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# **CUSTOMER ADOPTION OF INTERNET BANKING IN GAZA STRIP**

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## **ABSTRACT:**

The aim of this study is to identify the factors that encourage customers to adopt internet banking in Gaza Strip. The research constructs based on the Technology Acceptance Model (TAM) which included two factors; the perceived usefulness and perceived ease of use. some incorporated extra important external variables added; these are the technical service quality, computer self efficiency, awareness of service and its benefits, culture, trust, attitude towards use, behavioural intention to use, and other demographic variables such as; age, gender, education, and income . The model was empirically verified to examine the factors influencing the internet banking adoption behaviors of four hundreds ninety seven customers. The findings of the study suggest that the quality of the Internet connection, the awareness of internet banking and its benefits, the culture influence and computer self-efficiency have significant effects on the perceived usefulness and perceived ease of use of internet banking acceptance. Education, trust, perceived ease of use and perceived usefulness also have important impact on the attitude towards the likelihood of adopting internet banking. This attitude influences the behaviour of the customer to actually adopt the internet banking.

The researcher recommends the following most important recommendations to improve the customers' adoption of internet banking in the Gaza Strip:

1. The implication is that low awareness of internet banking is a critical factor in causing customers not to adopt or use internet banking. Banks in the Gaza Strip need to encourage customers by using various types of advertising media

2. When banks intend to develop their websites, they should take care of the ease of use of the website.
3. Technical service quality and the exist of the website 24 hours are important factors which influence the perceived ease of use which affect the adoption of customers to internet banking.
4. Banks should take care of the security of their websites to prevent any hacking activities to make users trust internet banking.
5. Most of internet banking users are educated users so banks should increase their care of these people as 73.2% of the users have bachelor degree or more.
6. Most banks are using informational websites; banks should improve their internet banking services and offer communicative/Simple transactional services and go a step forward and offer advanced transactional services.
7. Banks should convert some of its traditional banking services such as information and querying the users accounts to internet banking services; this will improve the users' attitude towards using and adopting internet banking.

Internet banking is still a new technology, this research covered the factors that affect customers to adopt internet banking in the Gaza Strip; there are many other areas can be covered as the followings:

1. Future studies could further extend the TAM model to include other variables such as customer's loyalty to Internet banking, cost, perceived value and perceived risk.
2. To focus upon the factors affecting business customers rather than consumers.
3. The study could even be extended to include other countries operating in similar conditions to see if comparable results are achieved.

## الملخص:

الهدف من الدراسة: تحديد العوامل التي تشجع الزبائن لتبني الانترنت المصرفي في قطاع غزة. بنيت الدراسة علي نموذج قبول التكنولوجيا، و الذي تضمن عاملين هما: الفوائد المتلقاه، و سهولة الاستخدام مع إضافة عوامل خارجية أخرى و هي: جودة التوصيل للانترنت، و الكفاءة الشخصية لاستخدام الحاسوب، و إدراك الخدمة و فوائدها، و الثقافة و الثقة، و الموقف من الاستخدام، و السلوك الفعلي للاستخدام، و عوامل ديمغرافية مثل: السن، و الجنس، و التعليم، و الدخل. النموذج عرف و جرب لفحص العوامل المؤثرة لسلوك أربعائة و تسعون و سبع زبون، لتبني الانترنت المصرفي. ما توصلت إليه الدراسة: يقترح أن جودة توصيل الانترنت، و إدراك الانترنت المصرفي و فوائده، و الثقافة، و الكفاءة الشخصية للحاسوب لها تأثير هام علي الفوائد المتلقاه و سهولة الاستخدام للانترنت المصرفي. التعليم و الثقة و سهولة الاستخدام و الفوائد المدركة أيضًا لها تأثير هام و قوي علي الموقف من تبني الانترنت المصرفي، هذا الموقف يؤثر في سلوك الزبون فعليًا لتبني الانترنت المصرفي.

الباحث أوصي بأهم التوصيات التالية لتحسين تبني الزبون للانترنت المصرفي في قطاع غزة:

- ٠١ قلة الوعي بوجود الانترنت المصرفي يعتبر من العوامل الحرجة التي تجعل الزبائن لا يتبنون الانترنت المصرفي في البنوك في قطاع غزة تحتاج إلي تشجيع الزبائن بمختلف الوسائل الدعائية.
- ٠٢ عندما تتوي البنوك لتطوير مواقعها علي الانترنت، عليها أن تأخذ في الحسبان سهولة استخدام الموقع.

٠٣ الجودة الفنية للخدمة و التواجد للموقع ٤ ساعة تعتبر من العوامل الهامة التي تؤثر علي

سهولة الاستخدام، و التي تؤثر بدورها علي تبني الزبائن للانترنت المصرفي.

- ٠٤ البنوك عليها أن تهتم بأمن مواقعها علي الانترنت لمنع أي أنشطة اختراقية لجعل المستخدمين يثقون بالانترنت المصرفي.

٥٠ معظم مستخدمي الانترنت المصرفي من المتعلمين، لذلك علي البنوك أن تزيد من اهتمامها بهؤلاء الناس حيث ٢. ٧٣% منهم يحملون درجة البكالوريوس أو أكثر.

٦٠ معظم البنوك تستخدم مواقع انترنت معلوماتية، لذا عليها أن تطور خدماتها المصرفية و تقدم خدمات تفاعلية و خدمات تحويلية بسيطة، بل تخطو خطوة إلي الأمام و تقدم خدمات تحليلية متقدمة.

٧٠ علي البنوك أن تحول بعضا من خدماتها التقليدية مثل المعلومات و الاستعلام عن حسابات المستخدمين إلي خدمات الانترنت المصرفي ، هذا سيحسن من انطباع المستخدمين تجاه استخدام و من ثم تبني الانترنت المصرفي.

لا يزال الانترنت المصرفي تقنية جديدة، و هذا البحث غطي العوامل التي تؤثر علي تبني الزبائن للانترنت المصرفي في قطاع غزة، و هنالك الكثير من المناطق الأخرى التي من الممكن تغطيتها و هي كالتالي:

١٠ الدراسات المستقبلية ممكن أن توسع النموذج المستخدم ليشمل متغيرات أخرى مثل:

ولاء المستخدمين للانترنت المصرفي، التكلفة، الفوائد و المخاطر المتلقاة.

٢٠ التركيز أكثر علي العوامل المؤثرة علي زبائن الأعمال أكثر منها علي المستهلكين.

٣٠ الدراسة ممكن أن توسع لتشمل بلدان أخرى تعمل بظروف متشابهة ليُشاهد إذا ممكن الحصول علي نتائج قابلة للمقارنة.

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## Acronyms

- **ATM:** Automated Teller Machine.
- **PCBS:** Palestinian Central Bureau of Statistics.
- **BICT:** Business Survey on Information and Communications Technology.
- **ICT:** Information and Communication Technology.
- **ITU:** International Telecommunication Union.
- **TAM:** Technology Acceptance Model.
- **PU:** Perceived Usefulness.
- **PEOU :** Perceived Ease Of Use
- **AU:** Attitude Towards Using
- **AW :**Awareness of services and its benefits
- **TR :** Trust
- **TSQ:** Technical Service Quality
- **TRA:** Theory of Reasoned Action
- **PC:** Personal Computer.
- **PIN:** Personal Identity Number
- **ABA :**American Bankers Association
- **NBS:** Nottingham Building Society
- **ISDN:** Integrated Services Digital Network
- **FDIC :** The Federal Deposit Insurance Corporation
- **FOREX:** Foreign Exchange
- **E-Banking:** Electronic Banking
- **SOA:** Services Oriented Architecture
- **BI :** Behavioral Intention

- **SN** : Subjective Norm
- **UTAUT** : Unified Theory of Acceptance and Use of Technology
- **IS**: Information System.
- **WAP**: Wireless Application Protocol
- **NGOS**: Non Government Organizations
- **SMS**: Short Message Service
- **TPB**: Theory of Planned Behavior
- **IB**: Internet Banking
- **SPSS**: Statistical Program for Social Sciences
- **UNDP**: United Nations Development Programme
- **PMA**: Palestine Monetary Authority

## **GLOSSARY OF TERMS**

**Brick and Mortar (B&M):** Refers to a company which possesses a building for operations. The phrase can be a misnomer since not all buildings are physically constructed from bricks and mortar.

