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FACULTY OF BUSINESS ECONOMICS
Master of Management: Management Information Systems

Masterproef

An investigation of variables affecting of using online banking in Jordan

Promotor :
Prof. dr. Koenraad VANHOOF

Mohammed Mfarrej

Master Thesis nominated to obtain the degree of Master of Management , specialization Management Information Systems

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An Investigation of Variables Affecting of Using Online Banking in Jordan

Mohammed Fawzi Mfarrej

Thesis submitted to the faculty of the
Hasselt University
In partial fulfillment of the requirements for the degree of

MASTER OF MANAGEMENT
In
Management Information Systems

Dr. Koen Vanhoof

Belgium, Hasselt

ABSTRACT

Purpose – Nowadays, Information Technology (IT) used heavily in different sectors especially in banks. Using online banking still in very early stage and there is need for more investigations and studies. Researchers discussed different factors that may influence bank's clients' acceptance. This study investigates these factors and analysed the outcomes of the data collections sources.

Design/methodology/approach – To enhance the research results, mixed method of methodology was used by using qualitative and quantitative methods. A purposive sampling procedure was engaged to enlist 240 customers representing the most wanted range of demographic characteristics (e.g. gender, age, educational background and monthly income), preceding the knowledge and understanding of using internet.

Findings –The results indicate that there are different factors were influence users adopting of online banking in developing countries such as online security, Internet quality, knowledge and understanding of services and benefits of online banking, trust, perceived usefulness (PU), perceived ease of use (PEOU) and behavioral attention of online banking clients.

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The most special thanks goes to my Dad and family, you gave me your unconditional support and love through all this long process. I am also grateful to my brother for his invaluable encouragement, support and help.

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Chapter One

INTRODUCTION AND BACKGROUND

1. Introduction

Information Technology (IT) used speedily in last years and it becomes a central base of developing and sustaining businesses, especially banking sector, and one of the most important channel distribution in financial services field is electronic banking. In light of international progress and developing in using technology development in banks, banks in Jordan start heavily trying to substitute their old banks style and work in services and tools to exploit technology.

Banks want to increase the benefits and maintain their developments and achieve clients' sustainability and satisfaction, therefore Understanding how people acceptance of online banking may help managers to facilitate the boom of the E-commerce.

Nowadays, the Internet has become less costly, which increase its use and enhance clients need for payments through the Internet which influence banks services supplied by banks, promoting them to increase their banking facilities by using the new technology.

Online banking offers bank clients with an application software program that enable them to use the bank facilities on their PC (Liao and Cheung, 2003). "A more developed service is one that provides customers with the opportunity to gain access to their accounts and execute transactions or to buy product online via the internet (Daniel, 1999)". At the beginning (in the 1960s), IT was used to automatise the back-office then it moves forward to the front office as well as to include the management work (Liao and Cheung, 2003).

“Compatible with the revolutionary components of the electronic marketplace, Jordan has actively developed e-banking services since 2004 (Central Bank of Jordan, 2009.)”

when internet consider as a based technology , online banking is not new but still unfamiliar for some people in Jordan, while there is different level of internet experience and education. Online banking generally has totally electronic banks or an electronic branch of a traditional bank. Due to the infrastructure and the rules of the central bank of Jordan, this study only focuses on an electronic branch of traditional banks.

The present research aims to investigate how people in Jordan are influenced to use online banking services. Especially, we want to investigate how customers acceptance of online banking services affected by privacy strategy and the extent how its easy to using website and what the role of all the factors that affected in the adoption process.

1.1 Research Aims and objectives

This study aims to accomplish the following objectives:

1- To explore the main elements and reasons impact clients’ using of online banking.
2- To examine the extent to which that Jordanian banks’ clients are using online banking.
3- To examining the factors that may influence users’ acceptance of e-banking, (PU), (PEOU).
4- Suggest appropriate strategies that may assist in increasing usage of online banking.

1.2 Research Questions and hypothesis

"What are the factors impacts the use of on-line banking in Jordan"

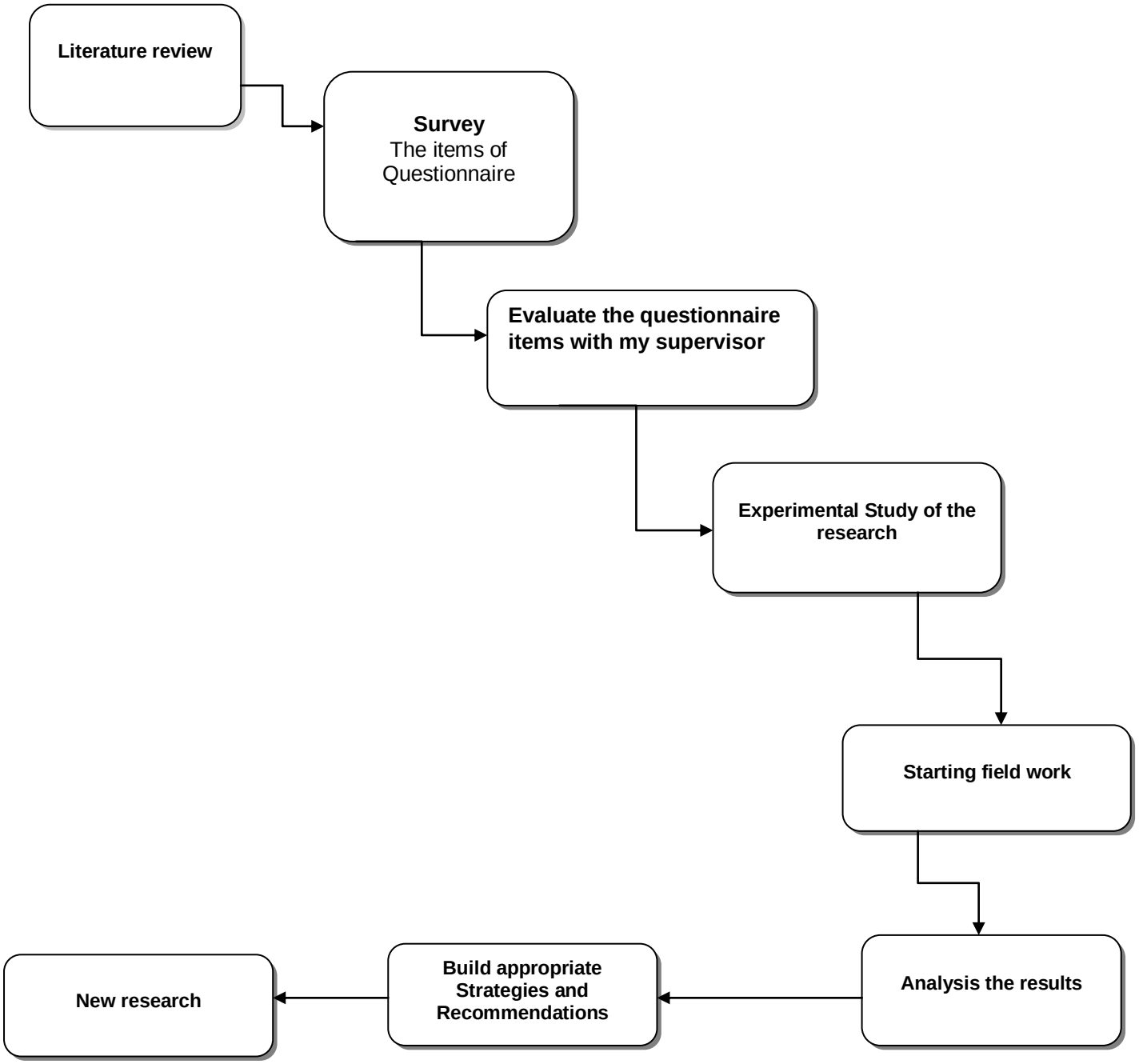
This study focuses mainly in bank clients' perspective to investigate why they still wavering in using E-banking? So, at the beginning, we will start reviewing the previous literature and after that focusing on the main issues that related to the research subject.

Furthermore, the research considers the main approaches employed in this subject but it will mainly focus on Technology Acceptance Model (TAM) which is developed by Davis (1989). In order to determine to what extent the TAM and its revisions have been validated for prediction of determinants of user's acceptance of online banking in Jordan , this study investigates the following research questions:

1. How does TAM analyse the factors that influences users' acceptance of online Banking?
2. Which determining factors affect the customer perceptions of an e-commerce application in the light of TAM Model?
3. Is there significant relationship between Perceived Credibility (PC), Customer Attitude (CA), (PU) and (PEOU) and user acceptance of E-banking services in Jordan?

