**FEMALES ONLINE! Examination of female consumer behaviour in Bahrain online banking environment**

**Introduction**

In 2011 it was reported that Bahrain was the country with the highest increase in absolute Information and Communication Technology (ICT) Development Index (IDI) (International Telecommunication Union, 2012). In 2011 the number of internet users in Bahrain climbed from 55% in 2010 to 77%. It was noted that 90% of the Bahraini households own a computer and 77% were connected to the internet (International Telecommunication Union, 2012). With the increased access to Internet and improved internet infrastructure, internet slowly but surely penetrates Bahraini consumers’ lifestyles. Technology plays an important role in Bahrain, especially within the banking industry, which is very information intensive and a sensitive activity in nature. This industry relies heavily on information technology (IT) to acquire, process, and deliver the information to all involved parties. Not only is IT critical in the processing of information, it is the current tool for banks to differentiate their products and services. Bahraini banks find that they have to constantly be creative and up to date with the technology to retain their customers by providing them with a unique service that would keep them satisfied particularly with strong competition from other international banks which opened branches in Bahrain. The aim of this paper is to examine the motivation and perception of Bahraini female consumers in adopting online banking services. To the best of our knowledge, there have been no empirical studies which examine Bahraini female consumer behaviour in terms of the adoption of internet banking. Therefore, this study proposed and tested research hypotheses which were developed based upon the modification of Davis, Bagozzi and Warshow (1989)'s Technology Acceptance Model (TAM).

**Women banking in Bahrain**

In the recent years, there has been an increasing evidence of women empowerment and access to education and employment in Bahraini society (Toumi, 2011; Al Obaidli, 2012; Al Gharaibeh, 2012; Al-Najjar, 2005; Ahmed, 2010). In 2010, women participation in workforce rose to 32.1% (Bahrain Economic Development Board, 2010). Economic empowerment of women is part of the "Bahrain Economic Vision 2030", a broad initiative of development of the country unveiled in 2008. Bahraini women account for 70% of all university graduates (Bahrain Economic Development Board, 2009). Thus, it is seen that women's rising education attainments as a resource for the country's development. More lenient procedures that allowed women to process all paperwork themselves instead of male representatives and access to financial loans have increased female entrepreneurship (Ahmed, 2010). It was reported that in 2008 more than one third of Bahraini businesses were owned by women (The Economist, 2008). Generally, Bahrain women can open their own bank accounts and manage their income (Al-Najjar, 2005). However, because of the increased access to employment and entrepreneurship, banking service will have more important role in their life than ever before. Due to the Islamic cultural environment in Bahrain, women are designated specific queues to use when they wish to conduct their banking transactions at the bank branch. In the case of the few Islamic banks operating in Bahrain, women have different entrances to the banking branch where they will be served by mainly female banking staff. The major purpose of this segregation is to emphasize the Islamic prospective of not allowing direct interaction between males and females in accordance with the guidance of Islamic instructions.

**Technology Acceptance Model (TAM)**

One of the most utilized models in studying information system acceptance is the Technology Acceptance Model (TAM) (Davis et al., 1989; Mathieson, 1991; Davis & Venkatesh, 1996;
Gefen & Straub, 2000; Al-Gahtani, 2001) in which system use (actual behaviour) is determined by Perceived Usefulness (PU) and Perceived Ease of Use (PEU) relating to the attitude toward use that relates to intention and finally to behaviour (Pikkarainen, Pikkarainen, Karjalouto, & Pahnila, 2004). The Technology Acceptance Model (Davis, 1989; Davis et al., 1989) focuses on the attitudinal explanations of intention to use a specific technology or service. It includes five concepts – perceived user friendliness or ease of use (PEU), perceived usefulness (PU), which both are affected by external variables, attitudes towards use, behavioural intention to use and the actual system use. The model indicated that the degree to which online banking technology is easy to use, as perceived by a bank customer, affects his/her perception of how useful the technology would be as well as his/her attitude towards using the technology. Attitude is also directly influenced by the bank customer’s perceived usefulness of the technology.

Conceptual framework and hypotheses
A specific framework which is aimed at measuring the intention of Bahraini female consumers in adopting online banking services has been developed. In this study Davis’s TAM framework is adopted but attitudes are excluded in this research and intention to use the online banking services is used as a moderator, to measure the usage behaviour. Variables such as perceived ease of use, perceived usefulness and perceived cultural influences are measured in terms of their actual influence on the intention to use the system. Bank customers in Bahrain have already been exposed to a number of technological advances not only in the banking sector such as the ATMs and telephone banking, but in many aspects of their everyday’s life. Opinions and intentions most probably have been already made and decisions taken whether to adopt these technologies or not. However, online banking services in Bahrain are relatively new and many customers may have never tried this service. As the sample used in this study is only cross-sectional and not longitudinal, it would be assumed that intentions at the point in time in which the respondent indicated an intention to use would be sufficient to predict the actual usage. In addition, this assumption is in agreement with the hypotheses by Davis et al. (1989) that were empirically confirmed in studies of TAM that usage intentions are predictors of actual use (Burton-Jones & Hubona, 2005; Agarwal & Prasad, 1999; Davis et al., 1989).

