Antecedents and Consequences of the Risk Taking Behavior of Mobile Commerce Adoption in Lebanon

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Abstract

This study was conducted to explore the attitude towards adopting M-commerce in Lebanon. There were just five specific questions to be answered:

1. What are the major characteristics of the selected group for the study?
2. Does using M-commerce differ among the selected group for the study?
3. Is the distributed questionnaire valid and reliable?
4. What is the relative importance of the independent variables to the proportion of variance accounted for in the dependent variable?
5. What are the direct and indirect causal effects of the independent variables on the dependent variable?

The sample of respondents were asked twenty Likert’s type questions that tapped five different areas (1) "Motives based on psychographics: Life Style and Hobbies", (2) "Perceived Ease of using M-commerce", (3) "Adopting M-commerce", "Perceived credibility" and, (5) “Experience”.

Factor analysis was carried out as a data reduction technique. Two statistical tests were conducted in order to determine the suitability of factor analysis. First, the Kaisers-Meyer-Olkin (KMO) measure of sampling adequacy score of 0.802 was well above the recommended level of 0.5. Second, the Bartlett test of sphericity was statistically significant (Chi Square = 5832.547, P [smaller] 0.01).

Two statistical analysis, Chi-Square and path analysis, were used. Factor analysis and reliability tests were used to establish the validity and reliability of the measuring instrument (questionnaire). It is found that M-Commerce through mobile payment is related to age, income and average monthly payment bill.

Path analysis was used in this study to decompose the relationships between the dependent variable “Respondents Attitude Towards “Adopting M-Commerce” and the independent variables “Motive”, “Experience” and “Perceived Ease of Use”. The
results of this study suggest that the relationship between the independent variables and the dependent variable to be further studied in further research using a larger sample. Having larger sample seems to be crucial in conducting similar studies.

Even though the findings of this study rest upon empirical investigation, a noticeable limitation related to the research methodology must be acknowledged: the empirical results of the exploratory study are valid and limited only to the large convenient sample that was used in this study.

**General Background**

Electronic commerce is not a recent idea in Lebanon, for government in Lebanon has been trying to restructure and modernize its telecommunications sector since the end of the civil war in 1990. “The goal of the government was not simply to fix what was damaged by the war but rather to restructure and reform the telecommunications landscape, allowing the country to leapfrog into the twenty-first century and the information age,” (Jamali, 2003). The Economist Intelligence Unit 2003 reported that Lebanon “has one of the most developed internet markets in the Arab world,” and as a result there has been an increased interest in using e-commerce in Lebanon. Similar to other countries, ATM was the most frequently adopted channel, followed by internet banking and telephone banking. “Virtually all of the banks that offer electronic services allow customers to check the balances in their accounts, transfer funds between accounts, and order electronic bill payments” (Lee et al, 2003). But as information technology becomes more and more sophisticated, m-commerce becomes the natural extension of the classical e-commerce and the primary concern of this paper is to uncover potential factors that will encourage or prevent the adoption of m-commerce in Lebanon.

Aldin et al. (2004) defined electronic commerce as any type of business transaction through which the parties interact electronically instead of through physical

exchanges or direct physical contact. Lee and colleagues 2004 believe that internet is the revolutionizing tool that has radically altered the dynamics of commerce worldwide. Lately, m-commerce is the hottest new trend in business transactions which became possible due to the emergence of wireless and mobile technology.

M-commerce: is defined as the ability to conduct commerce, using mobile handheld devices. It is anticipated that m-commerce will establish a considerable future market worldwide. ARC group (1999) projected that worldwide wireless internet users will increase from the 96 million users in year 2001 to more than a billion in few years.

The table below shows the differences and similarities between e-commerce and m-commerce:

<table>
<thead>
<tr>
<th>Technology</th>
<th>E-Commerce</th>
<th>M-Commerce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>PC</td>
<td>Smartphones, pagers, PDAs,</td>
</tr>
<tr>
<td>Operating System</td>
<td>Windows, Unix, Linux</td>
<td>Symbian (EPOC), PalmOS, Pocket PC, proprietary platforms.</td>
</tr>
<tr>
<td>Presentation Standards</td>
<td>HTML</td>
<td>HTML, WML, HDML, i-Mode</td>
</tr>
<tr>
<td>Browser</td>
<td>Microsoft Explorer, Netscape</td>
<td>Phone.com UP Browser, Nokia browser, MS Mobile Explorer and other microbrowsers</td>
</tr>
<tr>
<td>Bearer Networks</td>
<td>TCP/IP &amp; Fixed Wireline Internet</td>
<td>GSM, GSM/GPRS, TDMA, CDMA, CDPD, paging networks</td>
</tr>
</tbody>
</table>


**Literature Review**

Based on review of literature, mobile technologies have gained great attention lately. The main value-adding features of m-commerce include flexibility, convenience, and ubiquity. Wireless value is likely to be a main driver for m-commerce. However, in
contrast to the wired methods of connecting with an information system, mobile devices have smaller display screens, not really comfortable methods for inputting data, limited processing power, lower bandwidth capabilities, and require greater security and user identification. (Zhang et al, 2003). “While these technologies may provides benefits and new opportunities for consumers they may also give rise to sharp practices that can affect vulnerable consumers;” for instance, the current uptake of mobile technology by young consumers and the relative inexperience of young people with online buying. The wireless technologies that lie behind m-commerce may result in a lot of privacy concerns because of the ability of collecting individualized and personal information through wired methods. Wireless technology makes it possible to collect locational information as well (Australian Competition and Consumer Commission, 2005).

Rogers’ diffusion of innovation theory is a well known model used in explaining user acceptance of new technologies. Rogers (1962) anticipated a model of the diffusion of innovations that included five product or service characteristics assumed to affect consumer acceptance of new products and services: relative advantage, compatibility, simplicity/complexity, observability, and trialability. Relative advantage is the extent to which customers regard a new product or service as different and better from its substitutes. Compatibility is the degree to which a new product or service is reliable and compatible with customer’s beliefs, needs, values, experiences, and habits. Simplicity is the degree to which a new product or service is easy to understand or use. Observability is the degree to which a new product or service is observable and communicable to consumers. Trialability refers to customers’ competence to test a new product or service.
Alavi and Joachimsthaler (1992) believed that mainly the four important characteristics that determine technology acceptance are cognitive style, personality, demographics, and user-situational variables.

