Association for Information Systems
AIS Electronic Library (AISeL)

UK Academy for Information Systems Conference Proceedings 2015

UK Academy for Information Systems

Spring 4-1-2015

Jordanian Customers' Intention Towards and Use of Internet Banking: Exploring Demographic Differences on Their Perception

Yogesh Dwivedi
Swansea University, ykdwivedi@gmail.com

Ali Abdallah Alalwan
Swansea University, alwan_jo@yahoo.com

Nripendra Rana
Swansea University, nrananp@gmail.com

Michael Williams
Swansea University, m.d.williams@swansea.ac.uk

JORDANIAN CUSTOMERS' INTENTION TOWARDS AND USE OF INTERNET BANKING: EXPLORING DEMOGRAPHIC DIFFERENCES ON THEIR PERCEPTION

Yogesh K. Dwivedi[1], Ali Abdallah Alalwan[2], Nripendra P Rana[3] and Michael D. Williams[4]

School of Management, Haldane Building, Swansea University, SA2 8PP, United Kingdom, E-mail: [1] ykdwivedi@gmail.com; [2] Alwan_jo@yahoo.com; [2] alwan.a.a.ali@gmail.com**;** [3] n.p.rana@swansea.ac.uk; *[4] m.d.williams@swansea.ac.uk.*

Abstract

This research aims to explore whether Jordanian customers' perceptions on intention and use of Internet banking services varies according to their demographic characteristics. According to prior literature, there are five demographic factors; namely: age, gender, income, education and customers' experience with the computer and Internet. These have been considered in the current study. The required data was collected from field survey questionnaires administered to a convenience sample of Jordanian banking customers. The main statistical results indicated that the customers' perceptions on intention and usage of Internet banking are significantly different according to age, education, and their experience with the computer and Internet. Yet, there was no significant difference that could be attributed to gender. The results also suggest that even though the vast majority of the respondents have a higher willingness to adopt Internet banking, the actual usage rates of the most Internet banking (IB) services are too low. Theoretical contributions, implications, limitations and future research directions are also outlined.

Keywords: *Internet banking, intention, usage, Jordan, demographic characteristics.*

1. Introduction

Increasingly, as an alternative to the traditional, human encounters, technological interfaces (i.e. Internet banking, ATM, and Telebanking) have been largely implemented over the banking context to enable customers to produce financial transactions independently without any support from banking staff (Curran and Meuter, 2007). Internet banking is considered as one of the most well-known interfaces implemented by banks worldwide (Martins et al., 2014). Conceptually, Internet banking (IB) can be defined as the *"conducting of banking transactions through the Internet*" (Liao et al., 1999, p.69). In line with this definition, and as stated by Shih and Fang (2004), Internet banking refers to banking applications that allow customers to access and conduct their financial transactions using the World Wide Web, Wi-Fi technologies and the Internet, at a time and place of the user's choosing. Good examples of banking transactions which can be conducted using IB

include balance enquiries, downloading bank statements, fund transfers, requesting cheque books or bank certificates, requesting an increase in credit limits, paying loan and mortgage instalments and paying bills (Curran and Meuter, 2005; Martins et al., 2014).

Indeed, implementing IB as an innovative and electronic banking channel has been dramatically transforming the way that customers interact with banks (Akhlaq and Ahmed, 2013; Riffai et al., 2012) from *"low tech, high touch to high tech, low touch"* (Bitner et al., 2000, p.138). This also consolidates the banks efficiency and offers the capability to provide customers with a high service quality and greater convenience, thereby helping them to meet their growing demands (Baabdullah et al.,2014; Dimitriadis and Kyrezis, 2011; Kesharwani and Bisht, 2012). Further, banks have begun to consider implementing such emerging systems as a competitive necessity, rather than as a competitive advantage in order to keep up with the rapid technological advancements of the contemporary business environment (Baabdullah et al., 2014; Gan et al., 2006; Tan and Teo, 2000). Essentially, IB, like other kinds of online banking (i.e. Mobile banking, Telebanking) channels, has a key role to play in improving customer satisfaction, value, and loyalty, and ultimately maintain an organisation's market share (Al-Somali et al., 2009; Campbell and Frei, 2009).

In the context of this study, it is important initially to consider that Jordan has one of the fastest growing mobile and Internet technology sectors amongst Middle Eastern countries (The Gulf Today, 2012). For instance, approximately 55% of the Jordanian population are Internet subscribers (The Gulf Today, 2012; The Jordan Times, 2013). Therefore, Jordanian banks, operating under intense competition, have started taking advantage of the current technological prosperity to implement online banking channels (Migdadi, 2012). For instance, out of the 26 different banking organisations in Jordan, 23 have implemented Internet banking (Migdadi, 2012). Nevertheless, employing such electronic channels is not feasible unless customers widely adopt it as a full alternative for human encounters (Martins et al., 2014). In fact, Jordanian customers do not seem to be fully motivated to accept IB to attain the financial services required. This has been recently reported by existing studies that have examined related issues in the Jordanian context (Alalwan et al., 2014; Al-Rfou, 2013; Al-Smadi, 2012). For instance, based on a recent survey which included 40 specialist bank staff involved in online transaction departments in Jordanian commercial banks, Al-Rfou (2013) has illustrated that less than 19% of Jordanian banking customers

have accessed online banking services, while less than 21% of customers are actually able to use Internet banking in Jordan.

Prior literature on IB and self-service technology in general have argued that variations in customers' perceptions and behaviour toward such emerging systems could be attributed to the variation in the customers' demographic characteristics (i.e. age, gender, income level, educational level, technology experience) (Dabholkar et al., 2003; Dean, 2008; Ding et al., 2007; Lee et al., 2010; Proença and Rodrigues, 2011; Simon and Usunier, 2007). For instance, a number of studies has observed that younger men usually decide to use IB according to the benefits and advantages to be gained; while older women usually pay more attention to aspects related to complexity, facilitated resources, and assurance (AbuShanab et al., 2010; Dean, 2008). Other studies also indicated that the vast majority of the actual technology adopters are younger and enjoy an adequate level of education and experience with technology (Venkatesh et al., 2003; 2012).