**Automated Teller Machine (ATM):** A computerized telecommunications device that provides the customers with a financial institution with access to financial transactions in a public space without the need for a human clerk or a bank teller.

**Electronic Economy:** A new economy based on microelectronics, computers, multimedia applications and the Internet.

**Checking:** A web application that is intended for monitoring the quality of software development process and its results. That covers the needs of organizations that want to control software quality before it is being put into production.

**EDB:** One of the largest IT groups in the Nordic countries with over 40 years of experience is serving and leading Nordic businesses. The company delivers solutions that cover the entire range of business-critical IT services from application services and industry-specific solutions through IT operating services and network solutions.

**Encryption:** A software scrambles the data with a secret code so that no one could make sense of it while it's being transmitted. When the data reaches its destination, the same software unscrambles the information. When you see a small lock icon at the bottom of your web browser or next to the address bar, it indicates that your data is encrypted during transmission.

**Telephone Banking:** Provision of certain banking services (such as account balance inquiry, funds transfer, and bills payment) through telephone.

**Debit Cards:** When you buy goods or get cash with a debit card the money is taken from your bank account right away.

**Mobile Banking:** Mobile banking (also known as M-Banking, SMS Banking etc.) is a term used for performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone. Mobile banking today is most often performed via SMS or the Mobile Internet but it can also use special programs that are downloaded to the clients' mobile device.

**Funds Transfer:** Moving funds among accounts or to a third party account at the same financial institution. It is also called a *book transfer*.

**Videotex** (or "interactive videotex"): One of the earliest implementations of an "end-user information system". From the late 1970s to mid-1980s, it was used to deliver information (usually pages of text) to a user in computer-like format, typically to be displayed on a television.

**Prestel** (abbrev. from press telephone): The brand name for the UK Post Office's Viewdata technology, was an interactive videotex system developed during the late 1970s and commercially launched in 1979.

**The BBC Microcomputer System** (or "BBC Micro"): A series of microcomputers and associated peripherals designed and built by Acorn Computers for the *BBC Computer Literacy Project*. It is operated by the British Broadcasting Corporation. Designed with an emphasis on education, it was notable for its ruggedness, expandability and the quality of its operating system.

**Homelink:** was the UK's first online banking system. It was set up by the Nottingham Building Society in 1983 in association with the Bank of Scotland, using the UK Post Office's Prestel Viewdata system.

**BACS:** (originally an acronym for Bankers' Automated Clearing Services): A United Kingdom scheme for the electronic processing of financial transactions. BACS Direct Debits and BACS Direct Credit are made using the BACS system.

**Broadband:** A term refers to high speed of Internet connections. The highest speed modem connection will max out at around 45 kbps (kilobits per second), while the slowest DSL connections provide 144 kbps, over three times faster. "Broad" therefore simply refers to the size of the "pipe" used to deliver the Internet connection. Typically broadband is associated with multimedia technologies such as streaming radio and video connections that involve large amounts of data.

**Integrated Services Digital Network (ISDN):** A set of communications standards for simultaneous digital transmission of voice, video, data, and other network services over the traditional circuits of the public switched telephone network.



**FDIC** “The Federal Deposit Insurance Corporation”: An independent agency created by the Congress to maintain stability and public confidence in the nation's financial system .

**FOREX:** Stands for Foreign Exchange; it is also refers to as the FX or the FX markets. The currencies of different nations are traded against each other in the FOREX market. The minimum account size that we have seen is \$300. However, the FOREX brokers that we feel most comfortable with require a \$2,500 minimum.

**Middleware:** They are applications and servers designed to take content from otherwise incompatible back-end data sources (often legacy - that is outdated - systems) and pass it on to Web front-ends.

**Core Applications:** The most central part of programming. In web applications or the central business part that is considered as the core of the project.

**Information System (IS):** In a general sense , the term Information System (IS) refers to a system of people, data records and activities that process the data and information in an organization, and it includes the organization's manual and automated processes.

**ITV Banking:** At first, customers will only be able to view product information, but a full service is scheduled for the summer, allowing customers to carry out transactions via a suitable internet TV or set-top box. The service currently supports the BushInternet, ONnet and Q-Zero systems.

**Account Aggregation:** A method that involves compiling information from different accounts, which may include bank accounts, credit card accounts, investment accounts, and other consumer or business accounts, into a single place.

**WIM/SIM:** WIM is the security module implemented in the SIM card for WAP applications. WIM provides security services for WAP applications, and allows you to use digital signature. SIM cards with security module are provided by the SIM card issuer.

**ING:** A global financial services brand offering a range of banking and insurance services in over fifty countries. ING is committed to be a brand that stands out and leads the way in making finance easier.

**Chapter One:**  
**An Introduction**

## **1.1 Introduction:**

The twenty-first century is characterized with the use of information and communication technology which has revolutionized our working and living patterns. One of the most important information and communication tools is the internet. The Internet, sometimes called simply "the Net," is a worldwide system of computer networks - a network of networks in which users at any one computer can, if they have permission, get information from any other computer and sometimes talk directly to users at other computers (searchwindevelopment.techtarget.com,2009).

Global internet access exceeded 1660 million for June 30, 2009; global usage growth (2000-2009) exceeded 360% . Forty seven (47) million of these users are from the Middle East; in Middle East usage growth (2000-2009) exceeded 1,360%. These massive ratios reflect clearly the scope and size of this network. The growing use of the internet attached with growing use of the internet for business transactions, this use had a profound effect on the banking industry (internetworldstats.com, 2009).

Internet banking uses the Internet as the delivery channel by which to conduct banking activities, financial services accessed via the Internet's World Wide Web. Internet banking uses the global network of computer networks without any "brick and mortar" branch offices. By eliminating the overhead expenses of conventional banks, Internet banking theoretically can pay customers higher interest rates on savings than the national average. Banks use the Internet to deliver information about financial services, replace transactions done in branch offices, which eliminates the need to build new branches, and serve customers more efficiently. Internet banking sites offer the prospect of more convenient ways to manage personal finances, and such services as paying bills on-line, finding mortgage or auto loans, applying for credit cards, and locating the nearest "Automated teller machine" (ATM) or branch office. Some Internet banks also offer 24-hour telephone support, so customers can directly discuss their needs with bank service representatives (investorwords.com, 2009).

The emergence of new banking technology creates highly competitive market conditions, which have a critical impact upon customer behaviour. Internet banking providers must, therefore, attempt to better understand their customers and their attitudes toward technology in general. If they succeed, banks will be able to influence

and even determine customer behaviour, which will become a major issue in creating competitive advantage in the future (Jayawardhena and Foley, 2000; Nellis, 1998).

Internet banking has become a very competitive area and companies are constantly looking for a way to make their services more attractive to customers.

## **1.2 Problem definition:**

According to the Business Survey on Information and Communications Technology (BICT) in 04/12/2008 which was performed by (Palestinian Central Bureau of Statistics (PCBS), the main findings of this survey were as the following:

21.1% of the total number of enterprises in the Palestinian Territory used computers in 2007, including 16.3% for the Gaza Strip enterprises. Noticeably, the highest rate for computer use reached 83.0% for enterprises which had ten employees and over. On the other hand, the rate for the enterprises with 0-4 employees reached 16.4% and 43.2% for the enterprises with 5-9 employees. Moreover, 12.7% of the total number of enterprises accessed the internet. 67.8% of the enterprises that used computers accessed the internet. The most repeated purposes of internet use, according to the survey data, were as follows: 40.7% for sending and receiving electronic mail, 25.5% for information search through the internet search engines, 7.7% for customer services, and 1.6% for financial and banking services.

BICT continues to indicate that 62.4% of the total expenditures on ICT were spent on telecommunications including telephones and mobile phones; 6.1% of the total expenditures on ICT were spent on the internet, networks, and their maintenance, development, and installation (pcbs.gov.ps,2010).

