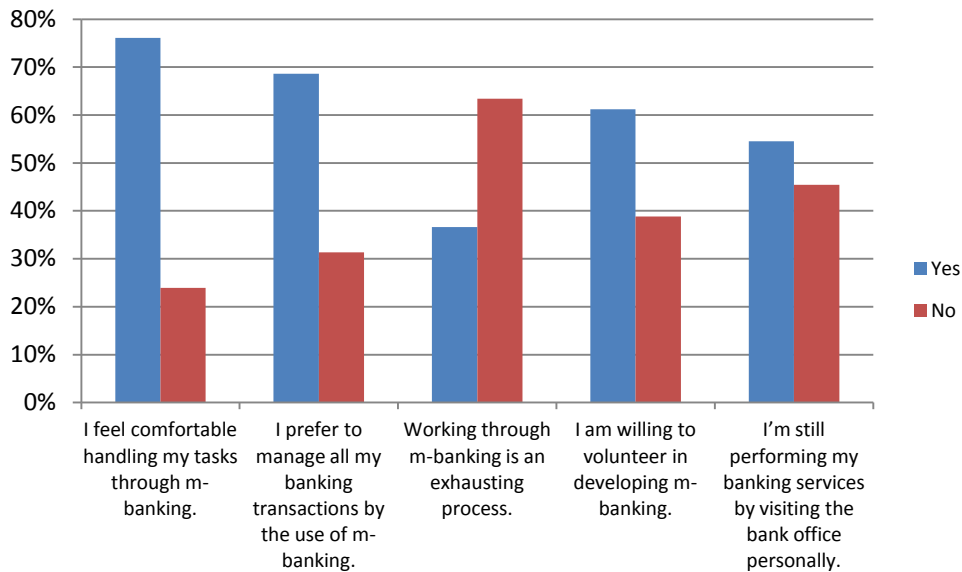


Figure 8: Client's behavioral intention in mobile banking

Figure (9) shows that 55% of clients are aware of the contact persons for assistance in m-banking system if necessary and 80% clients found m-banking training sessions effective. 71%

of clients agreed that the cost of m-banking service that imposed increases their willingness in adopting m-banking.

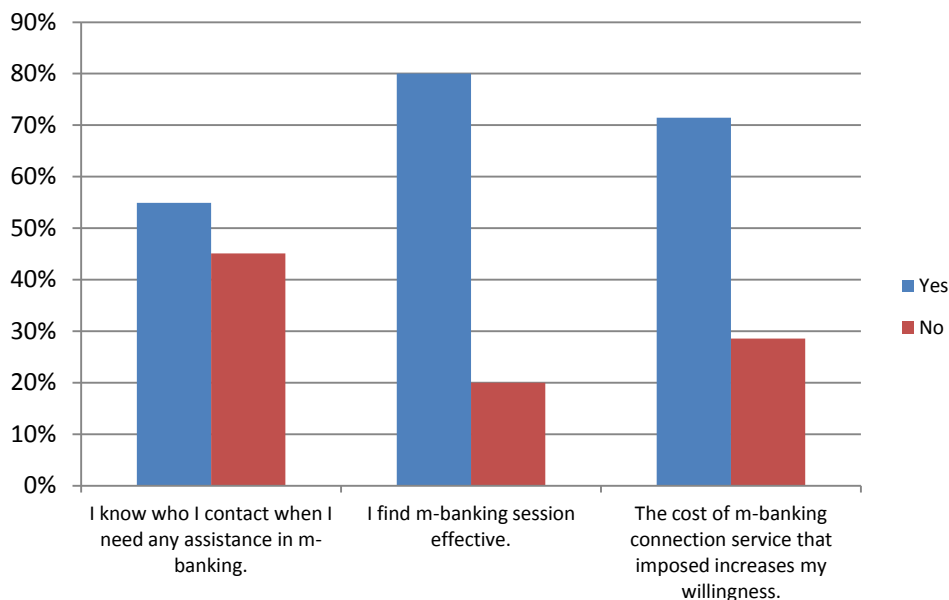


Figure 9: University Commitment in mobile banking

Figure (10) shows 79% of clients' evaluated adopting m-banking is an advanced technology in financial Institutes, this

research points out that clients generally have positive attitudes towards m-banking.

