Customers' Financial Needs satisfaction and Self-service Technology Banking: The Case of Automatic Teller Machines (ATMs) in Jordan

Fawzi Al Sawalqa
Accounting Department; Financial & Administrative Sciences Faculty
Tafila Technical University
Tafila-Jordan

Abstract

This study was conducted to achieve two main objectives. Firstly it assesses the effect of low cost services, security and privacy and ease of use on customers' financial needs satisfaction of Automatic Teller Machines (ATMs). The study also assesses if there is a difference in customers' financial needs satisfaction due to gender, age or academic qualification. Based on survey responses from 132 users, the results indicate that only privacy and security contributes significantly to the customers' financial needs satisfaction. The results also revealed that the demographic characteristics of users make no difference in the financial needs satisfaction of ATMs users. An important implication of this study is that the results of it brought with them the need for Jordanian banks to put more emphasis on the different aspects of privacy and security, to decrease or remove the cost of ATMs usage and to introduce a good training to ATMs users.

Keywords: ATMs, technological innovations, customers' financial needs satisfaction, low cost service, privacy and security, ease of use, Jordan

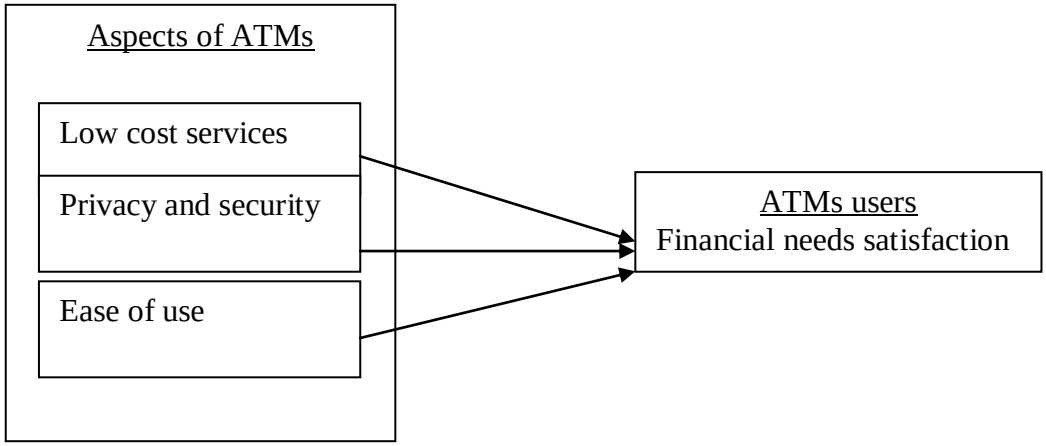
1. Introduction

ATMs are almost classified as new technology in context of developing country. ATMs introduced to markets since the 1970s (Mauldin, Sutherland & Hofmeister, 1978). ATMs can offer significant benefits to both banks and customers. By using ATMs, customers can deposit or withdraw cash, transfer funds from one account to another, inquire about account balance and request for cheque books and account statement (Liao, Shao, Wang & Chen, 1999; Karamala & Anchula, 2011). By automating services that were previously completed manually, ATMs can reduce the costs of servicing some customer demands. These potential benefits are multiplied when banks share their ATMs, allowing depositors of other banks to access their accounts through a bank's ATM (Mcandrews, 2003). According to Adepoju and Alhassan (2010), ATM is a computerized telecommunications device that provides the customers of a bank with access to financial transactions in a public space without the need to visit the bank. In today's ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stripe or a plastic smartcard with a chip that contains a unique card number and some security information. Security is provided entering a personal identification number (PIN).

Jordan has 25 banks. These include 13 commercial banks, 9 foreign banks, 3 Jordanian Islamic banks and 1 foreign Islamic bank (Central Bank of Jordan, 2012). Jordanian banks weathered of the international financial crises and its results relatively well. Measured by assets operating in Jordan, Jordanian banks activity witnessed a 7.3% rise in 2009. Total deposits, a major activity driver in this sector, managed to post a healthy 12.1% increase in the twelve month by the end of 2009 (Bank Audi, 2010). According to Retail Banking Research (2011), demand from customers and cost cutting have been the most important drivers of ATM growth on a worldwide basis currently. In 2010, rapidly growing volumes of ATM cash withdrawals in Asia-Pacific, Central and Eastern Europe and the Middle East and Africa helped to encourage many deployers to continue expanding their ATM estates. Retail Banking Research expects the global installed base of ATMs to increase by 42% to about 3.2 million installations by 2016. The ATM markets of Asia-Pacific, Central and Eastern Europe and the Middle East and Africa will expand significantly faster than other regions.