1.3. Conceptual Framework

The conceptual frame work underlines upon the aims, objectives and the research questions and the researcher opinions.



1.4. Theoretical background

1.4.1. Introduction

Banks start using developing their services by using a new system, called "e-banking", where bank clients carry out their financial operations via the websites using their PCs or laptops or any new systems like mobile phones in suitable time and limited and controlled to bank working hours. In addition, client is anticipated to execute all or most of the bank transactions, such as bank statement.

Researchers have investigated different reasons for adopting online banking. Khalfan, et al, (2006) commented that the reasons of e-banking development involve reduce the transactions costs and offer more services to clients. (Pikkarainen, Pikkarainen, Karijaluoto, and Pahnila, 2004) also see that the customer has a huge ascendancy on the adoption of internet online banking.

Customer acceptance and using of online banking investigated by prior researches, (e.g. Howcroft, et al, 2002; Pikkarainen, et al, 2004), in contrast, in developing countries, such these studies are still in early stage and there is a necessity for more investigations (Riyadh, et al, 2009).

The cultural infrastructure in Jordan is quite different from that of the Western world. In 2001, Roth (2001) predicted, based on a report from Pyramid Research that Internet users in the Middle East region, will surge over the next five years, but foreign entrants would have to penetrate major cultural barriers. Thus, there are additional aspects, in particular the cultural differences, which must be considered in order to adopt online banking in Jordan.

This study includes six parts: the 1st and 2nd parts include the foreword and the literature on models that may be applied to explicate online banking - particularly Technology Acceptance Model. Furthermore, prior studies on the main reasons determine the espousal of online banking will be discoursed. The 3rd part demonstrates the method approaches used in this study. The 4th part contains the data analysis and discussion of the study. 5th part contains the results and the closing part comprises of the conclusions.

Chapter Two

LITERATURE REVIEW

2.1 Literature Review

Adoption of online banking services took a special place and attention in researches and studies during the last years to inspect the factors that affect of adopting online banking .researchers found three essential theories to study adoption of online banking.

1. Davis et al, (1989) Technology Acceptance Model (TAM)
2. Fishbein and Ajzen (1975) Theory of Reasoned Action (TRA)
3. Shih and Fang,(2004) Theory of Planned Behaviour (TPB), originally proposed by Ajzen (1991).

"(Venkatesh et al., 2003) mentioned that the Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen (1975), is one of the most influential theories used to explain human behavior probably". The Theory of Planned Behavior (TPB) by Ajzen (1991) as an expansion of TRA (Fishbein and Ajzen, 1975) for situations where is people having imperfect volitional control.

"This construct reflects how people perceive the internal and external limitations to their behavior. It refers to how easy or difficult people believe it would be to perform certain behaviors (Ajzen, 1985). "

"The Technology Acceptance Model (TAM) is theory of information systems that how users accept and use technology. TAM suggests that when users using a new technology, many factors influence their decision like when and how they will use it, like (Perceived usefulness (PU) and Perceived ease-of-use (PEOU)). " (University of the Western Cape on 2009-11-24)

Most of the customers trust that a particular website is credibility, they may trust that the website is effectiveness and many profit can be obtained. "Pikkarainen et al. (2004) found that perceived usefulness of online banking was the most influential factors in explaining the use of online banking."

Institutions maintain investing in IT desiring to develop their work procedures and enhance its efficiency. According to Venkatesh, et al, (2003) exploiting using technologies to increase efficiency will increase user acceptances. Venkatesh et al., (2003) pointed out that previous research in explaining people adoption of using technology has yielded various approaches related to IS, sociology and psychology.

This study suggests apply TAM (The Technology Acceptance Model) to catch the factors influence on the using of online banking. TAM is the most applied approach for canvassing new technology acceptance (Davis, 1989).

Davis (1989) believed that perceived usefulness and perceived easy of use fundamental determinants of use acceptance. This also supported by King and He (2006) employed TAM in different fields using 88 articles where they conclude that TAM is valid, reliable and robust predictive approach that can be applied in a different contexts.

A review of literature has been carried out to answer the study question pertaining main theories to explore factors impact on banks' clients on adoption and usage online banking. The following sections will provide more details:

2.1.1 Technology Acceptance Model

As mentioned before, there are several approaches and different theories have been produced to explain the factors determining the acceptance of user adoption of new technology. All these diverse theories and approaches give a perceptive of the factors influencing consumer adoption of online banking. But Most of previous studies confirm that TAM is most applied model by Information System academics and practitioners (Riyadh, et al 2009). TAM developed by Davis (1989) to explain the determinants of the usage of information technology (Davis, 1989). See figure 1 below.

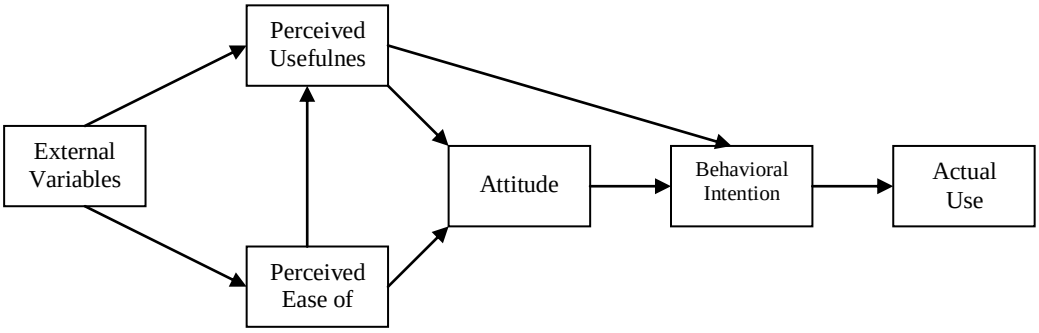


Figure (1) TAM Davis (1989)

The figure above contains different variables:

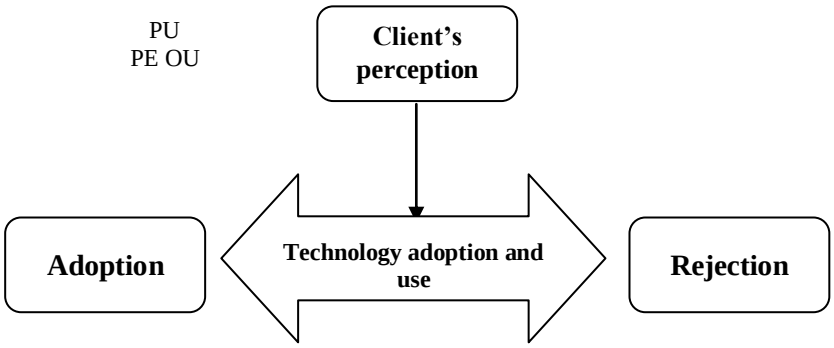
- **Perceived usefulness**: Fred Davis defined this as "the degree to which a person believes that using a particular system would enhance his or her job performance (MIS Quarterly, Sep., 1989) ". This concept focuses on people that "are generally reinforced for good performance by raises, promotions, bonuses, and other rewards (Pfeffer, 1982; Schein, 1980;Vroom, 1964). "
- **Perceived ease of use**: refers to "the degree to which a person believes that using a particular system would be free of effort.(Fred Davis) ,"Effort is a finite resource that a person may allocate to the various activities for which he or she is responsible (Radner and Rothschild, 1975).
- **External Variables in TAM**: There are many external variables which can be used with TAM. The first external variables was output quality Davis et al., in 1992, and since that researchers founded more variables for PU and PEOU such as (organizational, system, user`s personal characteristics).
- **Attitude**: "attitudes may be influenced by affect (Isen 2003). This is because receptors in brain can change in response to stimuli such as one's affective states. "

  Users' positive affect influences ⟶ system (positive attitude)

  Users' negative affect influences ⟶ system (negative attitude)
- **Behavioral Intention:** according to (Malhotra, Y 1999) "behavioral intention to use is the measure of the strength of one's intention to perform a specified behavior**.**"

  Chan, (2004) presented 3 different processes affect in customer's behavior, First: compliance, when an individual expectation of gaining rewards, second: Identification, when he/she needs to found a pleasing self important relationship to a different person and third internalization, when a customer accepts control because it is matching with value system.
- **Actual usage measure:** Is the measure defined? Yes/No, if yes: (definition, identifying, measured (objective), describe) of each actual usage measure.