Cognitive style is an expression used in cognitive psychology to explain the way people think, perceive and remember information, or their desired way of using such information to solve problems.

Personality refers to the cognitive and affective structure held by persons to facilitate adjustments to events, people, and situations. Some important personality traits are: need for achievement, degree of defensiveness, locus of control, and risk-taking propensity.

Demographic variables refer to individual characteristics such as age, education, and gender.

User-situational variables include training, experience, and user involvement.

Roger in 1995 stated that technology or innovation adopters are divided into five classes depending on their speed of uptake: innovators, early adopters, early majority, late majority, and laggards.

Some of the characteristics of each class of adopters include:

- Innovators: Brave individuals, educated, multiple info sources, and have greater tendency to take risk.
- Early Adopters: Respectable individuals, social leaders, and popular.
- Early Majority: Careful individuals, deliberate, and have many informal social contacts.
- Late majority: Skeptic individuals, lower socio-economic status, and will not
any new thing before others.

- Laggards: Traditional individuals, caring for old ways, and neighbors and friends are main source of information.

Previous research has shown that adoption of m-commerce provides an evidence that m-commerce appears to be beneficial to both customer and firms. Anckar 2002 in his investigation of the “Value Creation in Mobile Commerce: Findings from a Consumer Survey”, highlighted the importance of setting out from a consumer perspective when developing m-commerce strategies, proposing an analytical framework that can be used to assess whether, and in what ways, specific mobile services are likely to offer value for wireless internet users. He attempted to answer the following questions:

- What is the effect of value creation on mobile commerce usage?
- What is the effect of gender and age on m-services usage?
- What is the effect of consumer’s mobile value recognition on m-commerce usage? What is the effect of m-commerce on the overall increase of the internet commerce market?

To this end Anckar reported data by using a national consumer survey. They used a self-administered questionnaire which was mailed out to consumers. Respondents were instructed to indicate the likelihood on a 5 point scale. Anckar found out that:

- There is low willingness to use mobile services in general, but an exceptionally high willingness to use some applications.

Results did not support the supposition that m-commerce is likely to increase the overall volume of e-commerce significantly by penetrating into untapped markets.
In the study conducted by Nysveen and his team (2005), Nysveen, Pederson, and Thorbjornsen present an assessment of the way in which consumers use mobile chat services and the effect of gender. They wanted to answer: What is the effect of perceived expressiveness, enjoyment, usefulness, and ease of use on the intention to use mobile chat services between men and women? An extended adoption model based on the technology acceptance model and theory of reasoned action is applied in order to pinpoint the antecedents of intention to use mobile chat services and for revealing cross-gender differences. The hypotheses are tested on data from a survey of 684 users of mobile chat services. In other words, the survey was totally web-based and comparing it to the number of subjects clicking on the advertisement, the response rate was 43.6%. Biases are eliminated in the sample as a total of 684 respondents participated. The general internet population reflects the distribution of subjects in regards to age, education, and gender. Based on their data, the 3 researches showed that gender moderates the effect of perceived expressiveness on intention to use mobile chat services. Specifically, for expressiveness the results were in the opposite direction of what was hypothesized, and for ease of use and attitudes no differences in effect across gender were found. Therefore, the important determinants of intention to use by female users are social norms and intrinsic motives such as enjoyment. As the key drivers among men are extrinsic motives such as usefulness and expressiveness.

In the article, Linking Perceived Value and Loyalty in Location Based Mobile Services, Pura wanted to analyze the effect of perceived value dimensions (monetary, convenience, social, emotional, conditional, and epistemic value) on attitudinal and behavioral components on loyalty: commitment and behavioral intentions to use
location-based mobile service. The research model showing the hypothesized relationships is shown in Figure 1. Pura wanted to investigate: What is the effect of introducing new context relevant concepts that are needed in value based marketing towards perceived loyalty in location based on the mobile services? What is the effect of perceived value dimensions (monetary, convenience, social, emotional, conditional, and epistemic value) on attitudinal and behavioral components on loyalty: commitment and behavioral intentions to use location-based mobile services? Pura used online survey for users of a mobile location-based directory service (Fonecta Ltd.). Fonectas’ location-based service allows people to get the nearest service location by ordering the information with the help of a text message as shown in figure 3. Pura found out that:

- The behavioral intentions were most influenced by conditional value; the context, in which the service is used, followed closely by commitment and to some extent monetary value.
- Commitments can be enhanced through building emotional value and conditional value by focusing on offering fun service experiences in the right context.
- The influence of social and epistemic value was not significant (Pura, 2005).
Linking Perceived Value and Loyalty in Location Based Mobile Services.


Source et al (2005) conducted a research to examine the relative impact of age and attitude towards shopping online in forecasting the probability to shop and buy online. A survey was distributed to over 300 students and staff from a US university to study their online shopping and buying experiences for 17 products. The researchers investigated the following:

(1) What is the impact of age on searching for and purchasing products online?

(2) Do online shopping attitudes vary by age?

(3) What is the relative impact of age and attitudes in predicting online shopping and purchase behavior?

The results of the study show that older shoppers purchased as many products as younger shoppers, although they actually searched for fewer items than their younger counterparts. The unwillingness of older customers to spend the time and effort to shop for products online shows their less optimistic attitude towards internet shopping. The study shows that younger consumers were more expected to search online than older consumers. However, older consumers were more likely to buy when they had searched for the item online. Thus it is better to encourage older consumers to get online in the
first place, and need to tempt younger consumers to translate their shopping and browsing into actual purchasing.