Considering the above discussion, this research aims to examine if customers' perceptions on intention and usage of Internet banking are significantly different according to age, education, gender and their experience with the computer and Internet.

2. Literature Review

The IB issues have been constantly represented as an attractive area of interest for both academics and practitioners in their endeavours to identify suitable marketing strategies which will improve an effective implementation and adoption of this technology (DeYoung et al., 2007; Hung et al., 2012). Therefore, there has been a large number of studies that have examined IB in different cultures and countries in both developed and developing countries (Jaruwachirathanakul and Fink, 2005). However, the largest number of IB studies have focused on examining this technology from the customers' point of view: behavioural intention, usage behaviour, adoption, future intention (Eriksson et al., 2005; Teo et al., 1999); motives behind using IB (e.g. relative advantages, perceived usefulness, less waiting time, enjoyment) (Curran and Meuter, 2005; Wang et al., 2003); barriers to acceptance of IB (perceived risk, lack of knowledge; need for interaction, technology failure, technology anxiety) (Laukkanen et al., 2008).

A number of studies have paid attention to the role of demographic factors in formulating the customers' intention and usage of IB. For instance, Nilsson (2007) indicated that users of IB in Estonia seem to be more homogenous due to the fact that most of them are well-educated, younger, and more male than female. Also, Sathye (1999) noticed that younger customers with adequate educational and wealth levels seem to be more motivated to adopt online banking. Furthermore, Akinci et al. (2004) provided statistical proof that users of Internet banking in Turkey significantly differ from non-users in terms of age, technology orientation and confidence in Internet banking. For instance, users were observed as being middle aged, more male than female, and expressed an intention to use Internet banking. Moreover, Yoon (2010) predicted that customers who enjoy an adequate level of experience with technology are more likely to be pleased about Internet banking services if they perceived that Internet banking had fewer complexities, better design and more speed. In their examination of the impact of demographic factors on customer attitudes towards Internet banking in Saudi Arabia, Al-Somali et al. (2009) found that an educational level was a significant predictor in this respect. Jaruwachirathanakul and Fink (2005) concluded that the causal association between perceived behavioural control and the adoption of Internet banking is not moderated by gender and age differences.

3. Theoretical Basis

According to prior literature, five demographic factors (namely age, gender, income, education and customers' experience with computer and Internet experience) have been proposed over the conceptual model as key factors predicting both behavioural intention and usage behaviour as well. A detailed discussion regarding the main demographic factors (i.e. age, gender, education level and income level) is provided in the forthcoming subsections.

3.1 Age

An individual's age was articulated by Finch (1986) as an independent variable or factor clarifying a certain kind of individual or collective behaviour and actions. By the same token, several technology acceptance authors (i.e. Venkatesh and Morris, 2000; Venkatesh et al., 2003; 2012) argued that the crucial role of age was either as a moderating factor or as a direct factor predicting the individual's intention and usage of technology. With regard to self-service technology (SST), Dabholkar et al. (2003) established that there were significant differences in usage patterns of SST attributed

to age differences. Indeed, predilections to use an ATM have reached the highest level among younger customers (Dabholkar et al., 2003). Similarly, in their comparison study between users and non-users of SSTs in Portuguese banking, Proença and Rodrigues (2011) found that SSTs are extensively used by younger and middle-aged customers. Dean (2008) realised that older customers are less likely to be confident in using interface technologies so that their usage is limited by specific kinds of SSTs. A study by Dean (2008) concluded that older customers pay a great deal of attention to human encounters as well as perceiving the implementation of SSTs as sustaining an organisation's goals and benefits rather than serving customers. In line with Dean (2008), a negative relationship between customer age and preference for SSTs was observed by Simon and Usunier (2007) who also found that older customers seem to prefer communicating with a human encounter rather than technological interfaces. Younger customers expressed their intentions to use SSTs and ranked time and cost-saving as the main drivers behind using SSTs as found by Ding et al. (2007) as well. Accordingly, Jordanian banking customers could express a different level of intention to use IB because of their age difference.

Considering the above discussion, the authors propose that the Jordanian banking customers' perceptions on intention and usage of Internet banking would differ significantly according to age groups.

3.2 Gender

In the line with Morgan's (1986) proposition, gender could be debated in two ways: a descriptive variable or an explanatory variable. Theoretically, the impacting role of gender (either as an independent or as moderator variable) has also been the focus of attention of different studies over the technology acceptance area (i.e. Venkatesh and Morris, 2000; Venkatesh et al., 2003; 2012). From a different point of view, a number of studies have observed that men usually decide to use electronic channels according to the benefits and advantages to be gained; while woman usually pay more attention to aspects related to complexity, facilitated resources, and assurance (AbuShanab et al., 2010; Dean, 2008). In addition, Nilsson (2007) indicated that users of Internet banking in Estonia are more likely to be male than female. Similarly, men expressed a higher intention to use Internet banking than females in Turkey as reported by Akinci et al. (2004). Accordingly, gender differences could reflect considerable differences between Jordanian banking customers in their intention and usage behaviour of IB.