With all these expenditures on ICT developments and potential in ICT in the Gaza Strip there is still a clear weak in using internet for financial and banking services (1.6% only of total internet use) while in the same year (2007) in America the use of internet for financial and banking services was 24% of the total internet use (netbanker.com,2009). These tools improve performance but end users often are unwilling to use them (Davis,1989). So:

***“ Why many bank customers do not consider the online option for performing their bank transactions? “***

As Mals et al (1999) stated," the diffusion of online banking is more determined by customer acceptance than by seller offerings".

### **1.3 Research questions:**

*The following questions were addressed in this thesis:*

- 1) What are the factors that influence the customers adoption of internet banking?
- 2) What is the importance of these factors?
- 3) What is the nature and strength of the relationship among these factors?

### **1.4 Research Variables:**

Many factors contribute to influence the customer adoption of internet banking; these factors were discussed through many theories and were used in many researches over all the world. In chapter three "the research model and hypothesis development" of this study we went through and discussed these facts. Technology Acceptance Model (TAM) (Davis,1989) is the basic model of this study, other variables were added to enhance TAM model especially to be more close to our culture in the Middle East.

*These variables include the following:*

- 1) TAM Variables:
  - a) Perceived Usefulness (PU).
  - b) Perceived Ease Of Use (PEOU).
- 2) Attitude Towards Using (ATU).
- 3) Behavioral Intention To Use (BITU).
- 4) Demographic Characteristics:
  - a) Age
  - b) Income
  - c) Gender
  - d) Education Level
- 5) Trust (TR).

- 6) Culture (CU).
- 7) Self Efficiency (SE).
- 8) Awareness Of Service and its benefits (AOS)
- 9) Technical Service Quality (TSQ).

However these variables could be classified as:

Table (1.1): The Independent and dependent Variables

No.	Independent Variable	Dependent Variable
1	Culture	Perceived usefulness
2	Awareness of service and its benefits	
3	Perceived ease of use	
4	Technical service quality	Perceived ease of use
5	Self efficiency	
6	Perceived ease of use	Attitude towards using
7	Perceived usefulness	
8	Trust	
9	Age	
	Gender	
	Education	
	Income	
10	Attitude towards using	Behavioral Intention to use

### 1.5 Hypothesis:

*The followings are the research hypotheses:*

**H1:** Culture has a positive impact on customer's perceived usefulness

**H2:** Awareness of services and its benefits has a positive impact on customer's perceived usefulness.

**H3:** Higher computer self efficiency has a positive impact on customer's perceived ease of use.

**H4:** Technical service quality has a positive impact on customer's perceived ease of use

**H5:** Customer's perceived ease of use has a positive impact on his/her perceived usefulness of internet banking

**H6:** Customer's perceived ease of use has a positive impact on his/her attitude towards using Internet banking

**H7:** Customer's perceived usefulness has a positive impact on his/her attitude towards using internet banking.

**H8:** Customer's trust has a positive impact on his/her attitude towards using internet banking.

**H9:** Customer's attitude towards using internet banking has a positive impact on his/her intention to use it.

**H10:** The demographic factors:

**H10.1:** Age has an effect on customer's attitude towards using internet banking

**H10.2:** Gender has an effect on customer's attitude towards using internet banking

**H10.3:** Education has an effect on customer's attitude towards using internet banking.

**H10.4:** Income has an effect on customer's attitude towards using internet banking.

## **1.6 Research objectives:**

*The main objectives of this research are to:*

- 1) Identify the main factors that influence the customers adoption of internet banking.
- 2) Understand the nature, strength and importance of these factors which influence the customers adoption of internet banking.
- 3) Indicate the opportunities which a bank can gain by using internet banking.

## **1.7 Research importance:**

Understanding customers is important in any service industry. Identifying the elements that influence customer's propensity to start using internet banking is crucial in the process of acquiring new customers to go online; also it helps to understand how customers can be retained.

*Research served the following sides:*

**First: Bank:**

- 1) Banks investment in IT is very high ;however, the success of this investment is tied more with the acceptance of the customers to use this technology such as the internet banking.
- 2) By searching the factors which influence the decision of the customer to adopt the internet technology , banks can get the highest benefits from its investments in internet banking.
- 3) Banks can develop its processes, reduce its costs, maximize its revenue, and minimize the waiting time for customers to get on the services this will influence the image of the bank, and give it a competitive advantage among the other banks in the Gaza strip.
- 4) If customers used the internet to interact with the bank, the costs would fall dramatically, even when compared to other forms of remote bank access. Humphreys (2007) estimates that internet transactions cost less than \$0,01 per transaction, compared to ATM of \$ 0.27, telephone of \$ 0.54, mail of \$0.73 and in-person of \$ 1.50.



- 5) Enhancing this competitive advantage will maximize the benefits of using this technology.
- 6) Internet banking can be new distribution channels to reach a large number of customers passing the geographical barriers at low costs without the need to employ new employees to build new branches.
- 7) Minimizing the cost of internet banking technology and building the loyalty of the customers, encourage banks to offer new services on its website.
- 8) The Administrative work gets reduced drastically with Internet Banking.

**Second: Society:**

- 1) This study is the first one in Palestine, it will open many chances for future studies which can participate in improving the IT usage and investments in banks resident in the Gaza strip.
- 2) Strong exist of the banks on the internet can open co-operations with banks all over the world, which can open a lot of opportunities to work internationally therefore to compete in the "electronic economy" businesses. This will bloom the economy and open new job opportunities.
- 3) Reducing the time of waiting to get on the services and reaching to customers wherever they are and whenever 24 hours 7 days a week can satisfy customers.
- 4) Minimizing the cost of the services offered by banks will maximize the benefits for the customers by paying less money than in banks which do not use internet in serving their customers.
- 5) If you have multiple accounts with the same Internet bank, you can easily move "funds" online from one to the other. This also includes "credit cards", so you can pay your credit card bill online from your checking or savings account. This allows you to do transactions that would otherwise require sending a check through the mail or making a personal visit.
- 6) Ease and convenience for those who find it difficult to get to a branch within working hours will find internet banking a practical alternative.

## **1.8 Previous studies**

The followings are the most related and significant studies took place in different countries in the world; many other studies was referred to and linked with through the thesis:

### **1.8.1 Palestine:**

#### **a) Abu Jaber,(2007) titled "Readiness of the Palestine banking sector in adopting the electronic banking system (exploratory study) "**

The purpose of this research is to investigate the readiness of the Palestine banking sector to adopt e-banking technology by shedding light on a number of different success and obstacles factors. This research has been conducted as a quantities one based on a survey inquiry . The target to this survey was the information and technology department of the operated thirteen banks in the Gaza strip. Thirty of the distributed questionnaires were retrieved and analyzed.

The results show that the success factors that enhance the adoption process and seen as the most important and introduced by the banks are: usefulness of the services to the bank, security availability to the services, convenience of the services, advertisement ways used to persuading customers about e-banking, ease of use, and finally customer support. The obstacles factor that may hinders the adoption process are: expensive cost, cost of infrastructure, maintenance and other different costs; appropriate environment :such as the fast spread of the internet and IT personal; and acceptance from customers.

It is recommended that more efforts must be done in educating customers about the benefits of using e-banking services and products. According to the study, it needs support from PMA (Palestine Monetary Authority) to adopt e-banking by set new laws and legislations, the managements of the banks should build a strong system security and finally, banks should devote sufficient effort and funds to the adopting process.

#### **b) El kord, (2007) titled "Information technology investments evaluation practices in the banking sector in Palestine"**

This research presents the results of an empirical investigation of IT investment feasibility evaluation practices in the banking industry in Palestine. It sheds light on a number of evaluation issues, including the extent to which formal procedures of

evaluation exist within banks , the problems inherent in evaluating IT investments , and the techniques used by banks to evaluate their IT investments.

This research has been conducted as a quantitative one based on a survey inquiry. The target to their survey was all IT managers of the twenty one banks operate in the Gaza strip and the west bank. Nineteen of the distributed questionnaires were retrieved and analyzed.

In general, the banking sector in Palestine has some sort of formal procedures for evaluating IT investment, and they use a variety of IT investment evaluation techniques. However, closer examination of the formal procedures revealed that these procedures are not precise and detailed ones.