This research comes to investigate some aspects of ATMs in context of Jordan. In particular, this research tries to assess the extent of achieving the customers' financial needs satisfaction by empirically investigated the role of three important factors in achieving the anticipated satisfaction. These factors include low cost services, security and privacy and ease of use (see Figure 1).

Figure 1: Study's theoretical model



The importance of this study comes from that it, to the best of my knowledge, is the first study to investigate this relationship with its different components in Jordan. In addition, it has been argued that despite the pervasiveness of ATMs technology, it is surprising that it has not yet received any significant attention in the academic literature (Introna & Whittaker, 2006). Consequently, the current study seeks to answer the following two research questions from the perspective of Jordanian banks customers:

Question 1: Do the different aspects of ATMs contribute significantly to the satisfaction of financial needs of ATMs users in Jordan?

Question 2: Is there a difference in customers' financial needs satisfaction due to gender, age or academic qualification?

The reminder of the paper is organized as follows. Section two presents the relevant literature in the subject and hypotheses to be tested. Section three describes data collection process, study variables and statistical techniques adopted. Section four reports the finding of the study. Section five discusses and concludes the study.

2. Previous Literature and hypotheses development

Banks have usually tried to use technology initially for internal use and communication and later as a tool to serve their customers. In this context, Jun and Cai (2001) stated that, "*Customers perceptions of service quality and their satisfaction are profoundly influenced by their service encounters" (p. 277).* Beginning in the early 1970s and following the introduction of credit cards, the next important technology was the development of ATMs which started to perform most of the teller duties in the bank.

ATMs network contributed significantly in performing most of the customers' financial services in a reliable way (Giannakoudi, 1999). According to Mcandrews (2003) ATMs can offer significant advantages to both banks and customers. The machines can enable depositors to withdraw and deposit cash at more convenient times and places than during banking hours at branches. At the same time, by automating services that were previously completed manually, ATMs can reduce the costs of servicing some customer demands. These potential advantages are multiplied when banks share their ATMs with others, allowing depositors of other banks to access their accounts through a bank's ATM.

For a person to use ATMs, they should be cheap, ease of use, secret and safety. However, safety related to privacy and security. In respect to the ATMs service costs in Jordan, I have seen some variety in the applicable fees. Some Jordanian banks charge their customer some fees against the usage of their ATMs on a monthly basis. On the other hand, some banks introduce the ATMs services free to their customers. In respect to the sharing ATMs, the ATM bank's owner is usually charge those customers who hold other banks cards. In this context, Mcandrews (2003) argued that the decision by banks to share their ATMs is partially determined by the terms under which different banks agree on. In particular, there are several prices that can be charged to or collected by the three main parties involved in an ATM transaction, the cardholder or the customer, the cardholder's bank, and the ATM owner.

How, and by whom, these prices are set affects a number of economic decisions, including the number of machines that banks choose to deploy, deposit market interest rates, distances travelled by customers that wish to withdraw cash, profits of banks, and welfare of bank customers. According to Hubbard (2009) ATM fees have been a source of controversy in many countries. These fees are many types. Firstly, interchange fees that banks charge each other when the customer of the bank uses another's ATM. Secondly, foreign fees that banks charge their own customers for using other banks' ATM's. Thirdly, surcharges that banks charge other banks' customers for using their ATM's. In some countries, a single ATM transaction potentially involves all of these fees, when a customer of bank A withdraws money using bank B's ATM, the customer could pay a foreign fee to bank A and a surcharge to bank B, and bank A could pay an interchange fee to bank B. However, Banks' setting of ATM fees varies from one country to another due to differences in regulatory policy. In some countries, including the U.K. and France, banks generally neither charge foreign fees nor surcharges. In others, such as Australia, banks generally charge foreign fees but not surcharges. In general, it can be argued that banks should not charge users for ATMs usage. The justification of this argument is built on the idea that customers will not be satisfied if their banks charge them against the usage of ATMs while they use their cash balances in credit facilities and obtain credit interest on that money. Furthermore, ATMs usage can reduce the costs of servicing some customers' demands by banks (Mcandrews, 2003). For non-customer users, it is more useful for banks not to charge users who have no accounts in these banks, and should consider these ATMs as promotions for their banks.