TAM is designed to analyse people willingness to use information technology by influential two main beliefs that impact person behavioural intention to use the technology namely: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), Davis (1989). These are the main variables can help in explaining the variation in user's behavior of intention to use the new systems and technology (Davis et al, 1989) as presented below in Figure 2:



TAM supposes that PU and PEOU determine someone's intention toward particular technology, where person behavior intention to use is contributing and a mediator of actual technology in use (Davis, 1989). PU is also considered as being directly affected by perceived PEOU. These variables considered the main components influencing an individual behavior thought to use a new technology in general.

So according to TAM, people will find using new technology is interesting and will be promoted to use it if they find it useful and easy to work and operate (Davis, 1989). It is interesting to mention that PU is more concerned the expected overall influence of technology use on process and outcome, while PEOU is just related to those performance influences that are closely related to the process of using the technology per se.

(DeLone and McLean 1992) also developed model to assess the success of information system as presented below in Figure 3:

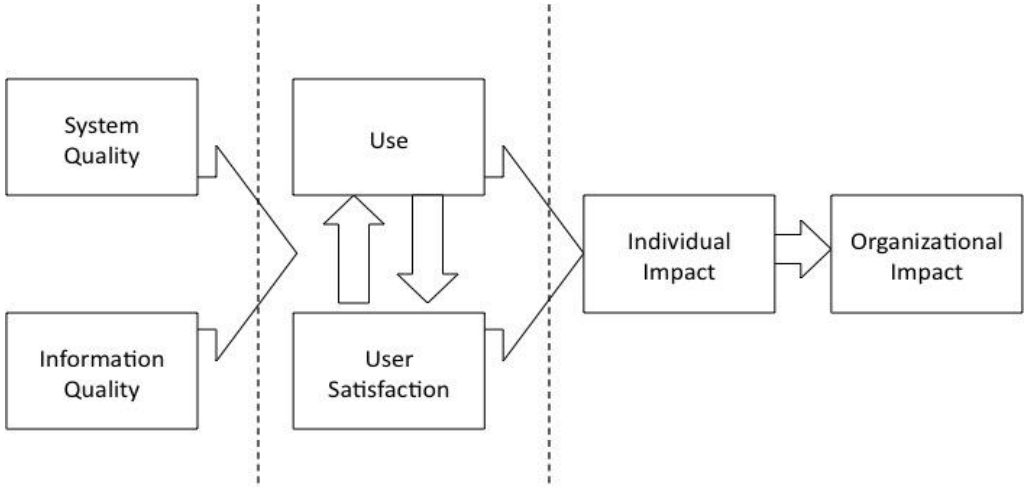


Figure 3 MODEL OF INFORMATION SYSTEM SUCCESS
(Delone and Mclean 1992)

Then they developed an updated version after 10 years to get the new updated form of (Delone and Mclean 2003) As shown in the Figure (4).

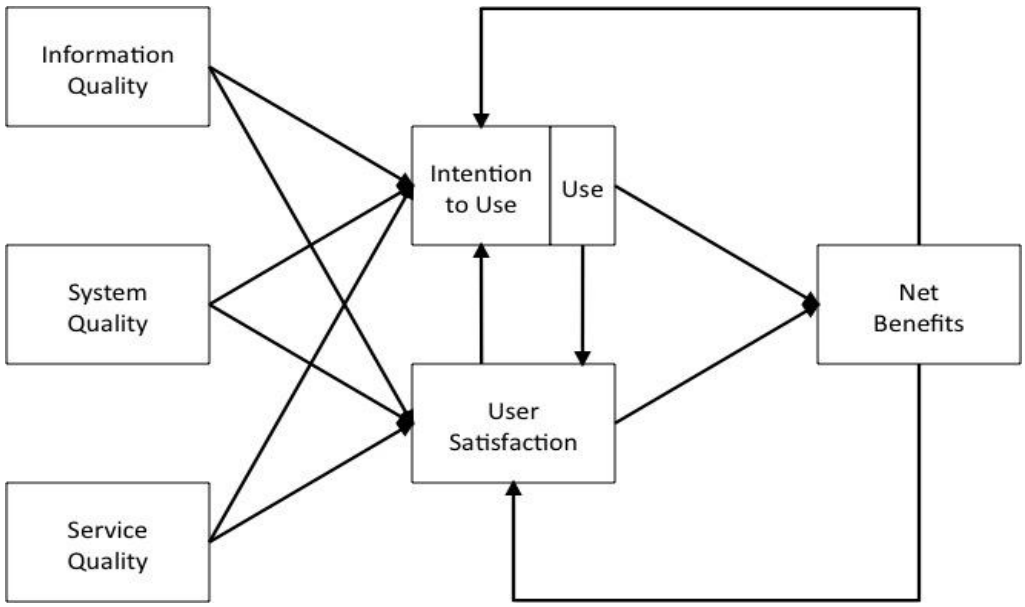


Figure (4) MODEL OF INFORMATION SYSTEM SUCCESS
(Delone and Mclean 2003)

"European Journal of Information Systems (2008) Stacie Petter, William DeLone, and Ephraim McLean) founded six major success dimensions of the updated model.

The dimensions of success include:

- System quality – the desirable characteristics of an information system. For example: ease of use, system flexibility, system reliability, and ease of learning.
- Information quality – the desirable characteristics of the system outputs; that is, management reports and Web pages.
- Service quality – the quality of the support that system users receive from the IS department and IT support personnel.
- System use – the degree and manner in which staff and customers utilize the capabilities of an information system.
- User satisfaction – users' level of satisfaction with reports, Web sites, and support services.
- Net benefits – the extent to which IS are contributing to the success of individuals, groups, organizations, industries, and nations. "

2.1.2 What determining the using of online banking?

Researcher discussed many factors that may impact client acceptance and influencing consumer of adoption online banking.

2.1.2.1 Demographic characteristics

Demographic characteristics, such as gender, age, sex, income, educational level and occupation have a big effect on consumer adoption of online banking. Studies mentioned that the different demographic information may influence user attitude towards online adoption. Furthermore, Lee and Lee (2001) pointed out that users of online banking in general characterised with high level of education, more annual incomes and younger as well as they are more using of online.

Alagheband (2006) noticed that age has a major impact on user adoption of online banking where young people are more accepting to use the internet while old consumers were have more negative attitudes towards using new technologies.

With regard to financial income, it is very important factors that influence using the internet. Most of the developing countries people except oil countries such as Gulf Region have very low income. According to Venkatesh et al, (2003), high income customers are rapidly embracing new technology and using it.

About gender, researches have found that they are not the same and there is a difference in adopting and using a new technology (Burke, 2002). Venkatesh et al, (2003), argued that gender a vital determinant of short-term usage and adopting of new technology. Finally, level of education is important; people that they have high educational attainment may have an aptitude for computers where people with high level of education are more acceptances for using the internet (Burke, 2002).

2.1.2.2 Knowledge and Understanding of Online Service and its benefits

Previous internet awareness is one of the factors that influences of adoption online banking in particular prior knowledge and skills of computers. "Prior experience with computers and technologies and attitudes towards computers influence both attitudes towards online banking and actual behaviors. Karjaluoto et al. (2002).)"
Pikkarainen (2004) mentioned that the data or information provided to the clients about online banking and its benefits might have a vital influence on the acceptance of using online banking. In addition, Sathye (1999) noted that short understanding of online banking is a significant issue in inducing clients not to utilise online banking. Besides Howcroft, et al, (2002) confirmed that shortage of awareness of on-line banking and its advantages are one of the main reasons that make bank's clients are hesitating to use online banking.

2.1.2.3 Security and privacy

Security of transactions through websites is a critical and significant issue of using online banking and its one of the very important factors for consumers to use Internet banking, and it is an essential factor that clients taking into account before using online banking. Many clients avoid using online banking as they think and perceive it as being easily vulnerable to fraud. Sathye, (1999) mentioned that 73% of banks clients do not exploit online banking as they are worried regarding protection and safety issues. Also, users are worried to provide and use their personal and financial information over the net as they are worried about fraud.

"In 1996 (Thorton Consulting) which conducted a survey focusing on banks In USA concluded that 67 percent of US banks feel that “security concerns” is the major barriers for Internet banking."

2.1.2.4 Internet Quality

Internet line quality is viewed to be a crucial element for any online-based application. Pikkarainen, et al. (2004) identified the significance of a properly online connection and its quality in using online banking and they added that without a right online link, the adoption of online banking will not be preferable. With regard to Jordan, the online was commenced in 1999 and it was very slow and not available for all as well as connecting internet was very expensive. Internet quality and its strong connection is main issue in using the internet.