The results also show that there is significant positive correlation between the presence of written IT strategy and the presence of formal IT investment evaluation procedures, there is a significant positive relation between the presence of formal IT investment evaluation procedures and the success of the implemented IT investments and there is a significant positive relation between carrying out IT investments evaluation and the success of implemented IT investment. Anyhow, the result did not show a significant positive correlation between the presence of formal IT investment evaluation instructions and carrying out IT investments evaluation.

It is recommended that sufficient time , effort and support from top management should be devoted to IT investment evaluations because it is the most important feeding mechanism, and banks should keep developing and searching for more comprehensive methods that consider broader economic and strategic impacts of their IT investments.

**c) Kuraz, (2005) titled "Factors affecting in dealing with credit card"**

This study aims at recognizing the factors underling the fall of credit card – card demand and the decrease in using them as tools for customers payments. It also studies the effect of the demographic changes on determining the attitudes towards credit cards holders and non-holders through a comparative and on analytic study on the bank customers in the Gaza strip.

The study indicates that there are several reasons beyond the low demand on credit cards by non holders customers and not using them by their holders. The most important is the effect of the demographic factors on the demands and use size. It also

indicates that there are intrinsic statistical difference between the different income resources for the holders and the degree of motivation for using these cards.

### **1.8.2 Arab countries:**

#### **a) Al-Hajri & Tatnall, (2008) titled “technological innovation and the adoption of internet banking in Oman”**

Omani banks continue to conduct most of their banking transactions using traditional methods. Given the prevalence of Internet technology adoption by the banking industry in developed countries, reasons for the lack of such innovation in developing countries such as Oman is of interest in any consideration of technological innovation. After providing some background on Internet banking, this article considers various factors that might act to determine whether a given technology is likely to be adopted by the banking industry in a developing country such as Oman, by being compared with a developed country like Australia. Data was collected from interviews with bank managers in each country, based on a consideration of each bank manager's perceptions of four factors that might affect their decisions to adopt, or not adopt Internet technologies: Relative Advantage, Organisational Performance, Customer/Organisational Relationship and Ease of Use. It thus addresses the question: What are the enablers and the inhibitors of Internet technology adoption in the Omani banking industry compared with those in the Australian banking industry?

#### **b) Achour, (2005) titled “an evaluation of internet banking and online brokerage in Tunisia”**

The first part of the study gives an evaluation of Internet Banking in this country, using a quality evaluation model of internet banking websites, which is derived from the existing Hersey's tailored model. The second part of this study, consists in a presentation of the Tunisian on line brokerage network. This research was conducted in March 2005 and shows that Internet based services in the financial sector are still in the early stages. Concerning Internet banking, only 5 among the 18 deposit banks are offering online services. The number and quality of these services vary from one bank to another and seems to them still limited. However, and despite of this late and small adoption of Internet Banking, banks seem today to be aware of Internet opportunities. In fact, they are all planning to move very rapidly to internet banking and to offer more sophisticated services for those who are already on the web. While developing their

Internet Banking sites, banks should take into account the quality of online products and services, the web site usability and its security which is crucial in Internet Banking. As shown in this study, effort should be done concerning the usability of existing web sites. Banks should also develop an appropriate marketing strategy in order to promote their sites and encourage clients to use online services. This promotion is currently absent and Tunisian consumers are not informed about new internet offers of their bank. This explains the current low profitability of operational sites. In terms of public policy and in line with its electronic government promotion policy, it is urgent for government to intervene at the level of public banks in order to make them improve the quality of their electronic banking services and in particular internet based ones.

This study has effectively showed that public banks are the less advanced ones in this field. Concerning on line brokerage, the study shows that among the 23 Tunisian brokers, only 6 have developed their own web sites. In addition, most of these web sites are offering basic services (stock quotes, financial market data, online orders and check accounts).

Brokers should though develop their on line business because transactions via Internet are rather simple to process and are probably more reliable and secure as compared to other means. In fact through brokerage online, investors can obtain financial data, make investment decisions and trade quickly. On the other hand, these services online reduce the risks of trade losses resulting from delayed processing of the orders, delayed quote or delayed flow of data. As shown in this study and concerning Tunisian online brokers, number of complaints and problems still exist including the inability to access a fully online trading service, the delayed execution of orders as well as other technical difficulties. To bring clients on the net, Tunisians brokers have to workout a bigger transparency in processing the transactions, and ways of tracking the status of the orders and of obtaining real time cash and securities positions. The delivery of these features in an efficient manner and at a low cost would ease a quick development of this business.

**c) Awamleh, Fernandes, (2005) titled "Internet banking :An empirical investigation into the extent of adoption by banks and the determinants of customer satisfaction in the united Arab Emirates"**

This study adopts the Diniz (1998) model to evaluate websites of foreign and local banks in the united Arab Emirates and through a survey of users ascertains factors that influence customer satisfaction of the internet banking service. These are convenience, independence , and security of internet banking transaction.

Results suggest that although the banking sector in the united Arab Emirates is a regional leader, internet banking in the United Arab Emirates is yet to be properly utilized as a real added value tool to improve customer relationship and to attain cost advantages. To identify factors influencing satisfaction of internet banking customers, data was collected from internet banking users in the United Arab Emirates. To examine the data as a factor analyses, multiple regression analyses were conducted. It was revealed that convenience and security of internet banking transactions have a significant impact on satisfaction. The effects of age, gender, number of years as an internet banking user were also explored . Security of internet banking transactions was significant for those using internet banking for more than two years, while not for others. Implications of results were discussed, and future research directions outlined.

**1.8.3 Asia:**

**a) Khan, (2007) titled "Adoption issues of internet banking in Pakistani firms"**

In the world of banking, the development in information technology has an enormous effect on development of more flexible payment methods and more –user friendly banking services . Electronic banking services are new , and the development and diffusion of these technologies by financial institutions is expected to result in a more efficient banking system. This technology offers the institutions alternative or non-traditional delivery channels through which banking products and services can be delivered to customers more conveniently and economically without diminishing the existing services level. In recent years , almost one fourth Pakistani banks have started to offer internet banking services to their customers . The purpose of this research was to explore and analyze the issues that influence Pakistani's firms intentions toward internet banking services adoptions. Based on a detailed literature review, a research model was developed .Five sub issues were selected from system trust area in order to

gain a better understanding of internet banking service quality and customer thoughts about these services. A qualitative research approach was used to get a better understanding of these issues. The empirical data were collected from three different Pakistani firms by using questionnaires and consulting case-studies. Data analyses were done in accordance with the research questions and research model. The findings from respondent data show that they have a greater level of worry regarding trust, and they do not have confidence to make any big financial transactions over internet, and have no satisfaction from internet banking services. Thus, lack of system security concerns as the prime reasons for slow adoption of internet banking in Pakistani firms.

Finally, the results from respondents' data and conclusions were drawn by answering the research questions.

**b) Soreze, (2007) titled "Keys factors that determine internet banking adoption in Thailand-Researcher design and methodology approach"**

The researcher setting in this study was in Bangkok, Thailand. Its objective came from the fact that internet banking customers gain more benefits than the traditional banking customers as they can access 24-hours services in everywhere. It is, however, revealed that internet banking services have been understood by the potential customers in spite of their availability. This demands the need for the research to identify the key factors that determine success and move intention of internet banking users toward their actual behavior.

The relevant literatures have been reviewed and indicate that the TPB and the TAM are crucial in predicting internet banking user behavior. However, other variables such as antecedents and perceived credibility are needed to enhance predicting power.

**c) Cheng, Lam and Yeung, (2006) titled "adoption of internet banking : an empirical study in Hong Kong "**

This study investigates how customers perceive and adopt IB in Hong Kong. The thesis developed a theoretical model based on the TAM with an added construct perceived web security. The thesis empirically tested its ability in predicting customers' behavioral intention of adopting IB. It designed a questionnaire and used it to survey a randomly selected sample of customers of IB from the yellow pages, and obtained 203 usable responses. The Author analyzed the data using structural modeling (SEM) to evaluate the strength of the hypothesized relationships, if any, among the constructs,

which include perceived ease of use and perceived web security as independent variables, perceived usefulness and attitude as intervening variables , and intention to use as the dependent variable. The results provide support of the extended TAM model and confirm its robustness in predicting customers intention of adoption of IB. This study contributes to the literature by formulating and validating TAM to predict IB adoption, and its findings are useful information for bank management in formulating IB marketing strategies.