Although many studies focused on technology development, few had explored the influence of culture over the success of IT deployment and adoption. Zakaria and Stanton (2003) believed that culture affects the adoption of new technologies and one has “to think globally but act locally.” What some people consider useful and meaningful in one culture may not be considered so in another. For instance, low-context societies such as USA, Germany, and Great Britain have greater concern for autonomy and privacy as compared to high-context societies such as Japan, China, and Saudi Arabia. Zakaria and Stanton believe that value has great influence on IT developments. For instance, an important cultural value in the Arab culture is collectivism in which Arabs are concerned about the common good (benefit to the culture) of any project before anything.

The study conducted by Lim and his team (2006), entitled “M-loyalty: Winning Strategies for Mobile Carriers” aimed at investigating the determinants of satisfaction and loyalty decisions in the use of mobile services. The purpose was two folds:

- The first purpose is to identify relevant dimensions of service quality in the mobile services context that consumers perceive in their service evaluations.

- The second purpose of the study is to identify relevant dimensions of consumers’ perceived value in the mobile services context. They attempted to answer:

  - What is the effect of high perceived performance on perceived value?
- What is the effect of perceived economic value on satisfaction?

- What is the effect of social value on consumer perceived value?

- What is the effect of perceived social value on the level of satisfaction in the use of mobile internet services?

- What is the effect of consumers’ positive attitude towards a service provider?

A research model was designed to identify multi-dimensions of mobile services quality and perceived value, and investigate their influence on satisfaction and loyalty. Structural equation modeling was employed to test hypothesis. A web-based survey was conducted to collect the data. The sample was general U.S. consumers who currently subscribe to a mobile service. The survey resulted in 81 percent click-through rate with no duplicated responses (i.e. respondents’ IP addresses were checked). Statistical analysis identified five distinct dimensions of mobile service quality, and their direct and indirect effects on economic value, emotional value on loyalty intention through satisfaction. Two dimensions of perceived value (i.e economic value, emotional value) had significant influences on customer satisfaction, and on loyalty. Also, the results show interrelationship between economic & emotional value.

In 2007, Vanessa Ratten and Hamish Ratten conducted a study of the social cognitive theory in technological innovations; this survey shed the lights on many important facts. They attempted to answer the question of: What are the effects and factors that influence youth’s intention to use WAP banking services in Australia?

The dependent variable is: intention to use WAP banking service by youth in Australia, while the independent variables: are exposure to WAP banking in the media;
exposure youth has to others engaging in WAP banking; youth’s expectations of the outcomes of WAP banking, levels of computer self-efficacy; the outcome value of the WAP service. The investigation is based on quantitative study of the youth market in Australia. Social cognitive theory is utilized to support a conceptual model that is empirically tested. The sample comprised 203 Australian youths between the age of 18 and 29 years old attending one of Brisbane’s major metropolitan universities in Australia. A 5 pages questionnaire was administered which included pre-existing scales with their reliability scores. The findings of the demonstrate shows that Australian youths are influenced by media exposure and outcome values (Kaufman, 1991).

In his research, on the consumers’ attitudes towards online and mobile banking in China, Laforet (2005) wanted to investigate the market status for online/mobile banking in China. With the recent and forecasted high growth of Chinese electronic banking, it has the potential to develop into a world-scale internet economy and requires examination. Laforet wanted to:

- Investigate the markets status of online and mobile banking in China.
- Identify the target customers for online and mobile banking.
- Understand the demographic characteristics of users and non users of electronic banking.
- Compare attitudes of users and non users towards electronic banking with respect to technology, security, convenience, prior personal banking experience and the product attributes and reference group’s influence. The major question to be answered was:

What is the effect of consumer behavior, attitude, motivation, and cultural
influence on the online and mobile banking usage in China? Laforet found out that:

- The results showed Chinese online and mobile bank users were predominantly males, not necessarily young and highly educated, in contrast with electronic bank users in the West.
- The issue of security was found to be the most important factor that motivated Chinese consumer adoption of online banking.
- Main barriers to online banking were perception of risks, computer and technological skills, and Chinese traditional cash-carry banking culture.
- The barriers to mobile banking adoption were lack of awareness and understanding of the benefits provided by mobile banking.

Wan and his colleagues conducted a piece of research in 2005 on customers’ adoption of banking channels in Hong Kong; this research showed several new results. The study sought to investigate factors that influenced Hong Kong bank customers’ adoption of four major banking channels, i.e. branch banking, ATM, telephone, banking, and internet banking. Specifically, it aimed to focus on the influence of demographic variables and psychological beliefs about the positive attributes possessed by the channels. A questionnaire was distributed to 314 bank customers. The question to be answered was: What is the effect of demographic factors on adoption of internet banking in Hong Kong?

The dependent variable is the adoption of internet banking channel in Hong Kong, while the independent variables are: gender, age, monthly household income, educational level, and occupation. The result of their study showed that males were more likely to use internet banking, adoption of internet banking was highest between
middle adulthood, and lower for younger or older customers, monthly household income was considerably associated with the adoption of internet banking, a positive relation between level of education and adoption of internet banking, and that adoption of internet banking was higher in the higher-level occupations.

Jaruwachirathanakul and Fink researched in 2005 the internet banking adoption strategies for a developing country in the case of Thailand; this review uncovered many significant conclusions. The objective of the paper is to identify the factors that encourage consumers to adopt internet banking services in Thailand and to use the study’s findings to develop strategies for banks on how to maximize the rate of adoption. The main question to be answered was: What are the effects and factors that influences internet banking adoption in developing countries like Thailand? The dependent variable is the adoption of internet banking in developing countries, while the independent variables are divided into (1) bank factors (perceived usefulness, adoption features, bank online features, and risk and privacy), (2) inhibiting factors (compatibility with the consumer's personal preferences, the external environment and Thai culture), and (3) moderating factors (age, gender, educational levels, income, internet banking experience. The study was based on a questionnaire research with a sample size of 600 achieved by sending questionnaire to 15 people in each of 40 large companies in Bangkok. The study is based on the Decomposed Planned Behavior. The result of the study showed that with the exemption of the respondents' age, all moderators had a statistically significant effect on the factors impacting the adoption of internet banking in Thailand. The attitudinal factors that seem to positively influence the adoption of internet banking in Thailand most are “features of the web site” and “perceived
usefulness”, while the most significant inhibiting factor to adoption is the external environment.