According to Maenpaa, Kale, Kuusela and Mesiranta (2008) security stands for the reliability of an innovation and an overall belief on the part of the user that banking transactions can be completed confidentially and safely. Study by Rogers, Gilbert and Cabrera (1997) asked the eight non-users if they had any concerns about using ATMs. The result of the study indicated that most of them mentioned safety as the main concern. This result is almost similar to that of Mirza, Beheshti, Wallstrom and Mirza (2009) in respect to internet banking (IB). However, Rogers et al. (1997) interviewee also focused on many issues related to safety and security. These include, for example, their inability to use ATMs in a remote location especially in the evening. In this context, the majority of ATMs today are located at sites other than banks such as malls and grocery stores (Gowrisankaran & Krainer, 2011). Study of Maenpaa et al. (2008) focused on many aspects for security of internet banking users which most of them also related to ATMs. These include, for example, privacy of their bank transactions and safety of their bank transactions. Study by Adepoju and Alhassan (2010) revealed that the security level is poor in Nigerian banks as some banks do not offer any tools where customers can easily report cases of ATM fraud.
In respect to ease of use, it has been defined as the degree to which an innovation can be understood and used in a simple and easy way (e.g. Davis, 1989; Mathieson, 1991; Zeithaml, Parasuraman & Malhotra, 2002).

However, previous literature introduced a series of challenges and difficulties that prevent the proper use of ATMs. Rogers et al. (1997) study showed that some intermediate users have some difficulties in using ATMs including for example, inserting the card in the wrong way, lacking experience and inconvenience. On the other hand, the frequent users indicated that ATMs not providing enough feedback and they are not responding quickly enough. Another study by Rogers, Cabrera, Walker, Gilbert and Fisk (1996) asked the respondents to identify the actual or perceived difficulties with ATMs. The results indicated that young, middle-aged and young-old adults rated having to wait in line to use the machine highest in difficulty, while old adults rated being able to see the screen well highest. Rogers et al. (1996) also asked the respondents to rate their actual or perceived difficulty with performing different transactions on ATMs. The results indicated that all age groups rated making payments as the most difficult. However, the overall pattern of difficulty was almost similar across age groups.

For example adults of all ages see making withdrawals and balance checking to be easy, whereases making deposits, cash advances, transfers and payments to be progressively harder. Taking another banking technological innovation, Jun and Cai (2001) focused on investigating the main dimensions of internet banking service quality as seen by internet banking customers and to determine critical, satisfying and dissatisfying factors among the identified dimensions. Using a content analysis, Jun and Cai (2001) identified six dimensions of online systems quality. These include content, accuracy, ease of use, timeliness, aesthetics and security. The study findings indicated that ease of use of internet in this case has many aspects. These include compatibility, user friendly, easy login, speed of responses, accessibility of the web site, functions that customers need and easy navigation. Most of these aspects are also applicable to the ATMs usage. The current study selected three important factors, namely; low cost services, privacy and security and ease of use to assess their influence on achieving the users' financial needs satisfaction.

The above mentioned studies indicated that low cost services, privacy and security and ease of use are the most important factors in accepting any technological innovations, which in terns, achieve the users' satisfaction. Accordingly, the following hypotheses can be developed (see Figure 1):

Hypothesis 1: The low costs' services of ATMs have a positive impact on the achievement of customers' financial needs satisfaction.
Hypothesis 2: The privacy and security of ATMs have a positive impact on the achievement of customers' financial needs satisfaction.
Hypothesis 3: The ease of use of ATMs has a positive impact on the achievement of customers' financial needs satisfaction.
Hypothesis 4: There is a difference in customers' financial needs satisfaction of ATMs services due to gender.
Hypothesis 5: There is a difference in customers' financial needs satisfaction of ATMs services due to age.
Hypothesis 6: There is a difference in customers' financial needs satisfaction of ATMs services due to academic qualification.

3. Research method

3.1 Sample selection and data collection

The current study aims to investigate the effect of different aspects of ATMs on the achievement of financial needs satisfaction of ATMs users in Jordan. The population of this study includes all the customers who hold an ATM along all the working banks in Jordan. To achieve these objectives, a well designed questionnaire was distributed to the study sample.