Considering the above discussion, the authors propose that the Jordanian banking customers' perceptions on intention and usage of Internet banking would differ significantly according to gender groups

3.3 Education

According to Burgess (1986), education level could positively enhance the individual's perception and ability to carry out further complicated actions and occupations. Hence, it has been largely argued that the adoption rates of the new innovations will reach the highest level among those who have an adequate level of education (Burgess, 1986; Rogers, 1995). In the same way, Proença and Rodrigues (2011) concluded that SST banking channels are extensively used by customers with an education level ranging from a mediocre level to a higher level. Another positive relationship between the education level and customers' willingness to adopt IB was supported by Sathye (1999). In their examination of the impact of demographic factors on customer attitudes towards Internet banking in Saudi Arabia, Al-Somali et al. (2009) found that an educational level was a significant predictor of customers' attitudes towards IB. According to the above-mentioned discussion, it could be expected that a good educational level could play a positive role in enhancing the Jordanian customers' intention and usage of IB.

Considering the above discussion, the authors propose that the Jordanian banking customers' perceptions on intention and usage of Internet banking would differ significantly according to education groups.

3.4 Income Level

As with other demographic variables, income level could reflect a considerable difference in the individual intention and behaviour towards technology usage (Porter and Donthu, 2006; Rogers, 1995). For example, people with lower incomes are more likely to pay attention to the issues related with monetary costs associated with the use of new applications (e.g. Internet banking) (Lee et al., 2010; Porter and Donthu, 2006). Furthermore, being consistent with the diffusion of innovation theory, innovators are more likely to have a substantial income and that allows them to carry the cost and a higher degree of risk in innovation (Rogers, 2003). In their study, Meuter et al. (2005) empirically supported the proposition of Rogers (2003); that is, an approved income level is a key determinant of both customer readiness and customer experiment of SST. Among the banking context, Al-Ashban and Burney (2001) empirically approved that an income level was a considerable positive

predictor of the customer acceptance of telebanking. Likewise, Kolodinsky et al. (2004) and Flavián et al. (2006) demonstrated that the higher the income the more likely the customers were to adopt electronic banking relative to lower income customers.

Considering the above discussion, the authors propose that the Jordanian banking customers' perceptions on intention and usage of Internet banking would differ significantly according to income groups.

3.5 Experience

Individual experience with technology has been argued by different studies in the area of information systems or online banking in both manners: as a moderating variable or as a direct factor predicting the behavioural intention and adoption of technology (Jaruwachirathanakul and Fink, 2005; Meuter et al., 2005). Earlier, Taylor and Todd (1995) had articulated that behavioural intention was considered to be the main determinant of usage behaviour and its influence is supposed to be increased by increasing the level experience. Further, Meuter et al. (2005) approved that prior experience is a significant determinant of customers' readiness and customers' trials of different types of self-services technologies. In addition, based on empirical results extracted by Curran et al. (2003), Jayawardhena et al. (2007) and Tan and Teo (2000), customer familiarity in dealing with self-service technology has a significant and positive impact on the customers' intention and orientation towards such emerging systems. Accordingly, it could be articulated that customers' experience with a computer and the Internet could have a direct impact on both behavioural intention and actual usage behaviour of IB.

Considering the above discussion, the authors propose that the Jordanian banking customers' perceptions on intention and usage of Internet banking would differ significantly according to the customers' experience with a computer and the Internet.

5. Methodology

A survey was selected for the current study as an appropriate research approach allowing data collection from a large number of actual customers of Jordanian banks from different places within a reasonable time frame (Bhattacherjee, 2012). Therefore, 500 self-administered questionnaires were allocated to obtain the required data from a convenience sample of Jordanian banking customers. Indeed, the self-administered questionnaire is largely considered to be one of the most suitable and

common instruments for field survey studies (Bhattacherjee, 2012). The self-administered questionnaire is also a cost-effective and feasible data collection instrument with the ability to access a large number of customers in different places (Bhattacherjee, 2012). There is no list of banking customers in Jordan, and banks will not provide any information about their customers for privacy and security reasons. In light of these factors, convenience sampling is deemed to be the most suitable sampling technique (Bhattacherjee, 2012; Dwivedi et al., 2006). Also, due to the large distances between banking customers in Jordan, convenience sampling is deemed to be a cost-effective approach for the current study (Dwivedi et al., 2006).

5.1 Instrument Development

As discussed before, the self-administered questionnaire has been adopted in the current study to derive responses from Jordanian banking customers regarding their perception and behaviour of the aspects related to behavioural intention and use of IB. The behavioural intention was measured by four items adapted from Venkatesh et al. (2003); these have also been extensively adapted and validated by prior IB studies (i.e. AbuShanab et al., 2010; Martins et al., 2014; Riffai et al., 2012). The seven-point Likert scale was used to measure behavioural intention items with anchors ranging from strongly agree to strongly disagree. The Likert scale has been highly claimed to be the best suited response format to derive accurate responses by means of the self-administered questionnaire (Hair et al., 2006).

A set of six common financial services were adopted to measure the use behaviour of SSTs by Jordanian banking customers. These services have been widely adopted by relevant studies that have examined customers use or adoption of IB (i.e. Curran and Meuter, 2005; 2007). In addition to this, these services have been approved by a number of the most well-known Jordanian banks that have introduced such services (i.e. Bank of Jordan, Housing Bank, Arab Bank, Kuwait Bank, Jordan Islamic Bank, and Cairo Amman Bank). The seven-point time scale was adopted to measure the use behaviour toward these services with anchors including: never, once a year, several times a year, once a month, several times a month, several times a week, several times a day (Venkatesh et al., 2012).

Furthermore, six close-ended questions were devoted for demographic variables: age, gender, income, education level, Internet experience, and computer experience. Arabic is the native language of the respondents being targeted in the current study

(Jordanian banking customers). The questionnaire, therefore, was converted to the Arabic language using the back translation method (Brislin, 1976).