2.1.2.5 Trust

In the organizational trust literature, (Mayer, 1995; Rousseau, 1998) found definition for trust "trust is as a belief or expectation about the other (trusted) party, or as a behavioural intention or willingness to depend or rely on another party, coupled with a sense of vulnerability or risk if the trust is violated".

"Trust is more crucial and complex in e-commerce environment than general and traditional commerce due to its uncertain environment and information asymmetry (Lu, 2003; Cho, 2007)."

"The buyers and sellers normally complete the transaction through internet technologies and will not necessary meet each other face to face. The buyers will thus be worried that their personal information and money will be transferred to third party without their knowledge (Luarn and Lin, 2005) ". Thus the existence of trust in a relationship is a kind of insurance against risks and unexpected behaviour.

Client perspective towards online banking is motivated by trust, which enhances customer attitudes toward using online banking. The trust issue is more essential in online comparing to offline because online banking is involve sensitive information about users and parties which include personal and financial information and they become worried about admission to important links and information shifted via the net (Alsajjan and Dennis 2006). In addition, in online transactions, there is no face to face contact which usually increase clients trust.

"Researchers warn that a lack of trust may be the most significant long-term barrier for realizing the full potential and attitude towards internet banking adoption (Keen 1997; Hoffman, 1999). Lack of trust is a critical issue that needs addressing pertaining to the internet banking adoption (CommerceNet, 1997).Gummerus et al, (2004) mentioned that lack of trust has been one of the most significant reasons for customer not adopting online services involving financial exchanges. Researchers have suggested that online customers generally stay away from vendors whom they do not trust (Reichheld and Schefter, 2000). "

2.1.2.6 Perceived risk

The sixth factor that influences the adoption of using of online banking by customers is the perceived risk. Several recent studies like (Pavlou 2003, Schlosser et al., 2006, and Ruyter et al. 2001) argued that perceived risk as an important factor influencing online consumer behavior.

Cheung and Lee, 2006 mentioned the reason of that because in the online environment, criminal acts can be performed with extremely high speed, and without any physical contact.

For example, when an authorized individual can get access to the online banking of a user, big amount of financial information may be imperiled and there might be large financial losses.

"Perceived risk reduction proves critical in an uncertain and risky environment, (Mayer,1995) and, as pointed out by Krauter and Kaluscha (2003), online transactions always take place in that risky environment where anonymity, lack of control and potential opportunism are always involved. Online trust can reduce the levels of perceived risk associated with transaction processes, (Pavlou, 2003; Koufaris and Hampton-Sosa, 2004). In terms of perceived security, web sites could increase consumers‟ online trust by decreasing perceived environmental risks or by raising security (Warrington, 2000). "

2.2. Summary Information about Online Banking in Jordan

Jordan belongs to developing countries where the using of online banking is still in preliminary stage, even though banks are trying to accelerate using new technologies and online banking. Currently, the majority of the banks provide different services through the internet. In 2000, banks in Jordan start utilizing online banking due to high competition and to become on line with global changes.

In 2000, Arab bank in Jordan was start using this service. Then, other banks fellow the bank procedures, such as, Cairo Amman Bank and Jordan Kuwait Bank. Since that time, managements realized that development internet banks as an important tool to save the time and money and increase customer satisfaction.

Nowadays, most of the Jordanian banks have their websites but they offer some limited services such as ATM cards, therefore, clients still require visiting their banks.

"Siam (2006) examined the effect of electronic banking in bank profitability in Jordan. The population of the study is all working banks in Jordan which have sites on the internet for the period of 1999-2004. The results from the data analysis that were gathered from study instrument (questionnaire) showed that:
a. There is a correlation with statistical significance between the impacts of electronic banking in banks profitability as the following:
1. A negative effect in profitability in the short run.
2. A positive effect on profitability on the long run.
b. Mangers and banks employees prefer their banks to expand their electronic operations in servicing customers, but not converting bank into a total electronic bank.
c. Electronic banking services in Jordan still at its early stages. However, it is reality and not a trend, especially Jordan as people, institutions in both private and public sectors are gearing up their efforts towards the maximum use of the internet and IT."
Figure (5) shows the banks in Jordan, when it establishment and when they start providing online banking service:

Figure (5) (Siam 2006)

Bank Name	Year of Establishment	Year of providing online banking service
Arab Bank	1930	2000
Arab Banking Corporation	1989	2006
Arab Jordan Investment Bank	1997	2006
Bank of Jordan	1960	2003
Cairo Amman Bank	1960	2007
Capital Bank of Jordan	1996	2006
Jordan Commercial Bank	1978	2007
Jordan Investment and Finance Bank	1989	2005
Jordan Kuwait Bank	1977	2001
Jordan Ahli Bank	1956	2006
Societe Generale de Banque	1993	2005
Housing Bank for Trade and Finance	1974	2001
Union Bank	1991	2005
Islamic International Arab Bank PLC	1997	2008
Jordan Islamic Bank	1979	2008

Chapter Three

RESEARCH DESIGN AND METHODOLOGY

3. 1Research Methodology

The following sections deal with the study methodology that applied for gathering the required information to achieve the study objectives.

The research methodology here presented clarifications on know the different methods used to get the information deemed necessary for reaching a meaningful conclusion in regard to the research.

3.2 Research Approaches

Two main different research approaches were employed namely: qualitative and quantitative, and these two approaches are centered on the research problem, which deals with the level of awareness of online banking users in regard to their privacy protection and the security of their accounts (Creswell 2003).

Qualitative research depends on gathering, analysing, and interpreting information by detecting what people perform and say. In addition, collecting the information is mainly based on personal subjective such as interviews and survey questionnaire (Creswell 2003).

However, a quantitative research applied in the case of a population investigation that contain several unites, and applies for knowledge that will assess and describe a research problem so it provides evidence by converting numbers into information (Creswell 2003).

Accordingly, this study will employ mixed research approaches (i.e. both qualitative and quantitative) to enhance the research intensity, validity and reliability.

3.3 Initial Data Collection

This thesis data sources can be classified in two main methods of data consideration time, costs, human resources and word limit constraints as follows:

3.3.1 Major Data Collection: The major data popularly known as the primary data (directly related to the subject of concern) was collated using a questionnaire that was designed to measure the various variables and distributed to a randomly selected sample that mirrors the population being studied.

3.3.2 Minor Data Collection: This which is popularly known as the secondary data consists of the information obtained from previous studies and other literature references. Such information assisted in identifying the study variables to be measured, the required data to be collected, as well as the requisite analytical techniques to be employed. Data can be collected through academic articles, internet, books and documents connected to the study.

3.4 Study Population & Research Sample

3.4.1 Study Population

The study population consists of all personnel directly engaged in the research study via the use of questionnaires and interviews. While the using of online banking services is not limited to specific people, it suffices to say that the study population is an open issue; involving members of staff of Jordanian and employee in different sectors in Jordan to represent different kind of people.

3.4.2 The Research Sample

To collect the required data, a simple random sample from the research population of the online banking was employed. A total of (numbers) samples which included questionnaires were used to achieve the data collection.

Different data collection techniques were employed taking into consideration time, costs, human resources and word limit constraints. In general, as explicitly stated in one of the foregoing sections, two main methods of data collection were exploited: minor (secondary) and major (primary) data collection methods.

Secondary data were collected through academic articles, Internet, books and documents connected to the study, while the primary data were collected through surveys (questionnaire). The major data collection methods are as revealed herewith.

3.5 The Questionnaire

The questionnaire is the source of the major data. The questionnaire was developed based on previous literature review with some amendments to cope with the research objectives.

The questionnaire was worded so as to be easily understood by participants. The questionnaire content was reviewed and assessed by three research experts in the same field in order to weed out mistakes in the items as well as confirm the information accuracy and enhance the research validity and reliability.

The questionnaire is divided into the following categories:

1. Classification information
    - Demographic information
    - Educational Qualifications
    - Monthly income
2. Online Banking Acceptance
    - Perceived usefulness (PU)
    - Perceived Ease of use (PEOU)
    - Internet Quality
    - Behavioral Intention
    - Attitude
    - Security and privacy
    - Trust
    - Online Service and its benefits

Each of those main categories was tested with a number of different questions (phrased as statements) covering its main aspects.

Regarding to the questionnaire questions, there are two different sections will be included. First section will include demographic information. Second part, Five-point Likert scale was used in filling the questionnaire. In this case the participants can answer the questions easily and do not create any misunderstanding.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Data Analysis

Researchers mentioned different methods of analysis of the gathered data. Analysing the drawn questionnaires was performed by using SPSS statistical software.