**d) Yiu, Grant and Edgar, (2006) titled "Factors affecting the adoption of internet banking in Hong Kong –implications for the banking sector"**

This paper explores the adoption of internet banking by retail customers in Hong Kong . The paper attempts to make sense of internet banking in Hong Kong from three angles:

The current adoption rate of internet banking the influence of perceived usefulness, perceived ease of use, perceived risk and personal innovations in information technology and the potential impacts on the strategic activity of banking organizations operating in the Hong Kong market.

The research constructs were developed and based on the technology acceptance model and incorporated two additional elements of personal innovations and perceived risk. Hypotheses were constructed and then tested using T- test and persons correlation. It was found that certain factors did have apposite relationship with the adoption of internet banking such as strategy in the banking services sector can be refined to better meet the demands and profile of the Hong Kong market.

**e) Podder and Braja, (2005) titled "Internet banking an empirical investigation of customers behavior for online banking in new Zealand"**

This study investigates the reasons why customers' use of internet banking and whether the use differs across various customer demographics. The relationship between trust and loyalty and customer demographics was also analyzed. The results showed that customers of differing genders and ethnic backgrounds perceived different factors as important "checking account balance " and " checking bank statements "were identified as the two most popular services that culminate in recommendation to improve Internet banking services for customers .



#### **1.8.4 Africa:**

**a) Chiemeke, (2006) titled "The adoption of internet banking in Nigeria :An empirical investigation"**

This study examines the level of adoption of internet banking in Nigeria . Twelve large on line banks that retained their brand names after the consolidation were studied in terms of the functionality and interactivity of their websites. The used model is similar to that proposed by Diniz in 1998 , with an a doptional factor on security measures.

Main factors that inhibit the adoption of internet banking in Nigeria are security and inadequate operational facilities including proper telecommunications and power. The results reveal that internet banking is being offered at the BASIC level of interactivity with most of the banks having mainly information sites and providing little internet transactional services .The level of security of the banks was also low as most of the banks have not adopted 128 bit secure sockets layer (SSL) encryption security measures. Most of the banks perform extremely well in providing up –to date information. However , further improvements on security and provision of key ingredients of internet banking which includes confidentiality , effective communication integrity and availability , should be considered in order to satisfy customers requirements.

**b) Hoppe, Newman and Mugeru, (2001) titled “ Factors Affecting the Adoption of Internet Banking in South Africa”**

A research framework based on the theory of planned behaviour and the diffusion of innovations theory developed by Tan & Teo (2000) was used to identify the attitudinal, social and perceived behavioural control factors that might influence the adoption of Internet banking. The set of questions developed by Tan & Teo (2000) for their Singapore study was then used in an online questionnaire for SA Internet users with the aim of obtaining results which could be compared with the previous results.

The results were largely in agreement with those obtained in the Singapore study. It was confirmed that attitudinal and perceived behavioural control factors, rather than social influence play a significant role in influencing the intention to adopt Internet Banking services. In particular, perceptions of relative advantage, compatibility,

trial-ability and risk regarding Internet use were found to influence the intention to adopt these services.

There were 3 notable differences in the results. Firstly, Complexity was not found to be a significant factor in Singapore, whereas it was in this study. In addition to this, Government support and banking needs were found to be factors in Singapore, but neither was found to be significant from the SA results. The implications of the study are discussed and various conclusions are reached.

### **1.8.5 Europe:**

#### **a) Vainio, (2006) titled "Factors influencing corporate customers acceptance of internet banking - Case of Scandinavian trade finance customers"**

The purpose of this research is to identify the factors that influence corporate customers adoption of internet banking services in Denmark, Finland, Norway and Sweden. The hypotheses are empirically evaluated by using trade finance customers of a scandinavian bank as the target sample.

TAM is the primary basis for the study. The information gathered from former studied that are mainly concentrating on private customer acts as a foundation for building an extension of TAM suitable for corporate customers.

Due to the quantitative nature of the study , the results are analyzed with statistical measures. The analysis reveals that corporate users are not motivated by the same factors as private users. In order to become internet banking customers , it is extremely important for corporate users to have a system that is easy to use and operate with full support from the bank.

#### **b) Mattile and Pento, (2003) titled "Internet banking adoption factors in Finland"**

This study finds out factors which have define consumers adoption of internet banking in Finland .Finland is a world leader in electronic banking, and over 39.8 percent of all the banking transactions were made over the internet. using the data of a large survey. The Author has developed a cognitive model of the factors which affect the adoption of internet banking. prior technology experience ,personal banking experience, reference group influence , and security concerns are found to be the main factors. Demographic characteristic and overall perceptions about internet banking were found to have a significant effect on the adoption.

Consumers' use of online banking services in Finland is the highest in the world. Nordea has 1.4 million online customers, and 3.2 million logons monthly. Osuuspankki Group was the second largest bank group in Finland with 500 000 online customers. All the banks offer a full line of Internet services: basic banking services, stock and bond trading, loan applications, consumption and education loan decisions, electronic bill presentment, international payments, and electronic salary presentment.

The demographics showed that the respondents of the sample were quite representative of the population in Finland on several variables. However, the age distribution of this sample differed from the national one by being more older people oriented. The age mode of the sample was between 35-49 years whereas 22.4 percent of Finnish population belong in this age group. Less than one percent in our sample were under 24 years compared to 30.6 percent of the total population. This difference may be partially explained by the fact that many young bank customers were not reached at their permanent address, to which the questionnaire was sent. Also one must keep in mind that only few children or teenagers actually own their own bank account, and therefore they may not be listed as customers in the bank's customer database.

The income of the respondents was also somewhat higher than that of the nation's consumers, but this is explained by the fact that the stratified sample intentionally produced an overrepresentation of the users of internet banking, and these users tend to have more income. Over 42 % of all respondents had an annual income over 37842e whereas the national average annual income was 25380e year 2000.

**c) Corrocher, (2003) titled "Internet adoption in Italian banks: An empirical investigation"**

This study examines the determinants of adoption of internet banking among Italian retain banks in particular it aims at investigating the nature of internet banking in relation to traditional banking activity. In doing so, the study analyses the role of firm-specific and market-specific characteristic in affecting the decision to provide financial services via the internet .The empirical analysis indicates that the adoption of internet banking depends upon the characteristics of traditional banking activities particularly in terms of existing networks of distribution and existing customers.

A first conclusion is that even in the age of the Internet, traditional banks will survive, since their core functions cannot be entirely replaced by the Internet. In

principle, the possibility of banking via the Internet eliminates the need to develop a network of branches. However, the recent evolution of the banking sector, particularly in Southern Europe, has not witnessed a decrease in the number of branches per bank, suggesting that the existing network is still crucial for banks to maintain the relationships with their customers.

Second, financial intermediaries need a large amount of capital to reduce the risk of their activity, which means that they need a large customer base to diversify and benefit from economies of scale and scope.

Furthermore, the rise of the Internet as a distribution channel requires a great effort to build up a reputation in the sector because there will be a larger supply of banking services. With information overflow characterizing the Internet, reputation may become an important asset for financial intermediaries. In this respect, large banks might retain some advantages in the future, although the growing demand for financial services will be satisfied also by new entrants.

**d) Abdallah, (2004) titled "Factors affecting the adoption of internet banking :The TRNC case "**

This study discusses the factors that affect the adoption of internet banking in the context of the Turkish Republic of northern Cyprus (TRNC). A questionnaire has been prepared and distributed in order to collect the empirical data. A sample size of 231 respondents has been analyzed in this study. The findings and results of the research were based on the regression analysis and the one-ANOVA statistical test

The results suggest that among the attitudinal variables, relative advantage, compatibility, internet experience, banking needs and trial ability were found to affect the adoption of internet banking. The perceived behavioral factors are considered in this study were both irrelevant to the adoption.