Participants were invited to participate in this study through a covering letter enclosed on the first page of the questionnaire. The content validity of the questionnaire was ensured by developing reliable scales for the different factors of the study depending on a series of previous studies in the field. All of the questions were close-ended. The last page of the questionnaire asks the respondents to mention any further comments. The five-point Likert scale was used in formatting the main questions in the questionnaire. The first question of the questionnaire asks the respondent if he/she uses an ATM card. Only those who stated yes filled the questionnaire. However, 140 questionnaires were handed to the cardholders in some locations in Jordan and the researcher asked them to fill them directly as most of them found in public areas such as streets and ATMs locations which prevented the researcher to leave the questionnaire with them as it was difficult to follow them up or for them to mail the questionnaires to the researcher. Thus, all the distributed questionnaires were collected. These include 132 usable questionnaires. However, Table 1 shows the demographic characteristics of the cardholders. In particular, Table 1 shows that most of the respondents (72.7%) were males. In this context, earlier Swinyard and Ghee (1986) findings revealed that most of ATMs users were more likely to be males. 71.2% of the cardholders were aged 40 or less and about 44.7% of them had a bachelor degree. These, however, are good indicators about the reliability of the data.

Table 1 Background Information of Participants

	Frequency	%
Gender		
Male	96	72.7
Female	36	27.3
Total	132	100.0
Age group		
Less than 30	54	40.9
30-40	40	30.3
41-50	28	21.2
More than 50	10	7.6
Total	132	100.0
Qualification		
Diploma	32	24.2
Bachelor	59	44.7
Master	14	10.6
PhD	2	1.5
Others	25	18.9
Total	132	100.0

However, a series of statistical tools were used to describe and validate the study variables. In addition, multiple regression analysis, independent sample T-test and one-way ANOVA were used to test the study hypotheses.

3.2 Measurement of variables

As shown in the study theoretical model (see Figure 1), the study has four factors. These include low cost services, privacy and security, ease of use and financial needs satisfaction. The researcher made considerable efforts to develop different scales to measure these factors by investigating abroad set of studies in the field. Thus, this study contributes to the knowledge in this area by creating these new scales. However, to measure the low cost services, three items were adapted from previous studies (e.g. Rogers et al., 1996; Jun & Cai, 2001). To measure the security and privacy, eight items were adapted from previous studies in the field (e.g. Rogers et al., 1996; Rogers et al., 1997; Maenpaa, Kale, Kuusela, & Mesiranta, 2008). Ease of use was measured using seven items adapted from previous studies (e.g. Rogers et al., 1996; Rogers et al., 1997; Zimmermann & Bridger, 2000; Jun & Cai, 2001). The satisfaction of the users was measured by asking the respondents how satisfied are they with the different ATMs services.

Factor analysis and a reliability analysis were performed for the study variables (Hair et al., 2006). In particular, three items were used to measure the low cost services. As shown in Table 2, a principle components analysis (PCA) yielded only one factor with an eigenvalue greater than one. However, one item was deleted due to an insignificant factor loading (0.237 < 0.50) (Jusoh, Ibrahim & Zainuddin, 2008). The loadings for the other two items were 0.900 and 0.890 respectively. The Cronbach alpha of the two items was 0.777 which indicates satisfactory internal reliability of the scale. The Bartlet's test of sphericity was significant (p = 0.000) and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.505 which indicated that factor analysis was appropriate for these items (Veen-Dirks, 2010). For the purpose of analysis, a single scale was constructed for the law cost services factor by taking the average of respondents' scores for the two items. Next, the procedures follow the same steps applied above to measure the other factors.

Table 2 Descriptive analysis and principle components analysis for the law costs' services

Items	mean	S.D.	Loading
Fees against using ATM machines of my bank	3.03	1.50	0.900
Fees against using ATM machines of other banks	2.70	1.48	0.890
Waiting in line to use ATM machines	3.19	1.31	0.237
Kaiser- Meyer- Olkin = 0.505 , p = 0.000 Cronbach's Alpha = 0.544/ new Cronbach's Alpha= 0777 Eigenvalue = 1.658 Explained variance= 55.267			

In respect to privacy and security factor, eight items were used to measure the privacy and security. The result of PCA yielded three component factors with eigenvalues exceeding 1, explaining a total of 72.21% of the variance. All loadings were greater than 0.50, ranging from 0.611 to 0.919. The Cronbach alphas for them were 0.826, 0.793 and 0.561 respectively. For the purpose of analysis, a single scale was constructed for the privacy and security factor by taking the average of respondents' scores for the three factors. The rational beyond this decision is that all the eight items are related to privacy and security (see Table 3).