4.2 Methodology of the study

This study is based on the use of two approaches to scientific research methods are:

I. A - Descriptive and analytical approach: This approach has been used to review the literature to explore Online Banking Acceptance in Jordanian Banks.

II. Research Methodology Field has been used to cover the practical side of this study, through testing the validity of hypotheses of the study, and answering questions, and drawing their results out of the questionnaire that was developed for the purposes of the study according to the steps of scientific norms.

4.3 The study population and sample:

I. The study population consisted of customers of Jordanian Banks.

II. The study sample

The study sample consisted of Customers of Jordanians Banks in Jordan, where the distribution(240)questionnaires to the Customers in Jordanian Banks, and after retrieval questionnaires were excluded (40) to identify the lack of validity for the purposes of statistical analysis, One was the study sample final(200)questionnaire, representing a rate(83.3%)of the study sample, with the following explanation of the results of data analysis for the distribution of demographic sample of the study were to find frequencies and percentages to the characteristics of study sample and the table(4-1)shows the characterization of members of the study sample.

Table (4-1)
Describe the Characteristics of member Study Sample

Variable	Frequency	Percent %
Age		
20-24	30	15.0
25-29	71	35.5
30-34	45	22.5
35-39	20	10.0
40-44	12	6.0
45-49	10	5.0
50-54	8	4.0
60-over	4	2.0
Gender		
Male	133	66.5
Female	67	33.5
Educational Qualifications		
high school	16	8.0
Diploma	24	12.0
Bachelor degree	129	64.5
Postgraduate	31	15.5
Monthly Income		
less than 500	88	44.0
1000-less 1500	61	30.5
1500-less2000	22	11.0
2000-over	29	14.5
Total	**200**	**100%**

4.4 Study Tool

The study tool consisted two parts

First part (Demographic Variables)

1. Age
2. Gender
3. Educational Qualifications
4. Monthly Income

Second Part: (Online Banking Acceptance) this part consisted of:

1- Perceived usefulness (PU).
2- Perceived Ease of use (PEOU).
3- Internet Quality.
4- Behavioral Intention
5- Attitude.
6- Security and Privacy.
7- Trust.
8- Online Service and its benefits.

4.5 Reliability of Study Tool

To calculate the stability of an instrument study, the researcher used the equation of internal consistency using test cronbach's alpha shown in Table (2) the test results where the values of cronbach's alpha for all variables of the study and identification of generally higher (60%) which is acceptable in the research and studies, which gives

The questionnaire as a whole the reliability coefficient range between (86.7-88.8), as shown in Table (4-2).

Table (4-2)

The Stability of Study Tool by Cronbach Alpha Test

Variables	Cronbach Alpha
Perceived usefulness (PU).	88.8
Perceived Ease of use (PEOU).	83.1
Internet Quality.	79.2
Behavioral Intention	71.0
Attitude.	78.1
Security and Privacy.	75.0
Trust.	79.4
Online Service and its benefits	68.7
The Total of the Questionnaire Statements as A whole	**93.6**

4.6 Statistical Processing:

To answer the questions of the study, descriptive and analytical methods were used, using the package of statistical (SPSS) ,which includes standard descriptive statistics(Descriptive Statistic Measure), to describe the characteristics of the sample depending on the frequencies, percentages, and in order to answer the questions of the study, means and standard deviations, as well as the Cronbach Alpha Test were used to ensure the stability of the study tool,(One Way ANOVA), and Independent Sample t-test to answer the study hypotheses.

CHAPTER FIVE

THE RESULTS

5.1 The Results

Been relying on the results of descriptive statistical analysis of the data, which includes means and standard deviations for all independent study and axes and paragraphs consisting of each axis, has been graded into account that the scale used in the study as follows:

Weighted Mean	Degree
1.00 - 2.33	Low
2.34 - 3.67	Medium
3.68 - 5.00	High

5.2 How does TAM analyse the factors that influences users' acceptance of E-Banking?

5.2.1 The Statistical Analysis of Perceived Usefulness (PU).

Table (5.1)
The Statistical Analysis of Perceived Usefulness (PU) based on Mean, Std. Deviation and Degree of Agreement in Descending Order

No.	Statement	Mean	Std. Deviation	Degree	Rank
1	Online banking allows me to complete banking activities faster.	4.27	1.11	High	1
2	Online banking allows me to enhance my performance of using banking services	4.12	0.98	High	2
3	Online banking gives me better control of my financial banking activities.	4.11	1.05	High	**3**
4	Online banking allows me to achieve more banking activities.	4.05	1.01	High	4
	Total	4.14	1.04	**High**	

It's clear from table No. (5.1) that weight mean to this axis (Perceived usefulness (PU), ranged between (4.27– 4.05), where the axis earned an weight mean of total (4.14), which is a level High, where paragraph (1) earned the highest mean reaching (4.27), and with a standard deviation of (1.11), which is a level of High, where the paragraph stipulated (Online banking allows me to complete banking activities faster). Similarly to, the paragraph (4) came in last place, where it earned an mean (4.05), and a standard deviation (1.01), which is of the level High, where the paragraph stipulated that (Online banking allows me to achieve more banking activities).

This explains that the perceived usefulness (PU) in the High level, from the perspective of members of the study.

5.2.2 The Statistical Analysis of Perceived Ease of use (PEOU)

Table (5.2)
The Statistical Analysis of Perceived Ease of use (PEOU) based on Mean, Std. Deviation and Degree of Agreement in Descending Order

No.	Statement	Mean	Std. Deviation	Degree	Rank
9	I expect online banking will be much easier for me to use.	3.98	0.90	High	1
5	Interaction with online banking site is clear and understandable.	3.83	1.00	High	2
8	My capability for using online banking is high and I have the skills for that.	3.83	0.99	High	3
7	Learning to use online banking is easy and not complicated.	3.72	1.06	High	4
6	I can do what I want to do by using online banking.	3.50	1.13	Medium	5
	Total	3.77	1.02	**High**	

It's clear from table No. (5.2) that weight mean to this axis (Perceived Ease of use (PEOU), ranged between (3.98– 3.50), where the axis earned an weight mean of total (3.77), which is a level High, where paragraph (9) earned the highest mean reaching (3.98), and with a standard deviation of (0.90), which is a level of High, where the paragraph stipulated (I expect online banking will be much easier for me to use).

Similarly to, the paragraph (6) came in last place, where it earned an mean (3.50), and a standard deviation (1.13), which is of the level Medium, where the paragraph stipulated that (I can do what I want to do by using online banking).

This explains that the perceived Ease of use (PEOU) in the High level, from the perspective of members of the study.

5.2.3 The Statistical Analysis of Internet Quality

Table (5.3)
The Statistical Analysis of Internet Quality based on Mean, Std. Deviation and Degree of Agreement in Descending Order

No.	Statement	Mean	Std. Deviation	Degree	Rank
13	Customers can use the online banking 7/24	3.99	0.94	High	**1**
12	My access to the online is simple and not complicated.	3.85	1.05	High	2
10	The online banking allows me to deal with financial transactions accurately.	3.81	0.97	High	3
11	The online banking allows me to deal with financial transactions efficiently.	3.78	1.01	High	4
	Total	3.86	0.99	High	

It's clear from table No. (5.3) that weight mean to this axis (Internet Quality, ranged between (3.99 – 3.78), where the axis earned an weight mean of total (3.86), which is a level High, where paragraph (13) earned the highest mean reaching (3.99), and with a standard deviation of (0.94), which is a level of High, where the paragraph stipulated (Customers can use the online banking 7/24).
Similarly to, the paragraph (11) came in last place, where it earned an mean (3.78), and a standard deviation (1.01), which is of the level High, where the paragraph stipulated that (The online banking allows me to deal with financial transactions efficiently).

This explains that the Internet Quality in the High level, from the perspective of members of the study.

5.2.4 The Statistical Analysis of Behavioral Intention

Table (5.4)
The Statistical Analysis of Behavioral Intention based on Mean, Std. Deviation and Degree of Agreement in Descending Order

No.	Statement	Mean	Std. Deviation	Degree	Rank
16	I will strongly recommend the other customers to use online banking.	3.94	1.06	High	1
15	I will use online banking Continuously in the future.	3.90	0.92	High	2
14	I expect to use my financial transaction continuously in the future.	3.86	0.87	High	**3**
	Total	3.90	0.95	High	

It's clear from table No. (5.4) that weight mean to this axis (Behavioral Intention, ranged between (3.94– 3.86), where the axis earned an weight mean of total (3.90), which is a level High, where paragraph (16) earned the highest mean reaching (3.94), and with a standard deviation of (1.06), which is a level of High, where the paragraph stipulated (I will strongly recommend the other customers to use online banking).