5.2 Pilot Study

A pre-test was carried out for both the original English versions of the questionnaires as well as the Arabic versions. This was conducted by sending drafts of these questionnaires to a panel of experts who were asked to evaluate the questionnaires. According to the comments mentioned by those reviewers, a few modifications were carried out either in the questionnaire structure or in the wording and language of the questions. Such of that, a few modifications regarding the demographic questions were suggested. For instance, the ranges of income and age categories were recommended to be slightly modified to cover all the respondents groups. Furthermore, six experts in the online banking services in the most well-known banks in Jordan (Bank of Jordan, Housing Bank, Arab Bank, Kuwait Bank, Jordan Islamic Bank, and Cairo Amman Bank) were asked to evaluate the Arabic version. A few changes were carried out based on the number of comments suggested by those experts as well.

Following the pre-testing, a pilot study was carried out with 30 questionnaires being distributed to Jordanian banking customers. The respondents were also asked to provide notes and comments regarding any problems and confusions that could be found in filling out the questionnaire. Of the 30 distributed, 23 questionnaires were returned. The respondents' notes assured the researchers that the language used was simple and clear; in addition, the questionnaire length was suitable and did not consume much of the respondents' time.

However, a number of respondents mentioned that there were a few repeated items that could reflect the same meaning. Such instances of these items included two items measuring behavioural intention (BI1: I intend to use Internet banking in the future) and (BI3: I plan to use Internet banking in future). Nevertheless, by looking at the original reference (Venkatesh et al., 2003) from where these items have been drawn, it was observed that these items have been validated and adopted by Venkatesh et al. (2003) to measure their related constructs. Therefore, in line with what has been adopted by Venkatesh et al. (2003), a decision was taken to keep these items in the final questionnaire.

6. Results

6.1 Respondents' Profile and Characteristics

Out of 500 questionnaires distributed, 348 usable responses have been received and subjected for further analyses. As seen in Table 1, more than half of the respondents (57.2%) were male, whereas 42.8% were females. With regard to the respondents age, the descriptive statistics revealed that the largest part of respondents were in the age group of 31-40 (37.4%) followed by the age group of 25-30 (32.2%) while both age groups 51-60 and above 60 comprised of 3.1% of the total usable sample size (see Table 1).

In terms of the monthly income level calculated in Jordanian Dinars (JOD), Table 1 depicts that the monthly income level of the largest segment of the usable sample (28.8%) was between 400-600 JOD followed by those who had a monthly income less than 400 JOD (20.4%) and 601-800 JOD (18.4%). Yet, the smallest segment of respondents (5.7%) had a monthly income between 1,001and 1,200 JOD.

In connection with the education level, the descriptive statistics show that the most prominent educational level of respondents (69.6%) had gained a Bachelor's Degree. The second mean educational level of respondents observed (14.9%) had acquired a Master's Degree followed by a Diploma Degree (10.6%) and a high school qualification (3.7%). A very small percentage of respondents (0.9%) held PhD degrees; the lowest percentage of respondents (0.3%) reported that they had other certificates (see Table 1).

Relating to computer experience, the descriptive statistics extensively indicated that the overwhelming majority of respondents (92.2%) have been computer users for more than three years. The computer experience group 2 to 3 years and 1 to 2 years both represented 6.1% of the total usable sample. Yet, the least computer experienced category (less than one year) comprised of 1.7% from the total usable respondents (see Table 1).

As for Internet experience, the vast majority of usable respondents (87.6%) have experienced more than three years with the Internet. The second largest group of respondents (5.2%) experienced the Internet for between 2 to 3 years followed by those (4.6%) who have enjoyed the Internet experience for between 1 to 2 years while 2.6% of respondents have had Internet experience of less than one year (see Table 1).

Table 1: Demographic Characteristics of Internet Banking Respondents

Demographic Profile	Number of Respondents (N= 348)	Percentage (%)
Gender		
Male	199	57.2
Female	149	42.8
Total	348	100
Age		
18-24	58	16.7
25-30	112	32.2
31-40	130	37.4
41-50	37	10.6
51-60	7	2
60+	4	1.1
Total	348	100
Monthly Income Level (JOD)		
Less than 400	71	20.4
400-600	100	28.8
601-800	64	18.4
801-1000	44	12.6
1001-1200	20	5.7
1200+	49	14.1
Total	348	100
Education Level		
High school	13	3.7
Diploma	37	10.6
Bachelor	242	69.6
Master	52	14.9
PhD	3	.9
Other	1	.3
Total	348	100
Computer Experience		
Less than one year	6	1.7
1-2 years	10	2.9
2-3 years	11	3.2
More than 3 years	321	92.2
Total	348	100
Internet Experience		
Less than one year	9	2.6
1-2 years	16	4.6
2-3 years	18	5.2
More than 3 years	305	87.6
Total	348	100

6.2 Descriptive Analysis of Usage of Internet Banking Services

Table 2 summarises some key information regarding the current usage patterns of the six Internet banking services. As seen in Table 2, balance enquiries and downloading

bank statements were the most frequently used Internet banking services. Of the 348 valid responses, 157 (45%) reported that they have used Internet banking several times per month to look at their bank balance or to download their bank statements. On the other hand, balance enquiries and downloading bank statements have never been used by 47 (14%) respondents. In summary, the average mean usage of these services was 4.12 and the standard deviation was 1.65.

Fund transfers were the next widely used Internet banking service. There were 125 (40%), 28 (8%), and 47 (15%) of the total respondents who have applied to use this service at least once per month, several times per month, and several times per year respectively. Yet, 106 (31%) valid responses mentioned that they have never used Internet banking to transfer funds. In general, the usage mean of funds transfer performed by Internet banking was 3.26 and the standard deviation was 1.79.

As summarised in Table 2, the third Internet banking service used by respondents was paying bills. Despite the fact that 108 (31%) respondents mentioned that they have never used Internet banking to pay bills, 152 (44%) of respondents acknowledged that they have conducted this Internet banking service about once a month. The usage mean of using Internet banking for paying bills was 2.96 and the standard deviation was 1.50.