Perceived Ease of Use (PEU) and Perceived Usefulness (PU)
Davis (1989, p. 320) defined Perceived Ease of Use as "the degree to which a person believes that using a particular system would be free from effort", while he defined Perceived Usefulness as “the degree to which a person believes that using a particular system would enhance his or her job performance”. Several researchers have replicated Davis’s original study to provide empirical evidence on the relationships that exist between usefulness, ease of use and system use (Davis et al., 1989; Adams, Nelson and Todd, 1992; Hendrickson, Massey, & Cronan, 1993; Segars & Grover, 1993). Online banking services allow customers to access their banking accounts from any location at any time of the days and ability to check their accounts easily. This is particularly convenient for consumers in general and females in particular in conservative societies as this will minimize the need for them to visit their bank branches to conduct simple transactions. Therefore, the above leads to the following hypotheses:

H1a Perceived Ease of Use of online banking will have a significant positive influence on intentions to use online banking.

H1b Perceived Usefulness of online banking will have a significant positive influence on intentions to use online banking.
In addition, researchers have found that perceived usefulness have the strongest influence when compared to perceived ease of use (Davis et al., 1989; Keil, Beranek, & Konsynski, 1995; Satzinger & Olfman, 1995; Taylor & Todd, 1995; Igbaria, Parasuraman, & Baroudi, 1996). According to Davis, there is a direct effect of perceived ease of use on perceived usefulness. Therefore, in this study perceived usefulness is hypothesised to be influenced by perceived ease of use.

**H1**
Perceived Ease of Use of online banking will have a significant positive influence on the Perceived Usefulness of online banking services.

**Individual differences**

Agarwal and Prasad (1999, p. 362) defined the term individual differences as user factors that include traits such as personality and demographic variables as well as situational variables that account for differences attributable to circumstances such as experience and training. Information technology can be found as the base for all those technologies and individuals with different backgrounds, personalities and past experiences are being introduced to these technologies. To ensure a successful adoption of these technologies, an understanding of those individual differences would help marketers target their strategies at the right segment of the population when promoting their products and services. The construct of risk aversion is of particular importance to online banking environment and customers as banking in general is a very information sensitive industry. When considering online banking the utility gains of potential increased efficiency, cost savings and fiscal control become overshadowed with perceived risk and uncertainty of the internet as an unsecured communications medium (Featherman & Pavlou, 2002, p. 1035). Vellido, Lisboa and Meehan (2002) found that online purchase behaviour was best predicted by consumer risk perception of shopping on the internet. A study which investigated whether the gender of the consumers affects the potential to be more responsive to online business reported high levels of concern over security issues and little difference between the genders (Kolsaker & Payne, 2002). Agarwal and Prasad (1999) argued that user capabilities are usually a result of demographic (user’s age, educational background, income, or personality trait (risk aversion, self efficacy) or situational (experience with computers, training). Therefore, the following hypotheses are proposed:

**H2a**
Individual differences will have a significant influence on perceived ease of use of online banking in terms of self efficacy, risk aversion, age, income and education.

**H2b**
Individual differences will have a significant influence on perceived usefulness of online banking in terms of self efficacy, risk aversion, age, income and education.

**Perceived Cultural Influences (PCI)**
The transformations in infrastructure and the industrialization and modernization that are taking place in Bahrain are more or less superimposed on the same traditional, socio-cultural system. It could be argued that modern and traditional can and do co-exist in what is called the ‘prismatic society; a society no longer totally traditional but not western either. But still the traditional way of doing things is deeply-rooted inside us and is difficult to change. Although women are everywhere in the society, not only at home, they are still looked at as a minority due to the cultural structure of the society. Even if we attempt to consider Bahrain as a fairly modern society with high rate of literacy for female (89.4%) (US Commercial Service, 2012), in comparison to its neighbouring Gulf countries, it would be highly presumptuous to classify it as a fully open society who would embrace new technology instantly. Therefore, the following hypothesis is warranted to be investigated:

**H3**
Perceived cultural influences will have significant influence on the intentions to use online banking in terms of observing religious and cultural aspects of Bahrain.
Research methods
A cross-sectional survey consisting of a total of 150 questionnaires were used to gather the necessary data for this research study with a mixture of Likert-scale statement and questions about experience with and attitude toward online banking services in Bahrain. Only 95 valid responses were considered for the purpose of this study. The sample population came from working females at different sectors of the Bahraini business market. Those sectors included both public and private sectors such as Ministry of Health, Ministry of Education, University of Bahrain, Bahrain Petroleum Company, Banks and five small private businesses owned by female. Housewives were excluded from this survey on the assumption that some of them may not have a stable monthly source of income that is credited on regular basis to their bank accounts. The inclusion criteria used in this study were: working Bahraini females, 18 years of age or more, and salary credited directly in a bank. The questionnaire was divided into three parts. The first part collected personal data of the respondent; the second part concentrated on investigating the degree of awareness of online banking services and other general questions such as accessibility to the bank branch. The third part consisted of 7-point Likert scale statements varying from strongly disagree to strongly agree. Those statements were further divided into 5 subsections representing each construct of the proposed model.