Similarly to, the paragraph (14) came in last place, where it earned an mean (3.86), and a standard deviation (0.87), which is of the level High, where the paragraph stipulated that (I expect to use my financial transaction continuously in the future).

This explains that the Behavioral Intension in the High level, from the perspective of members of the study.

5.2.5 The Statistical Analysis of Attitude

Table (5.5)
The Statistical Analysis of Attitude based on Mean, Std. Deviation and Degree of Agreement in Descending Order

No.	Statement	Mean	Std. Deviation	Degree	Rank
18	When online banking development, it will support customers.	3.99	0..92	High	1
19	I will encourage all my friends and colleagues to use online banking.	3.91	0.93	High	2
20	The attitude of using online banking is positive.	3.82	1.02	High	3
17	When I did my financial transaction, the traditional banking services make me not satisfied.	3.77	1.05	High	4
	Total	3.87	0.98	High	

It's clear from table No. (7) that weight mean to this axis (Attitude), ranged between (3.99– 3.77), where the axis earned an weight mean of total (3.87), which is a level High, where paragraph (18) earned the highest mean reaching (3.99), and with a standard deviation of (0.92), which is a level of High, where the paragraph stipulated (When online banking development, it will support customers).
Similarly to, the paragraph (17) came in last place, where it earned an mean (3.77), and a standard deviation (1.05), which is of the level High, where the paragraph stipulated that (When I did my financial transaction, the traditional banking services make me not satisfied).

This explains that the Attitude in the High level, from the perspective of members of the study.

5.2.6 The Statistical Analysis of Security and privacy

Table (5.6)
The Statistical Analysis of Security and privacy based on Mean, Std. Deviation and Degree of Agreement in Descending Order

No.	Statement	Mean	Std. Deviation	Degree	Rank
24	The security of online banking is highly important	4.10	.090	High	1
22	The security system is available to clients.	3.8	0.95	High	2
23	Your personal information is secure in online banking.	3.76	1.01	High	3
21	You feel safe when you transfer money through online banking.	3.56	1.04	Medium	4
	Total	3.81	0.98	High	

It's clear from table No. (5.6) that weight mean to this axis (Security and privacy), ranged between (4.10– 3.56), where the axis earned an weight mean of total (3.81), which is a level High, where paragraph (24) earned the highest mean reaching (4.10), and with a standard deviation of (0.90), which is a level of High, where the paragraph stipulated (The security of online banking is highly important).
Similarly to, the paragraph (21) came in last place, where it earned an mean (3.56), and a standard deviation (1.04), which is of the level High, where the paragraph stipulated that (You feel safe when you transfer money through online banking).

This explains that the Security and privacy in the High level, from the perspective of members of the study.

5.2.7 The Statistical Analysis of Trust

Table (5.7)
The Statistical Analysis of Trust based on Mean, Std. Deviation and Degree of Agreement in Descending Order

No.	Statement	Mean	Std. Deviation	Degree	Rank
28	I trust my bank for using online banking.	3.83	0.93	High	1
27	Online banking website is always fulfills the promises.	3.74	1.00	High	2
26	It's worthy to trust online banking.	3.70	0.94	High	3
25	Online banking websites keeps customers in mind.	3.62	1.02	Medium	4
	Total	3.72	0.97	High	

It's clear from table No. (5.7) that weight mean to this axis (Trust), ranged between (3.83– 3.62), where the axis earned an weight mean of total (3.72), which is a level High, where paragraph (28) earned the highest mean reaching (3.83), and with a standard deviation of (0.93), which is a level of High, where the paragraph stipulated (I trust my bank for using online banking).

Similarly to, the paragraph (25) came in last place, where it earned an mean (3.62), and a standard deviation (1.02), which is of the level Medium, where the paragraph stipulated that (Online banking websites keeps customers in mind).

This explains that the Trust in the High level, from the perspective of members of the study.

5.2.8 The Statistical Analysis of Online service and its benefits

Table (5.8)
The Statistical Analysis of Online service and its benefits based on Mean, Std. Deviation and Degree of Agreement in Descending Order

No.	Statement	Mean	Std. Deviation	Degree	Rank
29	I receive good information about online banking services.	3.68	1.01	High	1
30	I receive good information about using online banking services.	3.65	1.11	Medium	2
31	I receive good information about the benefits of using online banking	3.51	1.19	Medium	3
32	I never received information about online banking from my bank.	3.10	1.35	Medium	4
	Total	3.49	1.17	Medium	

It's clear from table No. (10) that weight mean to this axis (Online Service and its benefits), ranged between (3.68– 3.10), where the axis earned an weight mean of total (3.49), which is a level Medium, where paragraph (29) earned the highest mean reaching (3.68), and with a standard deviation of (1.01), which is a level of High, where the paragraph stipulated (I receive good information about online banking services).

Similarly to, the paragraph (32) came in last place, where it earned an mean (3.10), and a standard deviation (1.35), which is of the level Medium, where the paragraph stipulated that (I never received information about online banking from my bank).

This explains that the Online Service and its benefits in the Medium level, from the perspective of members of the study.

5.3 Study Hypotheses

Using T-Tests

T-Tests are tests for statistical significance that are used with interval and ratio level data. T-tests can be used in several different types of statistical tests:

1. One-Sample T test to compare a single sample with a population value
2. Independent-Samples T test to compare two groups' scores on the same variable
3. Paired-Sample T test to compare the means of two variables within a single group.

One Sample t-test it's necessary to indicate whether the responses in the positive or negative direction, if the responses is higher than (3) and the intermediate value in the scale of responses (Strongly agree, agree, neutral, disagree, strongly agree), we notice that the response intermediate is (3), and the T value must be (3), and compare the Arithmetic mean value of the study sample responses from the value axis (T).

- If the Arithmetic mean value is higher than (3), that's mean they are moving towards the positive direction or there is a statistically significant effect towards high.
- If the Arithmetic mean value is less than (3), they are moving towards the negative direction.

In this study the One-Sample T is the most appropriate test to commensurate with the desired goals.

Many statistical definitions we should be clear before we start the one sample test:

1. Value of T: it's a statistical hypothesis test if the null hypothesis is supported. It can be used to determine if two sets of data are significantly different from each other, and is most commonly applied when the test statistic would follow a normal distribution if the value of a scaling term in the test statistic were known.
2. Degrees of freedom: The degrees of freedom for the t-test are calculated by adding up the number of observations for each group, and then subtracting the number two (because there are two groups).
3. Distribution of T: The values of t are printed in tables in most statistics texts. The values of the degrees of freedom are listed in a column down the side, and the values of alpha (p-value) are listed in a row across the top. There are different tables for one-tailed and two-tailed tests of t.

Is there significant relationship between Perceived Credibility (PC), Customer Attitude (CA), (PU) and (PEOU) and user acceptance of online banking services in Jordan?

5.3.1 Perceived Usefulness (PU) on Online Banking Acceptance

To test this hypothesis the researcher uses One Sample t-test analysis to ensure the impact of Perceived Usefulness (PU) on Online Banking Acceptance in Jordanian Banks as shown in Table (5.9).

Table (5.9)
One Sample T-test to Show the Impact of Perceived Usefulness (PU) on Online Banking Acceptance

Mean	Std. Deviation	T Value	T Tabulated	df	Sig
4.136	**0.898**	**17.880**	**1.96**	**199**	**0.000**

Its Clear from One Sample (T) test results in table (5.9) There is statistically significant relationship between Perceived usefulness (PU) and Online Banking Acceptance, where the average answers to paragraphs Scale (4.136), which it is more than the average default scale (3). And proven there is a statistically significant difference at the level of significance (0.05) between the average of the answers and the average default scale, as the value of (T) calculated (17.880) which it is more than the value of (T) Tabulated, and therefore rejects the null hypothesis.

5.3.2 Perceived Ease of use (PEOU) on Online Banking Acceptance

To test this hypothesis the researcher uses One Sample t-test analysis to ensure the impact of Perceived Ease of Use (PEOU) on Online Banking Acceptance in Jordanian Banks as shown in Table (5.10).