Pousttchi & Wiedemann (2006) conducted research in year 2006 to study consumer acceptance of mobile payment in Germany; in order to study consumer behavior the research introduced a consumer acceptance model that tackles perceived usefulness, perceived ease of use, subjective security, and task-technology fit. Pousttchi & Wiedemann believed that TAM has demonstrated to be a helpful theoretical model in explaining customer behavior in information system implementation; however, it is essential to include other explaining variables into TAM related to mobile payment, “the perspective in which mobile payment is used and consumer’s perceived security.” Pousttchi & Wiedemann assumed that it is important to study consumer acceptance of mobile payment in light of the Task-Technology Fit model also. The research model showing the hypothesized relationships is shown in Figure 4. “The Task-Technology Fit (TTF) model proposes characteristics of technology, tasks, and individuals as explanatory variables for technology use and individual performance. TTF is considered as the extent to which technology functionality matches task requirements and individual abilities.” An online survey was given to participants who were recruited through advertising on some German websites and newsletters. The sample consisted of 1,104 German users. The results of the study show that perceived trustworthiness of a mobile payment service provider and perceived confidentiality of payment details are strongly correlated. Moreover, the study proved that perceived usefulness and perceived ease of use had a strong influence on customers’ intention to use a mobile payment procedure. It showed a significant positive influence of perceived ease of use on
perceived usefulness, customers who believe that mobile payment is easy to use also believe that it is more useful. However, perceived confidentiality and perceived trustworthiness had no influence on customers’ intention to use. Subjective security was not considered a driver of mobile payment acceptance. Perceived confidentiality had no influence on perceived usefulness as well. Finally, it showed that TTF have some effect on perceived usefulness.


Gan et al (2006) conducted research to study consumers’ choices between electronic banking and non-electronic banking in New Zealand. The dependent variable is electronic banking. The independent variables are: the service quality, perceived risk factors, user input factors, employment, and education. A survey was distributed to 1960 households in New Zealand. The results of the study show that service quality
dimensions (reliability, assurance, responsiveness) are positively related to consumer’s choice of electronic banking:

- Reliability: such as clients’ perception that electronic banking is always a secure method
- Assurance: such as the confidentiality aspect that is connected to electronic banking
- Responsiveness: such as electronic banking users assumed that electronic banking responded faster to their requirements than other traditional modes of banking

Moreover, the study shows a negative relationship between perceived risk and electronic banking. Since electronic banking is a technology-enabled channel, consumers perceive the use of electronic banking as a risky decision because technology-enabled services reveal invasive technological, strange, and vague stimuli. Risk includes:

- Financial risk: such as customers could fear losing money from stopping a payment after discovering a mistake.
- Performance risk: such as a client is denied the access to his/her account.
- Physical risk: such as injury when personal information, is accessed by a third party.
- Social risk: such as older generation could criticize the use of electronic banking due to their belief that non-electronic banking is personal and friendly.
- Psychological risk: such as clients’ belief that the use of electronic banking could lower the self-image of themselves, or have a negative effect on their perceived image from other clients.

- Time risk: such as taking more time to complete transactions as compared to electronic banking.

The study also shows a positive relationship between electronic banking and user input factors which are a function of (control, enjoyment, and intention to use):

- Control: is the amount of effort and involvement demanded by clients in using electronic banking.

- Enjoyment: is the perceived playfulness and intrinsic value that consumers encounter from the use of electronic banking.

- Intention to use: is the level of resistance to change, which is linked with clients’ intention to shift from non-electronic banking to electronic banking.

Finally, the study shows that demographic characteristics affect clients’ choice of electronic banking. Clients’ different residence areas have different influence on electronic banking use. There is a positive relationship between low-income consumers and electronic banking although it is statistically insignificant, maybe because costs associated with electronic banking are affordable.

Amin conducted a research in 2007 to investigate the factors that determine the motives behind using mobile credit card among Malaysia bank customers, as their new way in carrying out payment transactions. This study broadens the applicability of the technology acceptance model (TAM) in a mobile credit card framework trying to study the relationship between independent variables (perceived usefulness, perceived ease of use, perceived credibility, and the amount of information mobile credit card) and the dependent variable (usage intention). The study was conducted through a survey questionnaire that was distributed to 150 bank customers in Labuan and Kota Kinabalu,
Sabah, Malaysia and through which only 108 responses were usable. The study verifies the suitability of the TAM in foreseeing mobile credit card acceptance in Malaysia. Perceived usefulness is significantly related to usage intentions; that means that bank costumers will make use of mobile credit card when it is useful for payment purpose. It also shows that that perceived ease of use is significantly related to usage intentions. Finally it explains the association between perceived credibility and intention to use mobile credit card; that is even if a customer believes mobile credit card is useful and easy to use, the customer may consider the issue of security and privacy before adoption.

**Significance of the Study**

Based on review of literature it is found that “Owing to its scalability and potential cost savings, mobile communication is being increasingly applied in the business and consumer communities to create innovative data and voice application, which run over the Internet infrastructure” (Olla and Atkinson, 2004). Granted there have been many studies done either on online e-commerce in general or on m-commerce in particular; however, there was no attempt to study the risk taking behavior of mobile commerce adoption in Lebanon. The researchers in this study believes that it is important to investigate the internal and external motives that lead to adopting this new innovative commerce in Lebanon. A study, such as the one conducted here, is recommended by experts in the field of e-commerce. Lee and her colleagues 2003 argue that “Paradoxically, the problems of Internet banking may either prevent consumers from adopting the 3G mobile phone banking services or encourage them to adopt the services. Additional research is needed to identify under what conditions consumers’

adoption of new product may or may not be affected by their experiences with the previously adopted product”. They added that “exclusion and seclusion risks emerged from the current research as possibly being associated with psychological risk and social risk. Intrusion risk, found in the current research, may be related to financial risk, performance risk and time risk. These relationships need to be tested in the future research.” Based on previous research it is found that youths are more influenced by media exposure (Ratten & Ratten, 2007). Moreover, it is reported that online and mobile bank users were predominantly males, not necessarily young and highly educated, but they consider the issue of security as the most important criteria (Laforet, 2005).