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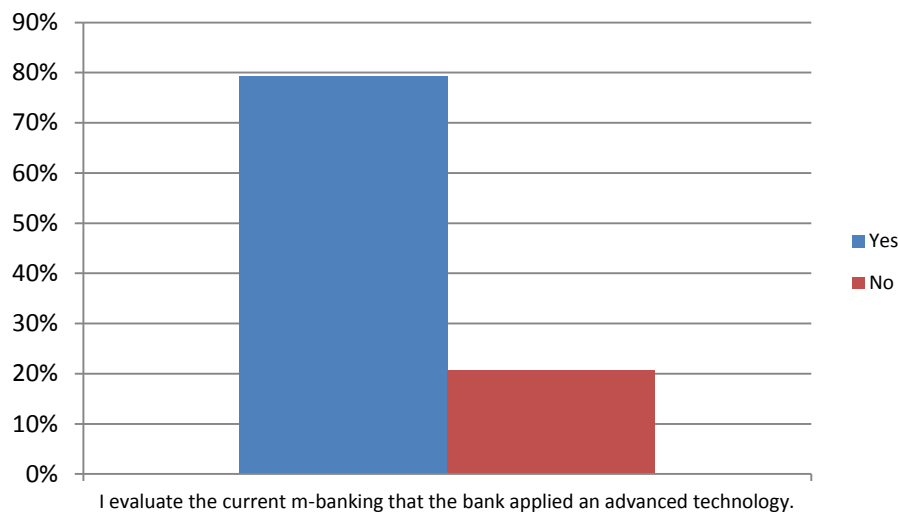


Figure 10: Client's attitude towards m-banking

IV. DISCUSSION

The research's primary goal was to measure the acceptance of mobile as banking tool in Kingdom of Bahrain financial Institutes. Accordingly, the research is investigating a number of factors that influence client acceptance, as not understanding these dimensions and factors can lead to failure post-implementation because users' unwillingness to accept the new technology can lead to nonuse and thus the technology does not bring the intended benefits for the organization [10]. An analysis of the data obtained by the researcher through distributing 400 questionnaires to clients online and receiving 360 valid and filled questionnaires.

The goal of this study was to fill this research gap by analyzing the attitudes towards acceptance mobile as banking tool in Kingdom of Bahrain. Basic information about the respondents' descriptive statistics have been defined such type of mobile devices and the amount of time that spend in using mobile. Then, the impact of some variables such as mobile usage in Kingdom of Bahrain financial Institutes sector and wireless technology has also been examined. In addition, the research showed the client's perspective of the future of mobile leaning in general, if it is efficient or not.

Financial Institutes applied mobile as one of its banking resources, the level of attitude towards m-banking the banks offers has been measured based on some factor that impact client's acceptance such as bank commitment, behavioral intention and extrinsic influence. 400 online questionnaires have distributed to clients and 360 valid and useable filled questionnaires have collected. The results of this research showed, mobile usage in financial sector affects attitude towards acceptance m-banking that offer by Kingdom of Bahrain financial Institutes. In contrast, that there is no relationship between wireless technology and acceptance of m-banking and this due to some strategy that bank was adopted. While, bank commitment, behavioral intention and extrinsic

influence have significant effects on attitude towards the current m-banking that bank offers. The client's perspective of the future of mobile banking was positively, finally the survey revealed the following conclusions:

- M-banking gives client an opportunity to get or provide information in case of urgent need.
- Mobile technologies support banking experience that is collaborative, accessible and integrated with the world beyond the boundaries of a regular bank.
- M-banking provides enhancement services to supplement the bank services.
- M-banking helps to increase access to banking services.
- Using m-banking helps to perform banking anyplace and anytime.
- Using m-banking increases productivity.
- Using m-banking enables people to accomplish banking tasks more quickly.
- Using m-banking enhances effectiveness in banking transactions.
- Banks encourage their clients to purchase smart phone compatible with the m-banking services through easily month installments plan.

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