Table (5.10)

One Sample T-test to Show the Impact of Perceived Ease of Use (PEOU) on Online Banking Acceptance

Mean	Std. Deviation	T Value	T Tabulated	Df	Sig
3.771	0.789	13.811	1.96	199	0.000

Its Clear from One Sample (T) test results in table (5.10) There is statistically significant relationship between Perceived Ease of Use (PEOU) and Online Banking Acceptance, where the average answers to paragraphs Scale (3.771), which it is more than the average default scale (3). And proven there is a statistically significant difference at the level of significance (0.05) between the average of the answers and the average default scale, as the value of (T) calculated (13.811) which it is more than the value of (T) Tabulated, and therefore rejects the null hypothesis.

5.3.3 Internet Quality on Online Banking Acceptance

To test this hypothesis the researcher uses One Sample t-test analysis to ensure the impact of Internet Quality on Online Banking Acceptance in Jordanian Banks as shown in Table (5.11).

Table (5.11)
One Sample T-test to Show the Impact of Internet Quality on Online Banking Acceptance

Mean	Std. Deviation	T Value	T Tabulated	df	Sig
3.857	0.779	15.564	1.96	199	0.000

It's clear from One Sample (T) test results in table (5.11) there is statistically significant relationship between Internet Quality and Online Banking Acceptance, where the average answers to paragraphs Scale (3.857), which it is more than the average default scale (3). And proven there is statistically significant difference at the level of significance (0.05) between the average of the answers and the average default scale, as the value of (T) calculated (15.564) which it is more than the value of (T) Tabulated, and therefore rejects the null hypothesis.

5.3.4 Behavioral Intention on Online Banking Acceptance

To test this hypothesis the researcher uses One Sample t-test analysis to ensure the impact of Behavioral Intention on Online Banking Acceptance in Jordanian Banks as shown in Table (5.12).

Table (5.12)
One Sample T-test to Show the Impact of Behavioral Intention on Online Banking Acceptance

Mean	Std. Deviation	T Value	T Tabulated	Df	Sig
3.898	**0.759**	**16.733**	**1.96**	**199**	**0.000**

It's clear from One Sample (T) test results in table (5.12) there is statistically significant relationship between Behavioral Intention and Online Banking Acceptance, where the average answers to paragraphs Scale (3.898), which it is more than the average default scale (3). And proven there is a statistically significant difference at the level of significance (0.05) between the average of the answers and the average default scale, as the value of (T) calculated (16.733) which it is more than the value of (T) Tabulated, and therefore rejects the null hypothesis.

5.3.5 Attitude on Online Banking Acceptance

To test this hypothesis the researcher uses One Sample t-test analysis to ensure the impact of Attitude on Online Banking Acceptance in Jordanian Banks as shown in Table (5.13).

Table (5.13)
One Sample T-test to Show the Impact of Attitude on Online Banking Acceptance

Mean	Std. Deviation	T Value	T Tabulated	Df	Sig
3.870	**0.763**	**16.124**	**1.96**	**199**	**0.000**

Its Clear from One Sample (T) test results in table (15) There is statistically significant relationship between Attitude and Online Banking Acceptance, where the average answers to paragraphs Scale (3.870), which it is more than the average default scale (3). And proven there is a statistically significant difference at the level of significance (0.05) between the average of the answers and the average default scale, as the value of (T) calculated (16.124) which it is more than the value of (T) Tabulated, and therefore rejects the null hypothesis.

5.3.6 Security and privacy on Online Banking Acceptance

To test this hypothesis the researcher uses One Sample t-test analysis to ensure the impact of Security and privacy on Online Banking Acceptance in Jordanian Banks as shown in Table (5.14).

Table (5.14)
One Sample T-test to Show the Impact of Security and privacy on Online Banking Acceptance

Mean	Std. Deviation	T Value	T Tabulated	df	Sig
3.805	**0.738**	**15.408**	**1.96**	**199**	**0.000**

Its Clear from One Sample (T) test results in table (5.14) There is statistically significant relationship between Security and privacy and Online Banking Acceptance, where the average answers to paragraphs Scale (3.805), which it is more than the average default scale (3). And proven there is a statistically significant difference at the level of significance (0.05) between the average of the answers and the average default scale, as the value of (T) calculated (15.408) which it is more than the value of (T) Tabulated, and therefore rejects the null hypothesis.

5.3.7 Trust on Online Banking Acceptance

To test this hypothesis the researcher uses One Sample t-test analysis to ensure the impact of Trust on Online Banking Acceptance in Jordanian Banks as shown in Table (5.15).

Table (5.15)
One Sample T-test to Show the Impact of Trust on Online Banking Acceptance

Mean	Std. Deviation	T Value	T Tabulated	Df	Sig
3.721	**0.764**	**13.377**	**1.96**	**199**	**0.000**

Its Clear from One Sample (T) test results in table (5.15) There is statistically significant relationship between Trust and Online Banking Acceptance, where the average answers to paragraphs Scale (3.721), which it is more than the average default scale (3). And proven there is a statistically significant difference at the level of significance (0.05) between the average of the answers and the average default scale, as the value of (T) calculated (13.337) which it is more than the value of (T) Tabulated, and therefore rejects the null hypothesis.

5.3.8 Online Service on Online Banking Acceptance

To test this hypothesis the researcher uses One Sample t-test analysis to ensure the impact of Online Service and its benefits on Online Banking Acceptance in Jordanian Banks as shown in Table (5.16).

Table (5.16)
One Sample T-test to Show the Impact of Online Service and its benefits on Online Banking Acceptance

Mean	Std. Deviation	T Value	T Tabulated	df	Sig
3.485	**0.841**	**8.150**	**1.96**	**199**	**0.000**

Its Clear from One Sample (T) test results in table (5.16) There is statistically significant relationship between Online Service and its benefits and Online Banking Acceptance, where the average answers to paragraphs Scale (3.485), which it is more than the average default scale (3). And proven there is a statistically significant difference at the level of significance (0.05) between the average of the answers and the average default scale, as the value of (T) calculated (8.150) which it is more than the value of (T) Tabulated, and therefore rejects the null hypothesis.

5.4 Which determining factors affect the customer perceptions of an e-commerce application in the light of TAM Model?

5.4.1 Age

To test the hypothesis, used One Way ANOVA test to identify Online Banking Acceptance due to the Age and (Table 5.17) show that:

Table (5.17)

One Way ANOVA to Identify the Online Banking Acceptance due to Age

	Sum of Squares	DF	Mean Squares	F	Sig
Between Groups	18.660	7	2.666	10.027	0.000
Within Groups	51.044	192	0.266		
Total	69.705	199			

Table (5.17) Show there is statistically significant differences in Online Banking Acceptance due to (Age) as the (F) value was (10.027) with statistical Significant (0.000) and its Less than (0.05) and its clear Reject the null hypothesis.
And to identify the differences between Ages in Online Banking Acceptance the researcher used Scheffe Test for multiple compressions to show that, and (Table 5.18) shows that:

Table (5.18)

Multiple Comparisons

(I) age	(J) age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
20-24	25-29	-.37576-	.11228	.137	-.8019-	.0503
	30-34	-.51944*	.12153	.014	-.9807-	-.0582-
	35-39	-.27083-	.14884	.853	-.8357-	.2940
	40-44	-.77292*	.17612	.010	-1.4413-	-.1045-
	45-49	-.18333-	.18827	.995	-.8979-	.5312
	50-54	-.24427-	.20517	.985	-1.0229-	.5344
	60-over	1.32604*	.27446	.002	.2845	2.3676
25-29	20-24	.37576	.11228	.137	-.0503-	.8019
	30-34	-.14368-	.09825	.951	-.5165-	.2292
	35-39	.10493	.13053	.999	-.3904-	.6003
	40-44	-.39715-	.16093	.531	-1.0079-	.2136
	45-49	.19243	.17416	.990	-.4685-	.8534
	50-54	.13149	.19229	1.000	-.5983-	.8613
	60-over	1.70180*	.26497	.000	.6962	2.7074
30-34	20-24	.51944*	.12153	.014	.0582	.9807
	25-29	.14368	.09825	.951	-.2292-	.5165
	35-39	.24861	.13857	.863	-.2773-	.7745
	40-44	-.25347-	.16752	.941	-.8892-	.3823
	45-49	.33611	.18026	.836	-.3480-	1.0202
	50-54	.27517	.19784	.963	-.4756-	1.0260
	60-over	1.84549*	.26902	.000	.8245	2.8664
35-39	20-24	.27083	.14884	.853	-.2940-	.8357
	25-29	-.10493-	.13053	.999	-.6003-	.3904
	30-34	-.24861-	.13857	.863	-.7745-	.2773
	40-44	-.50208-	.18827	.421	-1.2166-	.2124
	45-49	.08750	.19970	1.000	-.6704-	.8454
	50-54	.02656	.21570	1.000	-.7920-	.8451
	60-over	1.59687*	.28241	.000	.5251	2.6687