Furthermore, internet banking was found to be the second most used banking channel after ATM (Wan et al, 2005). The significant moderating factors encouraging the adoption of internet banking are gender, educational level, income, internet experience and internet banking experience, but not age (Jaruwachirathanakul and Fink, 2005).

Galanxhi-Janaqi and her colleague 2004 believe that while the combination of traditional e-commerce and wireless, bring many benefits, there are challenges and impediments to overcome and it is imperative to further investigate this issue in different cultures such as Lebanon. Lee and her colleagues (2003) in their recommendation for further research call for “Taking an international perspective, different cultures possess diverse values relating to various products and services, as well as to risk and relative advantages.”

**Purpose of the Study**

The objective of this research is to understand customers’ behavior and motives in choosing to adopt m-commerce in Lebanon. This thesis investigates internal
and external motives underlying individual behavioral intention to use m-commerce in Lebanon. It examines both the consumer risk perceptions and the motives as they are the key elements that will affect customers’ adoption of new technology.

**Statement of the Research Problem**

This study investigates the effects of internal and external motives on the adoption of m-commerce in Lebanon via perceived risk. This thesis attempts to answer this basic question: What are the direct and indirect effects of the explanatory variables to the explained variation in customers’ intention to adopt m-commerce in Lebanon?

**PROCEDURES AND METHODOLOGY**

**Population of the Study**

The population of the study consists of the Lebanese people who have access to mobile services. Previous research questioned “the wisdom of using age alone to segment the market. Psychographics, or lifestyle groupings, has emerged as a more robust technique of identifying distinct categories” (Oates et al, 1996).

**Sample Selection**

The researchers in this thesis selected a large convenient sample of the respondents from the population.

**Instrumentation**

Based on review of literature, discussion with experts in e-commerce and m-commerce the researcher in this thesis constructed a questionnaire using Likert type scale in which each respondent is asked to place him/herself on a scale from 1 to 5 in
which “1” means strongly disagree and “5” means strongly agree.

Data Collection

The data for this study has been collected by means of personal interviews using questionnaire. A causal model has been constructed to investigate the direct and indirect causal role of the constructs such the attitude toward risk-taking, perceived usefulness and perceived ease of using m-internet in developing the intention to use m-commerce in Lebanon. The intention of the researcher in this study is to develop a structural equation causal model to better reflect m-commerce context in Lebanon that can help in decision making and problem solving.

Construct Validity of the Instrument

Factor analysis was carried out as a data reduction technique. Two statistical tests were conducted in order to determine the suitability of factor analysis. First, the Kaisers-Meyer-Olkin (KMO) measure of sampling adequacy score of 0.802 was well above the recommended level of 0.5. Second, the Bartless test of sphericity was significant (Chi Square = 5832.547, P < 0.01), indicating that there are adequate inter-correlations between the items which allow the use of factor analysis, as shown in the table below:

Factor Analysis.
Principal axis factoring was used as an extraction method and oblique rotation was used as a rotation method. Five factors were extracted using Eigenvalue greater than one criterion. The five factor solution accounted for 80.26 per cent of the total variance, as shown in the table below:

### Total Variance Explained

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
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<td>99.254</td>
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<tr>
<td>17</td>
<td>.062</td>
<td>.329</td>
<td>99.583</td>
</tr>
<tr>
<td>18</td>
<td>.043</td>
<td>.225</td>
<td>99.808</td>
</tr>
<tr>
<td>19</td>
<td>.036</td>
<td>.192</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

- When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

The table reveals that the five factors were easy to label. The first factor
accounts for 37.496 percent of total variance and is defined by four items with factor loadings greater than 0.85. I call factor one "Motives based on psychographics: Life Style and Hobbies". The second factor accounts for 19.177 percent of total variance and is defined by its five items with factor loadings greater than 0.80. I call this factor "Perceived Credibility". The third factor accounts 10.926 percent of total variance and is defined by six items with factor loadings greater than 0.70. I call factor three "Adopting M-commerce". The fourth factor accounts 7.024 percent of total variance and is defined by two items with factor loadings greater than 0.70. We call factor four "Perceived Ease of Using M-commerce ". The last factor accounts 5.637 percent of total variance and is defined by two item with factor loadings greater than 0.79. I call factor five "Experience". As shown in the table below:

Factor Analysis – Oblique Structure Solution

### Structure Matrix

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q27: Dinner is incomplete without sweet</td>
<td>.971</td>
<td>-.062</td>
<td>.519</td>
<td>-.036</td>
<td>.274</td>
</tr>
<tr>
<td>Q25: I like to drive sport cars</td>
<td>.957</td>
<td>-.039</td>
<td>.551</td>
<td>-.003</td>
<td>.345</td>
</tr>
<tr>
<td>Q26: I like to be a member in a social club</td>
<td>.917</td>
<td>-.018</td>
<td>.469</td>
<td>-.095</td>
<td>.377</td>
</tr>
<tr>
<td>Q23: I like to be a member in a health club</td>
<td>.897</td>
<td>-.057</td>
<td>.330</td>
<td>.017</td>
<td>-.009</td>
</tr>
<tr>
<td>Q13: I am not sure of mobile commerce payment system and hesitate to use them</td>
<td>-.054</td>
<td>.898</td>
<td>-.007</td>
<td>.069</td>
<td>-.002</td>
</tr>
<tr>
<td>Q7: Buying products via mobile phone is complex</td>
<td>-.010</td>
<td>.879</td>
<td>-.017</td>
<td>.072</td>
<td>-.045</td>
</tr>
<tr>
<td>Q2: Mobile devices are easy to use</td>
<td>-.040</td>
<td>.872</td>
<td>-.056</td>
<td>.104</td>
<td>-.051</td>
</tr>
<tr>
<td>Q11: Mobile shopping is sophisticated</td>
<td>-.011</td>
<td>.805</td>
<td>-.076</td>
<td>.050</td>
<td>-.116</td>
</tr>
<tr>
<td>Q18: Going to stores for shopping is time consuming</td>
<td>-.058</td>
<td>.801</td>
<td>.019</td>
<td>.114</td>
<td>.034</td>
</tr>
<tr>
<td>Q17: Mobile commerce increase firm's temptation to exchange principles for success</td>
<td>.393</td>
<td>-.048</td>
<td>.938</td>
<td>-.166</td>
<td>.374</td>
</tr>
<tr>
<td>Q3: Mobile devices have limited memory</td>
<td>.568</td>
<td>-.042</td>
<td>.883</td>
<td>-.280</td>
<td>.227</td>
</tr>
<tr>
<td>Q21: I can trade stocks or mutual funds via mobile phone</td>
<td>.332</td>
<td>-.001</td>
<td>.861</td>
<td>-.214</td>
<td>.312</td>
</tr>
<tr>
<td>Q1: Mobile screens are easy to read</td>
<td>.341</td>
<td>-.076</td>
<td>.809</td>
<td>-.411</td>
<td>.343</td>
</tr>
<tr>
<td>Q30: Mobile commerce invades my privacy via cell phone</td>
<td>.714</td>
<td>-.055</td>
<td>.776</td>
<td>.116</td>
<td>.204</td>
</tr>
<tr>
<td>Q10: Applying for loans is easy to do via mobile phone</td>
<td>.558</td>
<td>.007</td>
<td>.733</td>
<td>.222</td>
<td>.278</td>
</tr>
<tr>
<td>Q8: It is easy to manage my banking/credit cards record via mobile phone</td>
<td>-.108</td>
<td>.102</td>
<td>-.148</td>
<td>.856</td>
<td>-.303</td>
</tr>
<tr>
<td>Q16: Mobile functions provided to end users are clear</td>
<td>.089</td>
<td>-.119</td>
<td>.430</td>
<td>-.790</td>
<td>.104</td>
</tr>
<tr>
<td>Q14: I lack experience in conducting commercial transaction via wireless device</td>
<td>.135</td>
<td>-.074</td>
<td>.275</td>
<td>-.156</td>
<td>.930</td>
</tr>
<tr>
<td>Q20: I lack experience in using mobile banking system</td>
<td>.562</td>
<td>-.032</td>
<td>.541</td>
<td>-.264</td>
<td>.792</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Testing the Relative Importance of the Independent Variables to the Explained Variation in the Dependent Variable

The following table shows the results of multiple regression. The regression is highly significant (RSQ = 0.277, F = 39.783, P = 0.00). The statistical tests of the partial regression coefficients show that only three predictors out of four are significant in predicting the variation in adopting M-commerce in Lebanon, and “Perceived Credibility” was excluded because of not being significant in explaining the variation in respondents attitude towards “Adopting M-Commerce”, as shown in table 47 below:

<table>
<thead>
<tr>
<th>Correlation Coefficients Between Independent and Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pearson Correlation</strong></td>
</tr>
<tr>
<td>Adopting M-Commerce</td>
</tr>
<tr>
<td>Adopting M-Commerce Motives</td>
</tr>
<tr>
<td>Perceived Credibility</td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
</tr>
<tr>
<td>Experience</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

**Model Summary**

### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.526a</td>
<td>.277</td>
<td>.267</td>
<td>.85591851</td>
</tr>
<tr>
<td>2</td>
<td>.526b</td>
<td>.277</td>
<td>.270</td>
<td>.85455540</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Experience, Perceived Credibility, Perceived Ease of Use, Motives

b. Predictors: (Constant), Experience, Perceived Ease of Use, Motives

c. Dependent Variable: Adopting M-Commerce

### ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>87.162</td>
<td>4</td>
<td>21.791</td>
<td>29.744</td>
<td>.000a</td>
</tr>
<tr>
<td>Regression</td>
<td>227.838</td>
<td>311</td>
<td>.733</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residual</td>
<td>315.000</td>
<td>315</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>315.000</td>
<td>315</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>87.157</td>
<td>3</td>
<td>29.052</td>
<td>39.783</td>
<td>.000b</td>
</tr>
<tr>
<td>Regression</td>
<td>227.843</td>
<td>312</td>
<td>.730</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residual</td>
<td>315.000</td>
<td>315</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>315.000</td>
<td>315</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Experience, Perceived Credibility, Perceived Ease of Use, Motives

b. Predictors: (Constant), Experience, Perceived Ease of Use, Motives

c. Dependent Variable: Adopting M-Commerce

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-1.3E-016</td>
<td>.048</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Motives</td>
<td>.420</td>
<td>.049</td>
<td>.420</td>
</tr>
<tr>
<td></td>
<td>Perceived Credibility</td>
<td>.004</td>
<td>.048</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>Perceived Ease of Use</td>
<td>-.142</td>
<td>.049</td>
<td>-.142</td>
</tr>
<tr>
<td></td>
<td>Experience</td>
<td>.195</td>
<td>.050</td>
<td>.195</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>-1.3E-016</td>
<td>.048</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Motives</td>
<td>.420</td>
<td>.049</td>
<td>.420</td>
</tr>
<tr>
<td></td>
<td>Perceived Ease of Use</td>
<td>-.142</td>
<td>.049</td>
<td>-.142</td>
</tr>
<tr>
<td></td>
<td>Experience</td>
<td>.195</td>
<td>.050</td>
<td>.195</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Adopting M-Commerce
Results of Path Analysis

The figure below shows the results of path analysis. Path coefficients which measure the direct effects between variables are shown between parentheses. The highest direct effect goes from “Motive” to “Adoption”, the second highest direct effect goes from “Experience” to “Adoption while the lowest direct effect is “Perceived credibility” to “Adoption”. It is very important to note here that that the direct effect of credibility on adoption is negative but because of the effect of indirect effects, the total relationship between credibility and adoption is positive but week. The relation between “Ease of Use and Experience” is positive but the true direct effect is negative.