Table 3 Descriptive analysis and principle components analysis for ATMs privacy and security

Item	Mean	S.D.	Loadings Factor 1	Loadings Factor 2	Loadings Factor 3
1. I trust the security of the ATMs	3.50	1.24	0.916		
2. I trust the accuracy of the ATMs	3.53	1.30	0.919		
3. ATMs are private enough	3.42	1.14	0.727		
4. By using ATMs other people don't know about my bank transactions	3.17	1.11		0.849	
5. By using ATMs machines, my information will not fall into the wrong hands	3.12	1.30		0.914	
6. Most of the ATMs are in safety locations	2.77	1.40			0.611
7. Most of the ATMs are located in the main streets	3.12	1.44			0.772
8. It is safety to use ATMs in the evening or after dark	2.41	1.30			0.754
Explained variance			27.973	23.440	19.800
Cronbach's Alpha			0.826	0.793	0.561

In respect to ATMs ease of use factor, seven items were used to measure it. Similar to the previous factor, the result of PCA yielded three component factors with eigenvalues exceeding 1, explaining a total of 66.73% of the variance. All loadings were greater than 0.50, ranging from 0.562 to 0.891. The test of reliability using Cronbach alpha revealed that factor two is not relevant as the value of Cronbach alphas was only 0.279 which indicated that the factor is lack the required reliability. Accordingly, a decision has been taken to delete factor two, which includes three items as shown in Table 4. The Cronbach alphas for factor one is 0.791 which indicates satisfactory internal reliability of this factor which also consist of three items. Factor three includes only one item. For the purpose of analysis, a single scale was constructed for the ease of use factor by connecting factor one and factor three to form a single factor to measure the ease of use factor.

Table 4 Descriptive analysis and principle components analysis for ATMs ease of use

Item	Mean	S.D.	Loadings Factor 1	Loadings Factor 2	Loadings Factor 3
1. Easy login	3.86	0.99	0.808		
2. Speed of response	3.69	1.03	0.891		
3. Easy navigation	3.43	0.97	0.772		
4. Functions that customers need	2.77	1.09		0.562	
5. Convenient services	3.43	2.81		0.668	
6. I am familiar with the usage of ATM	3.57	1.20		0.697	
7. ATMs give me the amount of money I want	3.77	1.18			0.882
Explained variance			32.053	19.085	15.588
Cronbach's Alpha			0.791	0.279	-

Customers' financial needs satisfaction represents the dependent variable in the current study. This variable was measured by asking the respondents how satisfied are they with the different ATMs services. These services include, ATM withdrawal service, ATM deposit service, fund transferring service, payments making, control my daily financial transactions, budgeting my daily expenditures, request for cheque books and request for account statements. The result of PCA yielded four component factors with eigenvalues exceeding 1, explaining a total of 73.20% of the variance. All loadings were greater than 0.50 except that of item four, namely; fund transferring service which has a loading less than 0.50. Accordingly, this service was removed from any farther analysis. The four factors with eight items were connected to form one factor with 56.3% Cronbach alpha. This value for Cronbach alpha is relevant according to Nunnally (1978). Table 5 shows the descriptive statistics for the nine services.

Table 5 Descriptive statistics for customers' financial services satisfaction

1. Financial service	Mean	S.D.
2. ATM withdrawal service	3.77	1.23
3. ATM deposit service	3.48	1.31
4. Fund transferring service	3.46	1.17
5. Payments making	3.77	5.66
6. Balance checking	3.46	1.34
7. Control my daily financial transactions	3.17	1.25
8. Budgeting my daily Expenditures	3.06	1.17
9. Request for cheque books	2.89	1.31
10. Request for account statements	3.23	1.35

4. Results

Six hypotheses were developed to achieve the objectives of the study. Three types of analysis were used to achieve these objectives. These include multiple regression analysis, independent sample T-test and one-way ANOVA. To draw a conclusion about the relationship between the different aspects of ATMs and customers' financial needs satisfaction, the following multiple regression was run using the SPSS program:

$$Y = \alpha 0 + \beta 1X1 + \beta\ 2X2 + \beta\ 3X3 + e$$

Where:

Y= customers' financial needs satisfaction;
X1= low costs' services;
X2= privacy and security;
X3= ease of use.