Although 114 (33%) of respondents claimed to have used Internet banking to request a cheque book or bank certificates several times per year, many more respondents (137; 40%) have never used the Internet banking channel to receive the same services (see Table 2). The mean of using Internet banking to perform these services was 2.85 and the standard deviation was 1.80.

Of the few who have used Internet banking for payment of instalments of loans and mortgages, 78 (22 %) [29 + 49] of the respondents who have used Internet banking to use these services once per month or several times per year (see Table 2). On the other hand, 214 respondents (66%) have never used these services. The mean of using Internet banking to conduct these services was too low at 1.9 with the standard deviation of 1.33.

As observed in Table 2, requesting an increase in the credit card(s) limit or to pay any balance due was the least Internet banking service used due to fact that more than half (195; 56%) of the respondents have never used these services. Only 115 (33%) [62 + 53] have used Internet banking to apply these services did so once a year or several

times per year. Moreover, these services had the lowest usage mean score among the Internet banking services at 1.89 and the standard deviation was 1.25.

Table 2: Descriptive Statistics (Frequency and Percentage) of Internet Banking Services Usage

Constructs	Frequency of Use	Number of Respondents (N=348)	Percentage (%)
Balance Enquiries and Downloading Bank Statements	Never	47	13.5
	Once a year	22	6.3
	Several times a year	33	9.5
	Once a month	45	12.9
	Several times a month	157	45.1
	Several times a week	29	8.3
	Several times a day	15	4.3
Fund Transfers	Never	106	30.5
	Once a year	26	7.5
	Several times a year	47	13.5
	Once a month	125	35.9
	Several times a month	28	8
	Several times a week	14	4
	Several times a day	2	0.6
Requesting Cheque books or Bank Certificates	Never	137	39.4
	Once a year	41	11.8
	Several times a year	114	32.8
	Once a month	39	11.2
	Several times a month	9	2.6
	Several times a week	6	1.7
	Several times a day	2	0.6
Paying Bills	Never	108	31
	Once a year	18	5.2
	Several times a year	42	12.1
	Once a month	152	43.7
	Several times a month	17	4.9
	Several times a week	9	2.6
	Several times a day	2	0.6
Request increase in credit card(s) limit or pay any balance due	Never	195	56
	Once a year	62	17.8
	Several times a year	53	15.2
	Once a month	20	5.7
	Several times a month	12	3.4
	Several times a week	4	1.1
	Several times a day	2	0.6
Payment of loans and mortgages' instalments	Never	214	61.5
	Once a year	41	11.8
	Several times a year	29	8.3
	Once a month	49	14.1
	Several times a month	10	2.9
	Several times a week	4	1.1
	Several times a day	1	0.3

6.3 Descriptive Analysis of Behavioural Intention towards Usage of Internet Banking Services

As seen in Table 3, the respondents' intention to use Internet banking was measured by four items. According to statistical descriptions of behavioural intention, BI4 comprises the largest mean score with a value of 5.71 (1.21) followed by BI1 (5.68; 1.23) and BI3 (5.61; 1.28). The mean score of BI2 was the lowest one by value of 5.53 (1.30). In total, the average mean score for all behavioural intention items was 5.64 (1.25) (see Table 3).

Table 3: Descriptive Statistics (Mean and Standard Deviation) Measurement Items of Behavioral Intention

Constructs	Item	Mean	Standard Deviation
Behavioural Intention	BI4	5.71	1.21
	BI1	5.68	1.23
	BI3	5.61	1.28
	BI2	5.53	1.30
	Average	5.64	1.25

6.4 Demographic Differences on Customers' Perceptions Relating to their Behavioural Intention and Usage Behaviour

The main findings of the ANOVA test show that there are significant differences in Jordanian banking customers' perceptions on intention that could be attributed to age ($F = 3.192$, $p = 0.008$), education ($F = 4.708$, $p = 0.000$), computer experience ($F = 12.493$, $p = 0.000$) and Internet experience ($F = 10.657$, $p = 0.000$) Yet, both gender and income do not reflect any significant differences on the Jordanian customers' perception on intention to use IB.

Table 4: ANOVA for Examining Influence of Demographics on Behavioural Intention and Use Behaviour

Demographic Factors	Behavioural Intention		Use behaviour	
	F-value	P-value	F-value	P-value
Age	3.192	0.008	2.452	0.035
Gender	0.0002	0.988	0.088	0.766
Income Level	1.062	0.382	2.820,	0.016
Education Level	4.708	0.000	2.864	0.015
Computer Experience	12.493,	0.000	4.049	0.002
Internet Experience	10.657	0.000	7.195	0.000

With regard to the customers' perception of the actual use behaviour, except gender, all demographic factors [age ($F = 2.452$, $p = 0.035$); income ($F = 2.820$, $p = 0.016$); education ($F = 2.864$, $p = 0.015$); computer experience ($F = 4.049$, $p = 0.002$); Internet experience ($F = 7.195$, $p = 0.000$)] reflect a significant differences in the

Jordanian customers' perception on the use behaviour of IB. The statistical findings also highly supported a significant relationship between customers' intention and actual use behaviour ($F = 8.45$, $p = 0.000$).

7. Discussion

According to the yielded results of the current study, it was evident that both Jordanian customers' perception on intention and use of IB can be significantly different according to demographic variables. Accurately, age, educational level, computer experience and Internet experience were able to reflect significant differences on customers' perception of both behavioral intention and actual use behaviour as well. Yet, there were no significant differences among the respondents' perception on intention and actual use behaviour that could be attributed to gender.

It is also worth mentioning that both aspects of customers experience with technology: Internet and computer were the most significant factors reflecting differences on the Jordanian customers' perception on the behavioural intention and actual use behaviour of IB. This could be attributed to the particular nature of IB which requires a certain level of knowledge and skill to effectively use such systems which, in turn, explains the crucial role of technology experience in determining the customers' intention; and of IB. Such findings are parallel with results of other studies that have addressed the important role of technology experience (i.e. Curran et al., 2003; Jayawardhena et al., 2007; Tan and Teo, 2000).