<table>
<thead>
<tr>
<th>Model</th>
<th>Excluded Variable</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
<th>Partial Correlation</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Perceived Credibility</td>
<td>.004</td>
<td>.084</td>
<td>.933</td>
<td>.005</td>
<td>.989</td>
</tr>
</tbody>
</table>

a. Predictors in the Model: (Constant), Experience, Perceived Ease of Use, Motives
b. Dependent Variable: Adopting M-Commerce
The mathematical model underlying the relations that lead to in solving the recursive causal model are:

\[ Z_1 = \beta_2 Z_2 + R_U \] (1)

\[ Z_2 = \beta_1 Z_1 + R_U \] (2)

\[ Z_3 = \beta_1 Z_1 + \beta_2 Z_2 + R_{w'} \] (3)

\[ Z_4 = \beta_1 Z_1 + \beta_2 Z_2 + \beta_3 Z_3 + R_{v'} \] (4)

\[ r_{12} = p_{21} \] (5)

\[ r_{13} = p_{31} + p_{32} p_{21} \] (6)

\[ r_{23} = p_{31} p_{21} + p_{32} \] (7)

\[ r_{41} = p_{41} + p_{42} p_{21} + p_{43} p_{31} + p_{43} p_{32} p_{21} \] (8)

\[ r_{42} = p_{41} p_{21} + p_{42} + p_{43} p_{31} p_{21} + p_{43} p_{23} \] (9)
Let us take an example of the computation process, decompose the simple relation between “Experience” and “Perceived Ease of Use” into “Direct Effect” and “Indirect Effect” as follows:

\[ R_{31} = -0.164 + (0.21)(0.038) = -0.157 \]

**CONCLUSIONS AND RECOMMENDATIONS**

**Implications**

Since M-Commerce through mobile payment is related to age, income and average monthly payment bill, it is recommended that such variables to be taken into consideration in marketing and promotion strategies. A study of what motivate respondents to use M-commerce and how do they perceive using M-commerce is imperative.

As shown in study 82.6% of the respondents said that they are not using m-commerce through mobile payment while just 17.4% said they are; the majority are not using m-commerce through mobile payment. In comparing those who said that they are using m-commerce through mobile payment across age categories, the number of respondents who use m-commerce through mobile payment increases as age increases.

In asking the respondents “are you using m-commerce through mobile banking” it is found that the majority 78.5% said that they are not as compared 21.5% who said yes. In studying this phenomenon across monthly mobile bill it is found that using mobile banking increases with increasing the amount of bill.

When respondents were asked if they use m-commerce through mobile shopping it is found that the majority 89.2% said they don’t as compared to a low
percentage of 1.8% who said yes. In studying this phenomenon across income, it is found that saying yes decreases with increasing income. It can be reasoned that respondents making less than $1000 are more ready to browse internet to shop via mobile.

Respondents in this study were asked if they are using mobile entertainment and found that three quarters of the respondents are not using m-commerce for entertainment. However, in inspecting this phenomena across the marital status, it is found that using entertainment decreases among the married with children, it can be reasoned that married people may not want to use mobile for entertainment (games, videos, msn .. others) to protect their kids from such behavior.

Instead of asking respondents if they are currently using m-commerce, the researcher asked if the respondents are interested in using m-commerce for receiving financial and non financial information; as if inspecting the difference between those who actually (currently using m-commerce) and those who are interested (expected to use m-commerce). The majority of respondents replied that 50% of sample are interested in using m-commerce for receiving financial and non-financial information. In studying if interest in using m-commerce to receive information depends on gender it is found that more than female are interested in having information via mobile.

It is found in this study that three quarters of sample are interested in using mobile commerce for checking banking account balance. Interest in using m-commerce for checking accounts is related to marital status and this interest increases among single and married with no children. It can be reasoned that respondents became more risk avert with having children.
 Fifty two percent of respondents are interested in paying bills via mobile commerce taking into consideration that more female than male are not interested in using m-commerce for paying bills.

When respondents were asked about their interest in looking at images of checks and deposit slips; third of them were indifferent as compared to third were not interested.

The findings of the study reveal that most of the respondents are not currently using m-commerce in fact the majority of them are not using m-commerce for entertainment, shopping, brokerage, payment, advertising, and information services). Taking into consideration that among the low percentage who are currently using m-commerce the findings of the study showed that a significant effect for age, marital status, income, and monthly mobile bill. It is important to note here that findings of the study show a more optimistic result than a pessimistic one especially when the respondents were asked if they are interested in using m-commerce. It is really interesting to find that interest in using m-commerce far exceeded the actual percentage for those who are using m-commerce. This puts more responsibility on companies, banks, insurance companies to promote m-commerce and help respondents adopt m-commerce. Since respondents are interested in this phenomena and since interest increases with gender, marital status, and other factors; it becomes imperative for companies to take that into consideration in this marketing strategy, planning, etc., …

**Recommendations**

For subsequent research, the results of this study suggest that the relationship between the independent variables and the dependent variable to be further studied in
further research using larger and representative sample. Having larger sample seems to be crucial in conducting similar studies.

As mentioned in the Review of literature, few studies had explored the influence of culture over the success of m-commerce deployment and adoption. The findings of the study call for conducting similar studies in different countries (especially in the Arab and Gulf region) to investigate the influence of culture on the customers’ behavior and motives in choosing to adopt m-commerce.

Path analysis is used in this study to evaluate the direct and indirect effects of the independent variables on the dependent variable. A hypothetical five-variables causal model was developed on the basis of review of literature. The sample in this study was not randomly selected and there is no attempt to generalize the results beyond the sample. In addition, there is no attempt to demonstrate any cause and effect in this study.

For subsequent research, the results of this study suggest that the relationship between the independent variables and the dependent variable are ones of the complex causal sequence. Most of the relationships between variables are recommended to be further specified and clarified in subsequent research.