40-44	20-24	.77292*	.17612	.010	.1045	1.4413
	25-29	.39715	.16093	.531	-.2136-	1.0079
	30-34	.25347	.16752	.941	-.3823-	.8892
	35-39	.50208	.18827	.421	-.2124-	1.2166
	45-49	.58958	.22077	.419	-.2483-	1.4274
	50-54	.52865	.23534	.654	-.3645-	1.4218
	60-over	2.09896*	.29769	.000	.9692	3.2287
45-49	20-24	.18333	.18827	.995	-.5312-	.8979
	25-29	-.19243-	.17416	.990	-.8534-	.4685
	30-34	-.33611-	.18026	.836	-1.0202-	.3480
	35-39	-.08750-	.19970	1.000	-.8454-	.6704
	40-44	-.58958-	.22077	.419	-1.4274-	.2483
	50-54	-.06094-	.24458	1.000	-.9891-	.8673
	60-over	1.50938*	.30504	.001	.3517	2.6670
50-54	20-24	.24427	.20517	.985	-.5344-	1.0229
	25-29	-.13149-	.19229	1.000	-.8613-	.5983
	30-34	-.27517-	.19784	.963	-1.0260-	.4756
	35-39	-.02656-	.21570	1.000	-.8451-	.7920
	40-44	-.52865-	.23534	.654	-1.4218-	.3645
	45-49	.06094	.24458	1.000	-.8673-	.9891
	60-over	1.57031*	.31575	.001	.3720	2.7686
60-over	20-24	-1.32604*	.27446	.002	-2.3676-	-.2845-
	25-29	-1.70180*	.26497	.000	-2.7074-	-.6962-
	30-34	-1.84549*	.26902	.000	-2.8664-	-.8245-
	35-39	-1.59687*	.28241	.000	-2.6687-	-.5251-
	40-44	-2.09896*	.29769	.000	-3.2287-	-.9692-
	45-49	-1.50938*	.30504	.001	-2.6670-	-.3517-
	50-54	-1.57031*	.31575	.001	-2.7686-	-.3720-

*. The mean difference is significant at the 0.05 level.

Table (5.18) Show that the Mean Differences was Favor to (40-44, 30-34, 25-29, 35-39, 50-54, 45-49, and the last to 20-24).

5.4.2 Gender

To test the hypothesis, used Independent Sample t-test to identify the online accepting due to Gender and (Table 5.19) show that:

Table (5.19)

Independent Sample t-test to identify the online banking accepting due to gender

		Mean	Std. Deviation	N	D.F	T Value	Sig
Gender	**Male**	**3.80**	**0.627**	**133**	**198**	**-0.281**	**0.779**
	female	**3.83**	**0.517**	**67**			

Table (5.19) Show that there is no statistically significant differences in online bank accepting due to (Gender) as the (T) value was (-0.281) with statistical Significant (0.779)were its more than (0.05) and its clear accept the null hypothesis.

5.4.3 Educational Background

To test the hypothesis, used One Way ANOVA test to identify Online Banking Acceptance due to Educational Background and (Table 5.20) show that:

Table (5.20)

One Way ANOVA to Identify the Online Banking Acceptance due to Educational Background

	Sum of Squares	DF	Mean Squares	F	Sig
Between Groups	6.590	3	2.197	6.822	0.000
Within Groups	63.115	196	0.322		
Total	69.705	199			

Table (5.20) Show there is statistically significant differences in Online Banking Acceptance due to (Educational Background) as the (F) value was (6.822) with statistical Significant (0.000) and its Less than (0.05) and its clear Reject the null hypothesis.

And to identify the differences between Educational Background in Online Banking Acceptance, the researcher used Scheffe Test for multiple compression to show that, and (Table 5.21) shows that:

Table (5.21)

Multiple Comparisons

(I) educatio	(J) educatio	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
high school	Diploma	-.73177*	.18315	.002	-1.2482-	-.2153-
	Bachelor degree	-.58854*	.15041	.002	-1.0127-	-.1644-
	Postgraduate	-.72429*	.17468	.001	-1.2169-	-.2317-
Diploma	high school	.73177*	.18315	.002	.2153	1.2482
	Bachelor degree	.14323	.12615	.732	-.2125-	.4990
	Postgraduate	.00748	.15429	1.000	-.4276-	.4426
Bachelor degree	high school	.58854*	.15041	.002	.1644	1.0127
	Diploma	-.14323-	.12615	.732	-.4990-	.2125
	Postgraduate	-.13575-	.11351	.699	-.4558-	.1843
Postgraduate	high school	.72429*	.17468	.001	.2317	1.2169
	Diploma	-.00748-	.15429	1.000	-.4426-	.4276
	Bachelor degree	.13575	.11351	.699	-.1843-	.4558

*. The mean difference is significant at the 0.05 level.

Table (5.21) Show that the Mean Differences was Favor to Educational Background (Diploma, Post Graduate, and then to Bachelor Degree).

5.4.4 Monthly Income

To test the hypothesis, used One Way ANOVA test to identify Online Banking Acceptance due to Monthly Income and (Table 5.22) show that:

Table (5.22)

One Way ANOVA to Identify the Online Banking Acceptance due toMonthly Income

	Sum of Squares	DF	Mean Squares	F	Sig
Between Groups	1796.190	3	598.730	1.687	0.171
Within Groups	69581.310	196	355.007		
Total	71377.500	199			

Table (23) Show there is no statistically significant differences in Online Banking Acceptance due to (Monthly Income) as the (F) value was (1.687) with statistical Significant (0.171) and its more than (0.05) and its clear accept the null hypothesis.

After analysing the collected data, as is evident, the majority of the selected sample was male (66.5%), while female was (33.5%) as presented in Table (4-1).

It should be more interesting to investigate the role of gender for further study in future whether gender play any impact toward using online banking.

A substantial number of the sample were in the age range 25-29 years (35.5%), 30-34 years (22.5%), 20-24 years (15%), 35-39 years (10%), 40-44 years (6%), 45-49 years (5%), 50-54 years (4%) and 60 years up (2%). They were sorted into younger (20-24 years) and older (60 years and above), so as to investigate if there is any differences between younger and older respondents.

It can be seen that younger subjects was the larger group compared to older respondents (See Table.4-1).

With regard to education level, it was found that 64.5 % of the sample graduated at bachelor degree level, compared to Postgraduate 15.5 %, Diploma 12 %, and high school 8%, (see Table 4-1).This result indicates that most of the bank clients are educated in general.

Finally, with regard to the monthly income, the outcomes indicates that the majority are less than 1500 JD (74.5%) (See Table 4-1). And this level of income is - in general - reasonable in Jordan comparing to the economic level.

CHAPTER SIX

CONCLUSION

6.1 Conclusion

The research has attempted to investigate the factors influence on online banking acceptance and usage in developing countries using Jordan as a case study through studying the attitudes and behaviour of Jordanian banks' clients by using TAM.

Different factors were investigated such as online privacy security, Internet quality, knowledge of services and benefits of online banking, trust, PU, PEOU and behavioral attention of online banking users and non-users.

The correlation of sample's demographic data (e.g. age, gender, education level and income) was supported and there are important influences on client attention of using online banking. Furthermore, PEOU and PU which are the main elements of the TAM theory were supported as significant and substantial factors to promote clients to use online banking.

The results also show that the most of the targeted sample never received information about online banking from banks. This indicates that level of online awareness is an important issue in inducing clients not to accept online banking and Jordanian banks keen to improve online banking usage should underline the profits and advantages provided by online banking to enhance PU of bank services.

This also can be achieved by using different types of marketing and advertising media for example brochures, ads on newspapers, SMS messages and e-mail. In addition, this will lead to extensive advertising and marketing the services to broader potential customers and educate them about online banking benefits.

In addition, the results also indicate that Jordanian banks' clients they dont feel safe when they transfer money through online banking. Clients did not trust using online banking and they did not feel using online is secure enough to keep their personal and financial information secure. They feel that online banking is not secure and they cannot trust enough to keep their financial and personal information secure.

As a final point, the increased availability of broadband connection with reasonable price or fees would extend increase using of online banking, as the current deficiency of availability of broadband plays a vital role in limiting using rates by Jordanian customers.

To conclude, the outcomes of this research demonstrate that there are different factors were influence users adopting of online banking in developing countries such as online security, Internet quality, knowledge and understanding of services and benefits of online banking, trust, PU, PEOU and behavioral attention of online banking clients.

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