Education level was also noticed to be the second strongest factor determining a significant difference on the customers' perception of both behavioural intention and actual use behaviour. In different words, the behavioural intention and use behaviour were noticed to be able to reach their highest level among those customers who have a higher educational degree such as a Bachelor's Degree or above. This is in line with prior studies; they argued that the people with a higher educational level are more likely to have self-confidence in their ability and knowledge to cope with new systems (Dwivedi and Lal, 2007; Proença and Rodrigues, 2011). By the same token, the respondents' perception on intention and usage of IB were found to be significantly different according to the age differences. Theoretically, several studies have supported the impacting role of age in this regard (i.e. Dean, 2008; Meuter et al., 2005; Venkatesh et al., 2003; 2012). Such a relationship to be reasoned with is the fact that the ability and customers' perception and attitudes towards technology are

more likely to be different from one age category to another; whilst the younger generation seem to be more motivated to adopt the new technology, seem to be more content to maintain their habitual behaviour and negatively perceive the introduction of the new technology (Dean, 2008; Ding et al., 2007; Simon and Usunier, 2007).

The role of income level was noticed to be fluctuating factor. There was no significant difference on the customers' perception on intention that could be accountable to income; perception on use behaviour was significantly different according to income. Most of the banks in Jordan are freely introducing the Internet banking applications for their customers. Therefore, it could be articulated that Jordanian customers are not concerned about the financial issues in formulating their decision to adopt or reject IB. Yet, in the case of actual use behaviour, it could be argued that by increasing the income level of customers, their need to conduct a variety of banking services is more likely to increase. This could explain why the higher income people need more to use Internet banking in order to attain the required financial services. Such results are in line with Al-Ashban and Burney (2001), Kolodinsky et al., (2004), Flavián et al., (2006) and others who confirmed the important role of income on the customers' adoption of online banking channels.

Finally, the yielded results went against what has been hypothesised regarding the role of gender which was not able to explain any significant difference in both customers' perception on behavioural intention and actual use behaviour. Lee et al. (2010), Gan et al. (2006) and Dabholkar et al. (2003) acknowledged there are no substantial gender variations in the customer propensity and utilisation of different kinds of SST channels. This could, therefore, be a return to the fact that women worldwide are more engaged nowadays over the business area and have equal chances to have a job, education level, and income. And, accordingly, the differences between male and female are more likely to vanish (Dabholkar et al., 2003; Gan et al., 2006; Lee et al., 2010).

7.1. Contribution to Theory and Practice

Having studied the impacting role of the demographic factors on Jordanian customers' intention and use of a novel technology (i.e. Internet banking), the current study represents a substantial contribution to existing knowledge regarding online banking and the technology acceptance area in general. Initially, this study was able to comprise a fundamental contribution via integrating the related literature on demographic factors and their influences on the customers' perception on behavioural

intention and use of IB. As well as, an empirical examination of a subset of the main demographic factors (i.e. age, gender, educational level, income level, and technology experience) gives a clue to how customers' reactions and behaviour could be different from each category to another. In addition, it shows the extent of how much the results regarding these demographic factors are comparable or different in comparison with the findings of other studies that have tested the impact of these factors on the customers' intention and use of IB.

From the practical perspective, the main descriptive statistics of usage behaviour gives the Jordanian banks a sign explaining the degree of acceptance of these technologies over the Jordanian market. Consequently, this study realised early on that an empirical study in this regard could alert the Jordanian banks to choose the most suitable marketing strategy that will help to reach an effective implementation and use of IB by the Jordanian customers. For instance, the statistical results (mean and standard deviation) of behavioural intention clearly imply that most of the respondents have a higher willingness to use IB which, in turn, could be considered as a worthwhile potential and may interest adopters (Dwivedi and Irani, 2009). In addition to this, most of them enjoy an adequate level of education and experience with the Internet and the computer; moving them to be actual users of IB will not be expensive and difficult (Akinci et al., 2004).

According to the statistical results, it seems that the respondents' intention and use of IB are strongly correlated with the technology experience. Accordingly, banks should concentrate in developing customers' skills, experience and knowledge to use IB effectively. In this respect, according to Taylor and Todd (1995) and Simintiras et al. (2014), conducting an effective training programme could play a crucial role not only in motivating customers to use IB but also in contributing to the effectiveness and efficiency of using such a system. Furthermore, customers seem to be largely different in their response to IB as a result of their age, education, and income level. Therefore, an effective market segmentation strategy should be conducted to effectively connect with each kind of customer.

8. Conclusion

This study was conducted to empirically examine whether Jordanian customers' perceptions on intention and use of Internet banking services varies according to their demographic characteristics. This study considered a subsect of demographic factors:

age, gender, income, education, and technology experience. The data required in the current study was collected using a self-administered questionnaire allocated to a convenience sample of Jordanian banking customers. The main statistical results indicated that the demographic factors of Jordanian consumers (age, income, education, and technology experience) were able to reflect significant differences on the customers' perception on intention and use of IB. Yet, gender was not able to account for any significant difference in the customers' perception on behavioural intention and use of IB.

8.1. Limitations and Future Research Directions

The data of the current study was obtained by using a convenience sample of Jordanian banking customers in only two Jordanian cities (Amman and Al-Balqa`) which, in turn, could negatively reflect on the results generalisability across other cities. Accordingly, future studies in Jordan should expand to the whole of the geographical coverage by including other cities and covering both urban and rural areas.

The sample description also showed that the largest segment of the respondents in the current study were young, have a medium-sized income, well-educated, and have adequate experience with the computer and Internet. Therefore, this raises concerns regarding the applicability of the results for other segments of the current population that have different characteristics (e.g. age, income, education level, gender, and technology experience).