Having a larger representative sample and experienced interviewers seem to be crucial in conducting similar studies about M-commerce. Replicating this study in different Arab countries should help in developing marketing strategies.

**Limitations of the Study**

This study had various limitations. First, the researchers were unable to select a random representative sample of respondents. Secondly, the researchers in this study...

had a very limited time. Thirdly, the interpretations of the findings are related to previous research but are based on logical basis and are subject to further research.
APPENDIX I

QUESTIONNAIRE

Greetings,

As an MBA graduate student at the S. O. School of Business of the American University of Beirut, I am conducting a survey which is part of a research study entitled “Antecedents and Consequences of the Risk Taking Behavior of Mobile Commerce Adoption in Lebanon”.

Your valuable input to this questionnaire is kindly requested as the data will be statistically analyzed, and the results of the research endeavor will be disseminated in the academic journals. All the collected information is strictly confidential.

Thank you in advance for your cooperation in completing the survey.

Rima Charbaji

Mobile Commerce (known as m-commerce) is conducting business through wireless devices such as cell phones and PDAs.

Part I

Are you currently using m-commerce through:

- Mobile Payment
- Mobile Banking
- Mobile Brokerage
- Mobile Shopping
- Mobile Advertising
- Mobile Information Services (such as sport figures or weather updates)
- Mobile Entertainment (such as games)

For each statement, indicate how interested are you in using the mobile phone for the following: where 1 means Completely not interested, 2 Not interested, 3 Indifferent, 4 Interested and 5 means Extremely interested:

| Q1: Receiving latest adds and promotions | 1 | 2 | 3 | 4 | 5 |
| Q2: Receiving financial information such as stocks, foreign exchange Rates, interest rates, & others… | | | | | |
| Q3: Receiving non financial information such as: weather updates and sports figures | | | | | |
| Q4: Checking banking account balance (banking account/ credit card/ investment account) | | | | | |
| Q5: Paying Bills | | | | | |
| Q6: Transferring money | | | | | |
| Q7: Mobile Shopping | | | | | |
| Q7: Mobile Entertainment such as: playing games, gambling, watching videos,… | | | | | |

Part II

For each statement, indicate if you agree or disagree with the statement based on a 5 point scale where 1 means Strongly Disagree (SD), 2 means Disagree (D), 3 means Neutral (N); 4 means Agree (A) and 5 means Strongly Agree (SA):

| Q1: Mobile devices have smaller screens | SD | D | N | A | SA |
| Q2: Mobile devices are comfortable in inputting data | | | | | |
| Q3: Mobile devices have limited memory | | | | | |
| Q4: When I must choose between the two, I usually buy mobile for fashion, not convenience | | | | | |
| Q5: I don’t like to take chances | | | | | |
| Q6: I like to adopt new technologies | | | | | |
| Q7: I am likely to buy products via mobile | | | | | |
| Q8: It is easy to manage my banking/credit card records via Mobile phone | | | | | |
| Q9: Mobile shopping is expensive | | | | | |
| Q10: Mobile shopping is easy to do | | | | | |
| Q11: Mobile shopping is sophisticated | | | | | |
| Q12: I feel safe exposing personal information using | | | | | |

<table>
<thead>
<tr>
<th>Mobile-commerce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q13: I am not sure of Mobile-commerce payment system &amp; hesitate to use them</td>
</tr>
<tr>
<td>Q14: To buy a product from mobile retailers would be a high potential for loss</td>
</tr>
<tr>
<td>Q15: Mobile retailers’ product information is not trustworthy</td>
</tr>
<tr>
<td>Q16: Mobile functions provided to end users are clear</td>
</tr>
<tr>
<td>Q17: Going to stores involve travel costs</td>
</tr>
<tr>
<td>Q18: Going to stores involve too-much time</td>
</tr>
<tr>
<td>Q19: I believe Mobile-commerce is consistent with my self image</td>
</tr>
<tr>
<td>Q20: Mobile phone is efficient way to keep me updated with my account activities</td>
</tr>
<tr>
<td>Q21: Mobile-commerce saves me time</td>
</tr>
<tr>
<td>Q22: Mobile phone helps me in accessing banking service anytime anywhere</td>
</tr>
<tr>
<td>Q23: I like to be a member in a health club</td>
</tr>
<tr>
<td>Q24: When I buy new things I ask the advice of others</td>
</tr>
<tr>
<td>Q25: I like to drive sport cars</td>
</tr>
<tr>
<td>Q26: I like to be a member in a social club</td>
</tr>
<tr>
<td>Q27: Dinner is incomplete without sweet</td>
</tr>
<tr>
<td>Q28: I like to have at least one trip per year</td>
</tr>
</tbody>
</table>

Part III

Check just one aspect of the following attributes that you believe it mostly affects your intention to use mobile-Commerce:

- [ ] Speed - of transfer and settlement
- [ ] Security - authentication and authorization
- [ ] Ubiquity - usable with a wide range of services
- [ ] Simplicity - easy for users to use
- [ ] Anonymity - identity-less transactions

Part IV

What’s the average amount of your mobile phone bill every month (including SMS delivery fee and other value-added service charges)?

Below $100   [ ]

$101~$300  □
$301~$500  □
$501~$700  □
$701 & above □

Gender
Male □  Female □

Monthly Income
Below $1000 □
$1001~$2000 □
$2001~$3000 □
$3001~$4000 □
$4001~$5000 □
$5001 & above □

Age
Below 20 □
20-30 □
31-40 □
41-50 □
51 and above □

Education
Undergraduate Degree □  Master Degree □  Doctorate □
Other professional qualifications, (please specify) ---------------

Occupation level
Student □  Business owner □

High level management □
Middle level management □
Entry level management □
Professional (e.g., doctor/lawyer/engineer) □
Administrator □
Unemployed □
Other (please specify) ---------------

Marital status

Single □
Married, no children □
Married, with children □
Divorced □
Separated □
REFERENCES