**1.8.6 Australia:**

**a) Durkin, Jennings, Mulholland and Worthington, (2007) titled "Key influencers and inhibitors on adoption of the internet for banking"**

This thesis reports on a study which examined customer stated propensity to purchase financial products on-line at varying levels of complexity. Findings underline the importance of banks to achieve a customer-oriented balance between face to face

relationship, managed activity and online enablement and to understand how this balance varies according to customer and complexity of product. Strategic marketing implications for the case bank are discussed.

The concept of product complexity was explored at all levels of analysis in this paper; literature review and the quantitative research of Stage 2 in the study. A consensus was reached as to how various products could be classified according to complexity.

The quantitative findings from the UK case bank certainly supported the contention that more simple products were better suited to Internet delivery. This is based on the fact that the greatest explanation for variability in the dependent variables could be explained at these lower levels. At medium and complex product levels there was an insufficient amount of variability explained regarding the suitability of the Internet for purchases of these products in a meaningful way.

Implications for the case bank were discussed and more general implications for the financial services industry regarding the need to place a greater emphasis on proactively advertising the key benefits of Internet banking. Also evident from the analysis was the risk that in the absence of service differentiation in retail branch outlets, and an understanding by customers that this added value service existed, there was the possibility that customers would be persuaded to adopt the Internet in preference to engaging in branch visits.

**b) Kuisma, Laukkanen and Hiltunen, (2007) titled "Mapping the reason for resistance to internet banking :A ease-end approach"**

The purpose of this paper is to identify the reasons for consumer resistance to internet banking.

The special interest is to explore resistance among those bank customers who already have valid contracts for internet banking, but prefer to pay their bills via ATM. The objective is to identify this characteristic generating resistance to internet banking and their connections to values of individuals. In order to achieve the objective , 30 Finnish bank customers were interviewed in depth using the means –end approach and the laddering interviewed in depth functional and psychological barriers arising from service, channel, consumer ,and communication-related means-end chains inhibiting internet banking adoption. The contribution of the paper lies in achieving amore

profound understanding of consumer resistance to internet banking and further, in offering suggestions and practical advice for service's decision –making.

The findings of this particular study suggest that banks can identify areas that have an effect on resistance to adopt Internet banking services. The concern regarding a physical receipt within usage barrier, for example, can be eased by informing the customers that the receipt from the Internet banking is “official” for e.g. the Finnish authorities. In addition, the feelings of insecurity and learning issues within value barrier could be avoided by proper marketing campaigns, communications, customer training and Internet banking design. Most of the issues identified seem to be achievable to influence with proper communications, and most of all, by providing good service in the Internet channel.

**c) Lichtenstein, (2006) titled “understanding consumer adoption of internet banking: an interpretive study in the Australian banking context”**

This paper reports key findings from an interpretive study of Australian banking consumer experiences with the adoption of internet banking. The paper provides an understanding of how and why specific factors affect the consumer decision whether or not to bank on the internet, in the Australian context. A theoretical framework is provided that conceptualizes and links consumer-oriented issues influencing adoption of internet banking. The paper also provides a set of recommendations for Australian banks. Specifically, the findings suggest that convenience is the main motivator for consumers to bank on the internet, while there is a range of other influential factors that may be modulated by banks. The findings also highlight increasing risk acceptance by consumers in regard to internet-based services and the growing importance of offering deep levels of consumer support for such services. Gender differences are also highlighted. Finally, the paper suggests that banks will be better able to manage consumer experiences with moving to internet banking if they understand that such experiences involve a process of adjustment and learning over time, and not merely the adoption of a new technology.

**1.8.7. America:**

**a) Gibson, (2007) titled “Chinese Americans and Internet Banking”**

Cultural factors, especially language, are important in studying the phenomenon of Internet banking adoption by Chinese Americans. As part of a study of

Internet banking adoption by Chinese Americans, research design was an important issue. This was particularly true when considering the high percentage of Chinese Americans that speak a language other than English in their homes. The importance of research design was also true given the cultural differences between Americans and Chinese. In order to insure that a representative sample of this population was surveyed, it was important to develop a Chinese language version of a survey along with an English version and to consider cultural differences between Americans and Chinese when collecting data. The results showed that, when given a choice of language surveys, 59% of the participants preferred the Chinese version and that there were significant differences between the responses to the English version as compared to the responses to the Chinese version.

**b) BAUER, (2004) titled “perceived risk and internet banking”**

Bankers and consumers are both interested in the potential for Internet banking.

Individuals have been adopting the Internet in large numbers, with more than half of all American households having some form of Internet access by 2000. Banks too have been developing their infrastructure to address what they perceive as a growing demand for online services, with 84% of all accounts offering some form of Internet banking by 1999. However, the adoption rate has not followed the hype. By 2000, the proportion of households using Internet banking was less than 10%. This research looks at the critical factors needed to promote banking adoption from the consumer's perspective. We use a consumer utility maximization framework, and include in the consumption bundle the possibility of using conventional, phone-banking and/or Internet banking. Phone-banking is added because it could be seen as a substitute for Internet banking. Many of the same services are available on both, and many of the restrictions are the same, i.e., no cash can be withdrawn from either. Using the utility maximization approach, we are able to conclude that adoption depends on marginal utility gain, marginal cost and a risk premium; where risk premium is the product of subjective probability of adverse outcomes from the technology and the utility of each adverse outcome. We use logistic regression to explore what factors are important to consumers adopting Internet banking in general. A conditional logic model is used to estimate the sensitivity of different decision factors to the marginal propensity of phone-bank customers adopting Internet banking and vice-versa.

The overall utility maximization model is consistent with our results from these

logistic regressions. The results presented in this research also support the hypothesis that the subjective probability of security problems experienced by Internet bank customers is not the same for all customers, and that it depends on their level of education. Varying subjective probability means that the risk premium can be affected by exogenous factors, in this case education. In other words, banks could affect the risk premium of their customers, thereby affecting adoption rates.

### **1.9. Previous studies discussion**

The followings can be concluded from the previous mentioned studies and the others discussed studies through this thesis:

1. This subject of internet banking still new in the Arab countries.
2. There is no such study in Palestine.
3. most of these studies took place in foreign countries that their culture is different from Middle East culture ;culture was not a factor among their studied factors for most of them, but here in our study, there was a factor to study the influence of culture of adopting internet banking especially even the related internet banking adoption theories origin is the west too.
4. The studies that took place in Arab countries ignored the influence of culture on the decision of the customers to adopt internet banking.
5. TAM was the basic model in the most of the previous studies, and other external variables were added to enhance the performance of this theory.

### **1.10. Summary:**

This chapter indicated the importance of internet and its users numbers which exceeds year by year, then explained the importance and usage of internet banking. The problem of the thesis is indicated by the question; why many bank customers do not consider the internet is an option for performing their bank transactions? Other questions were added to this main question, then the chapter indicated the research variables, hypothesis, objectives, importance, methodology, the previous studies and thesis structure.



**Chapter Two:**  
**Internet Banking Overview**

## **2.1 Introduction:**

Our century is the internet revolution century as the internet changed not only the way of doing our businesses but also our way of thinking as well.

The Internet is believed to change the way firms interact with their customers and thus the way they initiate, develop and terminate relationships with them (Mals, 2000). The Internet may also make it easier for the consumers to search and compare the offerings of different firms. Fraser, et al, (2000) argued that in the future, customers will be able to use the Internet to order goods and services from companies all over the world, and pay for them over the Internet with minimal risk.

## **2.2 Internet Banking, Electronic Banking and Online Banking**

### **differences:**

Internet banking can be defined as the use of technology to communicate instructions and to receive information from a financial institution where an account is held. Internet banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. When first introduced, Internet banking was used mainly as an information presentation medium in which banks marketed their products and services on their Web sites. With the development of asynchronous technologies and secured electronic transaction technologies, however, more banks have come forward to use Internet banking both as a transactional as well as an informational medium(Burnham 2008).