By the same token, the impacting role of the national culture on the Jordanian customers' intention and use of SSTs was not measured in the current study. In essence, examining the aspects related to the prevailing culture (e.g. masculinity, femininity, collectivism, individualism, uncertainty avoidance, and power distance) could be more useful to know more on how customers formulate their intention, behaviour, and beliefs towards IB.

References

AbuShanab, E., Pearson, M. and Setterstrom, A. J. (2010). Internet banking and customers' acceptance in Jordan: The unified model's perspective. *Communications of the Association for Information Systems*, *26*(1), 493-524.

Akhlaq, A. and Ahmed, E. (2013). The effect of motivation on trust in the acceptance of internet banking in a low income country. *International Journal of Bank Marketing*, *31*(2), 115-125.

Akinci, S., Aksoy, S. and Atilgan, E. (2004). Adoption of internet banking among sophisticated consumer segments in an advanced developing country. *International Journal of Bank Marketing*, *22*(3), 212-232.

Alalwan, A., Dwivedi, Y. K. and Williams, M. D. (2014). Examining factors affecting customer intention and adoption of Internet banking in Jordan. In *Proceedings of United Kingdom Academy of Information Systems UKAIS Conference*, 7th-9th April 2014, Oxford, UK.

Al-Ashban, A. A. and Burney, M. A. (2001). Customer adoption of Telebanking technology: The case of Saudi Arabia. *International Journal of Bank Marketing*, *13*(5), 191-201.

Al-Rfou, A. N. (2013). The usage of Internet banking evidence from Jordan. *Asian Economic and Financial Review*, *3*(5), 614-623.

Al-Smadi, M. O. (2012). Factors affecting adoption of electronic banking: An analysis of the perspectives of banks' customers. *International Journal of Business and Social Science, 3*(17), 294-309.

Al-Somali, S., Gholami, R. and Clegg, B. (2009). An investigation into the acceptance of online banking in Saudi Arabia. *Journal of Business Research*, *29*(2), 130-141.

Baabdullah, A. M., Dwivedi, Y. K., and Williams, M. D. (2014) Adopting An Extended UTAUT2 To Predict Consumer Adoption Of M-Technologies In Saudi Arabia. UK Academy for Information Systems Conference Proceedings 2014. Paper 5.

Bhattacherjee, A. (2012). *Social science research: Principles, methods, and practices*. (2nd Ed.). Florida, USA: AnolBhattacherjee.

Bitner, M. J., Brown, S. W. and Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, *28*(1), 138-149.

Brislin, R. (1976). Comparative research methodology: Cross-cultural studies. *International Journal of Psychology*, *11*(3), 215-229.

Burgess, R. (1986). *Key Variables in Social Investigation*. London: Routledge.

Campbell, D. and Frei, F. (2009). Cost structure, customer profitability, and retention implications of self-service distribution channels: Evidence from customer behaviour in an online banking channel. *Management Science*, *56*(1), 4-24.

Curran, J. M. and Meuter, M. L. (2005). Self-service technology adoption: Comparing three technologies. *Journal of Services Marketing*, *19*(2), 103-113.

Curran, J. M. and Meuter, M. L. (2007). Encouraging existing customers to switch to self-service technologies: Put a little fun in their lives. *Journal of Marketing Theory and Practice*, *15*(4), 283-298.

Curran, J. M., Meuter, M. L. and Surprenant, C. F. (2003). Intentions to use self-service technologies: A confluence of multiple attitudes. *Journal of Service Research*, *5*(3), 209-224.

Dabholkar, P. A., Bobbitt, M. L. and Lee, E. J. (2003). Understanding consumer motivation and behavior related to self-scanning in retailing: Implications for

strategy and research on technology based self-service. *International Journal of Service Industry Management*, *14*(1), 59-95.

Dean, D. H. (2008). Shopper age and the use of self-service technologies. *Managing Service Quality*, *18*(3), 225-238.

DeYoung, R., Lang, W. W. and Nolle, D. L. (2007). How the Internet affects output and performance at community banks. *Journal of Banking and Finance*, *31*(4), 1033-1060.

Dimitriadis, S. and Kyrezis, N. (2011). The effect of trust, channel technology, and transaction type on the adoption of self-service bank channels. *The Service Industries Journal*, *31*(8), 1293-1310.

Ding, D. X., Verma, R. and Iqbal, Z. (2007). Self-service technology and online financial service choice. *International Journal of Service Industry Management*, *18*(3), 245-268.

Dwivedi, Y. K. and Irani, Z. (2009). Understanding the adopters and non-adopters of broadband. *Communications of the ACM*, *52*(1), 122-125.

Dwivedi, Y. K. and Lal, B. (2007). Socio-economic determinants of broadband adoption. *Industrial Management & Data Systems*, *107*(5), 654-671.

Dwivedi, Y. K., Choudrie, J. and Brinkman, W. P. (2006). Development of a survey instrument to examine consumer adoption of broadband. *Industrial Management and Data Systems*, *106*(5), 700-718.

Eriksson, K., Kerem, K. and Nilsson, D. (2005). Customer acceptance of Internet banking in Estonia. *International Journal of Bank Marketing*, *23*(2), 200-216.

Finch, J. (1986). "*Age".* In R. Burgess, (Ed.), *Key Variables in Social Investigation*, London: Routledge.

Flavián, C., Guinaliu, M. and Torres, E. (2006). How bricks-and-mortar attributes affect online banking adoption. *International Journal of Bank Marketing*, *24*(6), 406-423.

Gan, C., Clemes, M., Limsombunchai, V. and Weng, A. (2006). A logit analysis of electronic banking in New Zealand. *International Journal of Bank Marketing*, *24*(6), 360-383.