Table 6 shows that the overall *F* statistic is statistically significant at the 0.000 level. R^2 indicates that the regression model explains 18.2% of the variance in investment opportunity with adjusted R^2 of 16.3%.
The result of multiple regression as shown in table 6 indicates that the relationship between low cost service and customers' financial needs satisfaction is not significant (Beta= 0.059, t-value= 0.727, *p* = 0.469). Accordingly, H 1 which stated that the low service costs of ATMs have a positive impact on the achievement of users' financial needs satisfaction, was not supported at the 0.05 significance level. Therefore, hypothesis H1 is rejected. On the other hand, H2 which stated that the privacy and security of ATMs have a positive impact on the achievement of customers' financial needs satisfaction is supported at at the 0.05 significance level (Beta= 0.346, t-value= 3.986, *p*= 0.000). This result indicates that privacy and security have a positive impact on the customers' financial needs satisfaction.

In respect to H3, which stated that the ease of use of ATMs has a positive impact on the achievement of customers' financial needs satisfaction is rejected (Beta= 0.152, t-value= 1.745, *p*= 0.083). This result does not support the existence of a positive relationship between ease of use of ATMs and the customers' financial needs satisfaction.

Table 6 Result of regression analysis: ATMS aspects and customers' financial needs satisfactions

Independent variables	Unstandarized coefficients		Standarized coefficients	t- value	Sig.		
	B	Std. Error	Beta			Tol	VIF
(Constant)	1.756	0.314		5.594	0.000		
Low cost service	0.028	0.038	0.059	0.727	0.469	0.955	1.047
Privacy and security	0.320	0.080	0.346	3.986	0.000	0.850	1.176
Ease of use	0.130	0.074	0.152	1.745	0.083	0.841	1.189
R^2	0.182						
Adjusted R^2	0.163						
F	9.505						
Sig	0.000						

To test H4, independent sample T-test was used. As shown in Table 7, the male mean (3.3359) is greater than that of female (3.2639) but this difference is not significant (t= 0.584, p= 0.560). Accordingly, H4, which stated that there is a difference in customers' financial needs satisfaction of ATMs services due to gender, is rejected. Thus, it can be concluded that there is no difference in customers' financial needs satisfaction of ATMs services due to gender.

Table 7 Independent sample T-test/ Gender and financial needs satisfaction of ATMs services (H4)

Gender	N	Mean	S.D.	t-value	Sig.
Male	96	3.3359	0.66746	0.584	0.560
Female	36	3.2639	0.51994		

To test H5 and H6, One-way ANOVA test was used. In respect to H5, the result of the test indicates that the means are different among different age groups (see Table 8), but these differences are not significant as shown in Table 9 (*F*= 0.364, *P* = 0.779). Thus, H5 is rejected which means that there is no difference in customers' financial needs satisfaction of ATMs services due to age.

Table 8 Descriptive statistics for age groups (H5)

Variable	Groups	N	Mean	S.D.
Age	less than 30	54	3.3264	0.64630
	30-40	40	3.2406	0.58520
	41-50	28	3.3616	0.65116
	more than 50	10	3.4375	0.71017
	Total	132	3.3163	0.62955

Table 9 One-way ANOVA test/ age and and financial needs satisfaction of ATMs services (H5)

	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	0.439	3	0.146	0.364	0.779
	Within Groups	51.481	128	0.402		
	Total	51.920	131			

In respect to H6, the result of the test indicates that the means are different among different academic qualification groups (see Table 10), but these differences are not significant as shown in Table 11 (F = 1.451, P = 0.221). Thus, H6 is rejected which means that there is no difference in customers' financial needs satisfaction of ATMs services due to academic qualification.

Table 10 Descriptive statistics for academic qualification groups (H6)

Variable	Groups	N	Mean	S.D.
Academic qualification	Diploma	32	3.1563	0.62782
	Bachelor	59	3.3411	0.59308
	Master	14	3.4554	0.71321
	PhD	2	2.6875	0.26517
	others	25	3.4350	0.65662
	Total	132	3.3163	0.62955

Table 11 One-way ANOVA test/ academic qualification and financial needs satisfaction of ATMs services (H6)

	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Academic qualification	Between Groups	2.270	4	0.567	1.451	0.221
	Within Groups	49.650	127	0.391		
	Total	51.920	131			