But the term electronic banking is almost generic in its nature and therefore it is mostly used without any further explanation or definition. It should be reminded that electronic banking is not equal to the term Internet banking although the latter is undoubtedly the most widespread type of it. Electronic banking includes several traditional services like “telephone banking”, “credit cards, debit cards”, and “ATMs”. The more recent additions are Internet banking, and “mobile banking”. Electronic banking is also known as electronic funds transfer (EFT) and basically is simply the use of electronic means to transfer funds directly from one account to another. (Burnham 2008).

But when we speak about online banking, we find that online banking was first introduced in the early of 1980s (Kalakota, 1997). Online banking provided the customer with an application software program that is operated on the customer's PC (Liao, 1999). The customer then dialed into the bank via a modem, downloaded, and operated the programs that are resident on his or her PC.

Thus internet banking lay under the umbrella of E banking without a need to a specific software to be installed on the customer's PC just like online banking.

### **2.3 Internet Banking services:**

Internet banking service is defined as a banking service that allows customers to access and perform financial transactions on their bank accounts from their computers with an Internet connection to the bank web site, such as Web browser software Netscape Navigator, or Microsoft Internet Explorer (Well Fargo Bank, 2007). Since 1995, the internet has become less expensive and more available for customers to access information, as well as exchange products and services world wide from their personal computers and modems at their home and/or work. The increasing population of Internet customers and demand for payments via the Internet has an impact on banking services provided by many banks, forcing them to extend their banking services to customers on the Internet.

Financial services web sites can perform a variety of functions ranging from basic information provision to full transactional capability. Knight et al. (2006) identifies four separate levels of information provision. At the most basic level, an Internet presence merely provides information about the financial institution, with no interaction between the institution and customer other than a possible e-mail link. The next level allows the institution to receive information, such as an electronic loan application. The third level offers the customer the opportunity to share information, such as account balances or transaction details. The identified highest level allows the customer to process information.

### **2.4 Types of internet banking:**

Diniz (1998), Henry (2000) and MU Yibin (2005) identify three functional level/kinds of internet banking that are currently employed in the market place and these are: *Informational, Communicative and Transactional websites as the following:*

**a) Informational (Websites):**

This has been identified as the first level of internet banking. Typically the bank has the marketing information about the bank's products and services as a stand alone server. The risk is very low as informational systems typically have no path between the server and the bank's internal network.

**b) Communicative/Simple transactional (Websites):**

This type of internet banking allows some interaction between the bank's systems and the customer. The interaction is limited to e-mail, account inquiry, loan application or static file updates (name and address). It does not permit any "funds transfers".

**c) Advanced Transactional (Websites):**

This level of internet banking allows bank customers to electronically transfer funds to/from their accounts, pay bills and conduct other internet banking transactions.

## **2.5 Benefits of internet banking:**

The emergence of the Internet has had a significant impact on the diffusion of internet banking. With the help of the Internet, banking is no longer bound to time or geography. Consumers all over the world have relatively easy access to their accounts 24 hours a day, seven days a week. Therefore, internet banking provides many benefits to both banks and their customers (Karjaluo, 2008).

### **2.5.1 For Banks:**

Various studies have been conducted on internet banking and the benefits that accrue from the use of this innovation for banks are summarized in table (2.1):

Table(2.1): The benefits of internet banking for banks

No.	Benefit	Related Literature
1	Cost Reduction	Noth et al 2006, Al-Sukkar and Hasan (2005) and Singh (2004), Corrocher (2002), Chang (2003), Sullivan and Wong (2005).
2	Increased customer base	Bradley and Stewart (2003), Jen-Her Wu et al 2006 and Singh (2004), Corrocher (2002).
3	Enable innovation and development of non-core business services	Noth et al. (2006), Karem (2003), Corrocher (2002), Chang (2003).
4	Marketing and communication	Jayawadhera and Foley (2000), Karem (2003), Corrocher (2002).
5	Increased customer loyalty and satisfaction	Jen-Her Wu et al 2006 and AL-Sukkar and Hasan (2005), Noth et al. (2006).
6	High profit customers	Noth et al. (2006).
7	Ability to attract new customers	AL-Sukkar and Hasan (2005).

### 2.5.2 For customers:

Internet banking helps to provide a full range of services including some services that are not offered at branches. The greatest benefit of internet banking is that it is cheap or even free to customers. However, price seems to be one factor militating against internet banking (Sathye, 2008).

Internet banking, in general, is not limited by time or place. It has also been argued that the electronic banks are more likely to change in response to customers demands (Brogdon, 2008). Internet banking has the advantage that the customer cuts down on traveling to and from a bank branch. In this way, internet banking saves time and money, provides convenience and accessibility, and has a positive impact on customer satisfaction. Customers can manage their banking affairs when they want, and they can enjoy more privacy while interacting with their bank. It has been claimed that internet banking offers the customer more benefits at lower costs (Mals, 2008)

## **2.6 Advantages and disadvantages of internet banking:**

### **2.6.1 Advantages:**

Internet banking offers certain advantages in comparison with traditional banking methods. According to Wong (2005), internet banking is time saving and convenient since a customer can bank seven days a week and twenty-four hours a day without physically visiting a branch, and transactions are executed and confirmed almost immediately. Martins, et al., (2006) indicates that internet banking offers clients security as they can choose their own secret PIN (Personal Identity Number), thereby, preventing unauthorized access to their accounts. Client safety is also improved by reducing the need to carry around large amounts of cash.

### **2.6.2 Disadvantages:**

Wong (2005) argues at the same time internet banking has also disadvantages. The main one being the cost of purchasing and maintaining is suitable for computer equipment, or obtaining access to such equipment. This is an additional cost which is not presented when using traditional banking or other internet banking services such as ATMs. Pahnla (2006) points out that cash can neither be deposited nor withdrawn with internet banking, and so inevitably there is the inconvenience of having to visit the local branch or ATM. Another disadvantage of internet banking is the possibility that security may be threatened by computer hackers and fraudsters.

Doing transactions on the internet can be very impersonal. In other words, you only do business with the use of a computer. No individual to receive and check your money or correct some wrong information that you might have written on a certain form. And so for people conformability, dealing with real people who provide personalized services and using paper and money, internet banking is not ideal (webinternetbanking.com,2009).

Sometimes internet banking is difficult for first timers. For a first time user, navigating through a website of an internet bank may be hard and may take some time. Opening an account could also take time as some sites ask for numerous personal details including a photo identification which can inconvenience the potential customer. Because of this complexity, they may be discouraged to use

this internet banking service. Tutorials and live customer support may be provided, though, to help the client in his or her needed tasks so it's best to take the time to know the virtual environment (webinternetbanking.com,2009).

At the end we can conclude that the advantages of internet banking exceeds the disadvantages especially for the institutions and companies.

## **2.7 Internet banking in the world:**

### **2.7.1 History:**

The precursor for the modern home internet banking services were the distance banking services over electronic media from the early '80s. The term internet became popular in the late '80s and referred to the use of a terminal, keyboard and TV (or monitor) to access the banking system using a phone line. 'Home banking' can also refers to the use of a numeric keypad to send tones down a phone line with instructions to the bank. Internet services started in New York, 1981 when four of the city's major banks (Citibank, Chase Manhattan, Chemical and Manufacturers Hanover) offered home banking services (easier.com,2009) using the "videotex" system. Because of the commercial failure of videotex these banking services never became popular except in France where the use of videotex was subsidized by the telecom provider and the UK, where the "Prestel" system was used (easier.com,2009).

The UK's first home internet banking services(silicon.com,2009) was set up by the Nottingham Building Society (NBS) in 1983. The used system was based on the UK's Prestel system and used a computer, such as the "BBC Micro", or keyboard connected to the telephone system and television set. The system (known as "Homelink") allowed on-line viewing of statements, bank transfers and bill payments. In order to make bank transfers and bill payments, a written instruction giving details of the intended recipient had to be sent to the NBS who set the details up on the Homelink system. Typical recipients were gas, electricity and telephone companies and accounts with other banks. Details of payments to be made were input into the NBS system by the account holder via Prestel. A cheque was then sent by NBS to the payee and an advice giving details of the payment was sent to the account holder. "BACS" was later used to transfer the payment directly.