Hair Jr., J. F., Black, W., Babin, B., Anderson, R. E. and Tatham, R. (2006). *Multivariate data analysis*. (6th Ed.). New Jersey: Prentice Hall.

Hung, C. S., Yen, D. C. and Ou, C. S. (2012). An empirical study of the relationship between a self-service technology investment and firm financial performance. *Journal of Engineering and Technology Management*, *29*(1), 62-70.

Jaruwachirathanakul, B. and Fink, D. (2005). Internet banking adoption strategies for a developing country: The case of Thailand. *Internet Research*, *15*(3), 295-311.

Jayawardhena, C., Wright, L. T. and Dennis, C. (2007). Consumers online: Intentions, orientations and segmentation. *International Journal of Retailing and Distribution Management*, *35*(6), 515-526.

Kesharwani, A. and Bisht, S. S. (2012). The impact of trust and perceived risk on Internet banking adoption in India: An extension of technology acceptance model. *International Journal of Bank Marketing*, *30*(4), 303-322.

Kolodinsky, J. M., Hogarth, J. M. and Hilgert, M. A. (2004). The adoption of electronic banking technologies by US consumers. *The International Journal of Bank Marketing*, *22*(4), 238-259.

Laukkanen, P., Sinkkonen, S. and Laukkanen, T. (2008). Consumer resistance to Internet banking: Postponers, opponents and rejectors. *The International Journal of Bank Marketing*, *26*(6), 440-455.

Lee, H., Cho, H. J., Xu, W. and Fairhurst, A. (2010). The influence of consumer traits and demographics on intention to use retail self-service checkouts. *Marketing Intelligence & Planning, 28*(1), 46-58.

Liao, S., Shao, Y., Wang, H. and Chen, A. (1999). The adoption of virtual banking: An empirical study. *International Journal of Information Management, 19*(1), 63-74.

Martins, G., Oliveira, T. and Popovic, A. (2014) Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application. *International Journal of Information Management, 34*(1), 1-13.

Meuter, M. L., Bitner, M. J., Ostrom, A. L. and Brown, S. W. (2005). Choosing among alternative service delivery modes: An investigation of customer trial of self-service technologies. *Journal of Marketing, 69*(2), 61-83.

Migdadi, Y. K. A. (2012). The developing economies' banks branches operational strategy in the era of e-banking: The case of Jordan. *Journal of Emerging Technologies in Web Intelligence, 4*(2), 189-197.

Morgan, D. H. J. (1986). "Gender", In R. Burgess, (Ed.), *Key Variables in Social Investigation*. London: Routledge.

Nilsson, D. (2007). A cross-cultural comparison of self-service technology use. *European Journal of Marketing, 41*(3/4), 367-381.

Porter, C. E. and Donthu, N. (2006). Using the technology acceptance model to explain how attitudes determine Internet usage: The role of perceived access barriers and demographics. *Journal of Business Research, 59*(9), 999-1007.

Proença, J. and Rodrigues, M. A. (2011). A comparison of users and non-users of banking self-service technology in Portugal. *Managing Service Quality, 21*(2), 192-210.

Riffai, M. M. M. A., Grant, K. and Edgar, D. (2012). Big TAM in Oman: Exploring the promise of on-line banking, its adoption by customers and the challenges of banking in Oman. *International Journal of Information Management, 32*(3), 239-250.

Rogers, E.M. (1995), *Diffusion of innovations*. New York, NY: The Free Press,

Rogers, E. M. (2003). *Diffusion of innovations* (5th Ed.). New York, NY: The Free Press.

Sathye, M. (1999). Adoption of Internet banking by Australian consumers: an empirical investigation. *International Journal of Bank Marketing, 17*(7), 324-334.

Shih, Y. and Fang, K. (2004). The use of a decomposed theory of planned behaviour to study internet banking in Taiwan. *Internet Research, 14*(3), 213-223.

Simintiras, A. C., Dwivedi, Y. K. and Rana, N. P. (2014). Can marketing strategies enhance the adoption of electronic government initiatives? *International Journal of Electronic Government Research (IJEGR), 10*(2), 1-7.

Simon, F. and Usunier, J. C. (2007). Cognitive, demographic and situational determinants of service customer preference for personnel in-contact over self-service technology. *International Journal of Research in Marketing, 24*(2), 163-173.

Tan, M. and Teo, T. S. (2000). Factors influencing the adoption of Internet banking. *Journal of the Association for Information Systems, 1*(5), 1-42.

Taylor, S. and Todd, P. A. (1995). Assessing IT usage: The role of prior experience. *MIS Quarterly, 19*, 561-570.

Teo, T. S., Lim, V. K. and Lai, R. Y. (1999). Intrinsic and extrinsic motivation in internet usage. *Omega*, *27*(1), 25-37.

The Gulf Today. (2012). *Jordan's Internet users stand at 3.535 million: August 19, 2012*. Available from: http://gulftoday.ae/portal/cf77a112-4874-4abe-bba8-4265dc1aa8c9. aspx. Accessed: 08.01.14.

The Jordan Times. (2013). Mobile phone penetration projected to reach 200%. Available from: http://jordantimes.com/mobile-phone-penetration-projected-to-reach-200. Accessed: 25.12.13.

Venkatesh, V. and Morris, M. G. (2000). Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behaviour. *MIS Quarterly, 24*(1), 115-140.

Venkatesh, V., Thong, J. Y. L. and Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, *36*(1), 157-178.

Venkatesh, V., Morris, M., Davis, G. and Davis, F. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, *27*(3), 425-478.

Wang, Y. S., Wang, Y. M., Lin, H. H. and Tang, T. I. (2003). Determinants of user acceptance of internet banking: An empirical study. *International Journal of Service Industry Management, 14*(5), 501-519.

Yoon, C. (2010). Antecedents of customer satisfaction with online banking in China: The effects of experience. *Computers in Human Behavior, 26*(6), 1296-1304.