5. Discussion, conclusions and limitations

Two objectives were identified for the current study. The first one tries to investigate the relationship between the different aspects of ATMs (i.e. low costs' services, privacy and security and ease of use) and customers' financial needs satisfaction. The second objective tries to find if there is a difference in customers' financial needs satisfaction due to gender, age or academic qualification. Notably, there is no study that has investigated all these variables at the same time. To achieve the first objective, three hypotheses were developed and tested using multiple regression analysis. The result indicates that the relationship between low costs services and customers' financial needs satisfaction is not significant. This result, however, indicated that the ATMs low costs' services have not contributed to the satisfaction of users. The justification of this result is that most of Jordanian banks charge their customers some fees on the ATMs services. However, it can be argued that ATMs reduce the costs of servicing some customer demands using banks' counters (Massoud, Saunders & Scholnick, 2006; Mcandrews, 2003).

Accordingly, banks should not charge their customers any fees against their usage of ATMs. This is because banks use their customers' cash balances in its credit facilities which create credit interest for banks in general. In respect to the second hypothesis, the result indicates that privacy and security of ATMs have a positive impact on the achievement of customers' financial needs satisfaction. This result is rational as the security and privacy is very important in using any electronic service. This clear as most of previous research in e-banking gave a big weight to this aspect (e.g. Maenpaa et al., 2008; Mirza et al., 2009; Rogers et al., 1997). In respect to the third hypothesis, the result indicated that the ATMs ease of use has no effect on customers' financial needs satisfaction. However, ATMs' screens have many functions need to be known as some customers not familiar with most of them such as cash transfers and payments (see Rogers et al., 1996). The justification of this result is that most of Jordanian users use ATMs for the simple services such as cash withdrawals, and balance inquiries. This, however, is consistent with the findings by Gowrisankaran and Krainer (2011) who found that more than 75% of all ATM transactions are cash withdrawals, with the remainder being deposits and balance inquiries. Thus, it looks that Jordanian users put no emphasis on the difficulty of ATMs usage as they used to use limited services. In general, the above mentioned results indicated that privacy and security is the main concern of ATMs' users in Jordan as they were important determinants of customers' financial needs satisfaction.

The main aim of hypotheses 4, 5 and 6 is to assess if financial needs satisfaction of ATMs services different among respondents due to some of their characteristics (i.e. gender, age and academic qualification). However, the result of hypothesis 4 revealed that there is no difference in customers' financial needs satisfaction of ATMs services due to gender. The result of hypothesis 5 also revealed that there is no difference in customers' financial needs satisfaction of ATMs services due to age. The justification of this result is that most of the respondents (92.4%) were aged 50 or less which means that they have the ability to understand the different ATMs functions easily.

This result is also consistent with that of hypothesis 3 which revealed that the ease of use is not important in identifying the customers' financial needs satisfaction. Finally, the result concluded that there is no difference in customers' financial needs satisfaction of ATMs services due to academic qualification. The justification of this result is that most of the respondents have a good homogeneous academic qualification. In general, the results of the last three hypotheses gave a good indicator that the demographic characteristics made no difference in the customers' financial needs satisfaction of ATMs services.

An important implication of this study is that the results of it brought with them the need for Jordanian banks to incorporate the Western aspects of privacy and security, to decrease or remove the cost of ATMs usage and to introduce a good training to those users who face problems in using ATMs.

The current study, to the best of my knowledge, is the first study to discuss the determinants of Jordanian customers' financial needs satisfaction of ATMs services usage using the current factors. This, however, gives it an exceptional importance in context of Jordan and other developing countries. Despite that, the current study suffers many limitations. There are many other factors ignored in this study which may have important effect on ATMs users' satisfaction. This is clear from the value of R^2 (18.2%). Despite that, this study investigated three important factors. This creates a fruitful opportunity for future research to incorporate many other factors. The current study connected one aspect of e-banking services, namely; ATMs usage with the financial needs satisfaction of customers. Thus, the study opens many avenues for future studies to investigate other e-banking services and to identify the factors that may influence the adoption of services in Jordan and other developing countries (see Tan & Teo, 2000). The sample of current study covered some areas in Jordan. Future study may have an opportunity to cover all Jordanian governorates. The current study employed a cross-sectional design which has many limitations. Accordingly, future study may incorporate a longitudinal approach to overcome these limitations. Furthermore, using qualitative approach to assess the difficulties that ATMs users face is also a fruitful future research opportunity.

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