Findings and analysis
Out of the 95 questionnaires analyzed, about half of the respondents were current users of online banking services (53%). Those who were already users indicated that mainly bank personnel were the main driver for their adoption of these services (54%), while the influence of friends and relatives was the case with only 22% of the users. Most of the users emphasized the importance of banks’ promotional campaigns in promoting their online services to encourage customers to adopt (81%). The respondents varied in their personal characteristics as 58% of them were married with an average monthly income of BD600 (about 857 sterling pounds). The majority of them fell within the age group of 30 – 34 years of age and had university education of four years or more (43%). When respondents were asked about their intention to use online banking services in the future (in the case of nonusers) or continue usage of their services, over half of them stated that they will do so (53.8%). Although few of them indicated that they will not adopt this service in the future (15.1%), one third of the participants were unsure if they will do so (31.2%). Analysis of data collected to test the proposed model was carried out in two parts. First reliability of the theoretical variables perceived ease of use (PEU), perceived usefulness (PU), perceived risk (PR), perceived cultural influences (PCI) and self efficacy (SE) were established. Those proved to be varying from good to very good and the lowest reliability was found for the culture variable (PCI). In the second part of the analysis hypotheses were tested. H1 was tested by correlation and the coefficient was found to be very high at 0.706 which is highly significant. This proves that our H1 is supported. H3, H1a and H1b were tested by linear multivariate regression using SE as dependent and PCI, PEU and PU as explanatory. This analysis support H1a (PEU), but does not support both H3 (PCI) and H1b (PU). However, because of the support for H1, there was a problem of collinearity between PEU and PU, to avoid further problem there was a need to drop one of the correlated variables from the regression. PU was dropped and then H3 and H1a were tested together. It was found that collinearity was not a significant issue then but H3 and H1b were not supported. For H2a and H2b, correlation showed various associations between these variables and between differences and PEU, PU and SE. This indicates partial support of H2a and H2b. The first regression regresses PEU on age, income, risk and education. The regression only indicated risk as a factor, but there were low tolerance levels for age and income. Another regression
took out income to test the collinearity and this produced the result that PEU depends on perceived risk (PR) and age. A third regression replaced age with income and this had a similar effect. Because there was a problem of collinearity between age and income in these two hypotheses, income was taken out leaving age as the key explanatory variable, which showed that PEU depends on risk, age and income. Therefore, H2a was supported noting that education is not a factor. The same was carried out for PU, but this suggested that age, income and education do not explain PU, only risk does. Therefore, there was partial support for H2b. In general, the data collected produced reliable scales. The fact that only half the respondents were users runs the risk of instability in correlation estimate (only 49 cases). However, there is still of a ratio of about 10:1 cases to variables in the analysis, so over specification of the regression models is not an issue. Therefore, it would be reasonable to establish confidence in the suitability of the data for the analyses performed. The following figure illustrates the findings of this study.

**Conclusion, managerial implications, and limitation**

This study showed that perceived risk is a key driver for women in Bahrain to adopt online banking. PU depends on risk as well as PEU as it will be perceived as useful if it is easy to use and seen as secure medium to transact. Perceived risk actually appeared to be a reflection of perceived online banking system security. PEU depends on risk and some other factors notably age and income. When it comes to the question of what drives intention to use online banking system, it is actually down to PEU. If it is not easy to use, then it is not going to get used. Culture showed no significance in affecting females’ intention to adopt technology and they are keen to be looked at as an equal when it comes to innovation usage. Online banking is growing rapidly and consumers are responding to the convenience and capabilities of financial services at the touch of a button. The banks must ensure that services to new users must appeal to women as the proportional gap between male and female users is closing down. Banks need to start adjusting their consumer marketing strategies to reflect the shift in user characteristics and that consumers’ interest in online banking revolves around ease of use. In addition, consumers are worried about the security of online banking. As the case with any research, there are some limitations to this study. Even though it has been suggested that usage intention can be used as a predictor of actual usage, it must be recognised that there are other factors that may influence customers’ decision to adopt a technology which have not been captured by TAM framework (Bagozzi, 2007). Furthermore, the results of this study might have been different in a larger sample which is researched on longitudinal basis than the cross sectional data gathered here. However, time and resources constraints limited the feasibility of using longitudinal study although it would have been more helpful in providing insight into understanding the attitudes and perception of online banking customers as they evolve over time. In addition, online banking is still new and there is a scarcity of information on its use in third world countries in general and the Middle East in particular. Therefore, relevant literature inevitably was utilized from countries such as the United States and Europe which may not reflective of the current situation in Bahrain.
References


Bagozzi, R.P. (2007). The legacy of the technology acceptance model and a proposal for a paradigm shift. *Journal of the Association for Information Systems, 8*(4), 244-254