"Stanford Federal Credit Union" was the first financial institution to offer internet internet banking services to all of its members in Oct, 1994. (silicon.com,2009).

Over the past decade Internet banking use has grown drastically along with other forms of Internet use.

### 2.7.2 In America:

In 1998, when the Pew Research Center switched to ask all internet users if they ever paid bills or banked internet, 13% of this larger group, or about 10 million American adults, said yes

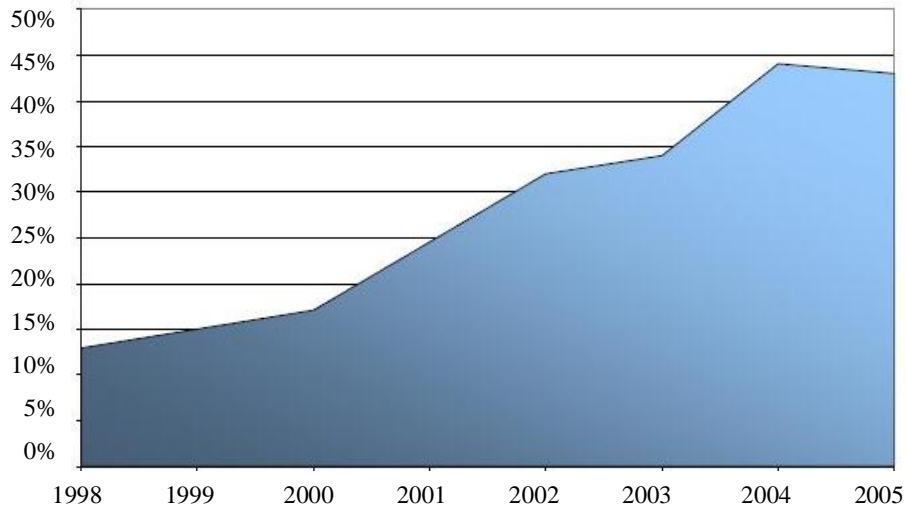


Figure (2.1): Percentage of internet users who bank online

(source: pewinternet.org, 2005)

By 2000, when the Pew Internet & American Life Project filled the first survey, the proportion of internet users who said they ever did any banking online had risen to 17% or about 16 million Americans. Over the next few years, internet users ramped up a range of online financial and transactional activities, trusting more and more of their personal financial information to the Web. Among categories of activities, online banking and online auctions grew the most rapidly, especially among men, home “broadband” users, and internet users under the age of 50.



Other forms of financial housework joined banking as popular online activities. In January 2005, 38% of internet users reported paying bills online. In December of that year a study fielded by Harris Interactive found that 35% of bills were paid online, up from 25% the year before. By comparison, 37.5% of bills are paid by paper check and 27.5% are paid some other way, such as in cash or by debit card ( pewinternet.org,2009).

If we moved to the most recent studies in the American society concerning internet banking; American Bankers Association (ABA) Survey shows online banking is most frequent delivery channel for first time which was performed by Jim Bruene on August, 2009; according to its annual telephone survey of 1000 U.S. consumers, online/Internet banking is now the most common banking method among U.S. consumers.

The following table (2.2) indicates the total:

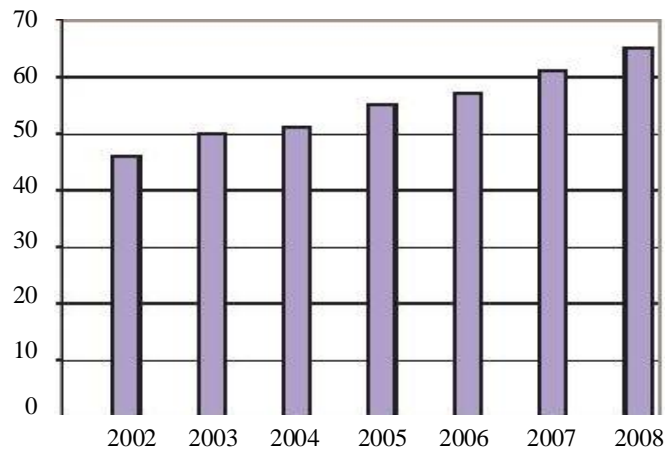
Table (2.2): The respondents rates of the question  
*“Which banking method do you use most often?”*

Channel	2009	2008	Net Difference	Percent Change
Internet	32%	25%	Up 7.5 points	+ 30%
Branches	28%	34%	Down 6.6	(24%)
ATM	22%	28%	Down 5.6	(20%)
Mail	11%	9.1%	Up 1.9	+21%
Telephone	5.8%	4.1%	Up 1.7	+41%
Mobile	0.6%	1.0%	Down 0.4	(40%)
<i>Total</i>	<i>100%</i>	<i>100%</i>	--	--

(Source: American Bankers Association, telephone survey of 1000 U.S. consumers conducted by Ipsos-Reid, on August 14-16-2009)

### **2.7.3 In Britain:**

In 2008, 16.46 million UK households had Internet access. This represented 65 per cent of households and an increase of 1.23 million households since 2007. These estimates are derived from the 2008 National Statistics Omnibus survey.



Figure(2.2): Household with access to the Internet, Great Britain, 2002 to 2008 (source: National Statistics Omnibus survey, 2008)

Of all UK households, 56 percent had broadband Internet access in 2008, an increase from 51 per cent in 2007. Of the UK households with Internet access, 86 per cent had a broadband connection in 2008.

Great Britain has seen an average increase of over 1 million households per year connecting to the Internet since 2004, reaching a total of 16.05 million in 2008.

Table(2.3): Household with access to Internet, Great Britain and UK, 2002 to 2008

Great Britain				UK			
Year	Percent	Number of Household	Percentage change on previous year	Year	Percent	Number of Household	Percentage change on previous year
2002	46	11.02m	-	2002	-	-	-
2003	50	11.88m	8	2003	-	-	-
2004	51	12.16m	2	2004	-	-	-
2005	55	13.26m	9	2005	-	-	-
2006	57	13.93m	5	2006	57	14.26m	-
2007	61	14.94m	7	2007	61	15.23m	7
2008	65	16.05m	7	2008	65	16.46m	8

(Source: [www.statistics.gov](http://www.statistics.gov), 2008)

Nearly half of recent Internet users had used Internet banking (49 per cent). This activity, along with online selling proved to be most popular among the 25-44 age group (at 57 per cent and 24 per cent respectively).

#### **2.7.4 A round the world:**

##### **a) In Greece:**

The Internet is now becoming a popular tool in Greece. According to a survey made by the Observatory for the Greek Information Society, the percentage of Internet users in Greece was 20.8% in 2005, while the percentage of Internet access (irrespective of having a personal connection) was 23%. In addition, it was estimated that the majority of Internet users include men, younger age groups, residents of Athens and Thessalonica (the two biggest cities), as well as higher education individuals.

Internet access is mainly accomplished through a dial-up connection (67%), while “ISDN” follows with 21% and broadband with only 8%. However, according to the Observatory for the Greek Information Society, there were 167,000 broadband connections (1.5% of the population) in the beginning of 2006. In addition, there are over 15,000 new broadband applications every month, which together with the increasing rate of personal computers sales show great prospects in the future use of Internet in Greece.

##### **b) In Norway:**

According to a study took place in Oslo, at 23 February 2009, Norwegians are using Internet banking more than ever before, and over the last three years Internet banking usage has more than doubled. These trends are identified by “EDB” Business Partner's annual statistics for 2008. The number of invoices paid through Internet banks increased by 12% in 2008, and the number of Internet banking account holders with Norwegian banks passed the 4 million milestone. This means that virtually every adult in Norway now uses Internet banking to pay accounts and manage his or her personal finances (allbusiness.com,2010).

"We see that people are becoming ever more professional in their use of Internet banking, and we expect to see Internet banking develop over the next few years in pace with users' needs and expectations to become a complete control panel and administrative tool for Norwegians to manage their private finances. In many ways, banking customers are becoming their own bank managers", explains Helge Moan, Director for Solutions and Services Bank & Finance at EDB.

Explosive growth in Internet banking since the start in 1996, Internet banking has had a massive effect on how Norwegian banking customers manage their finances. Up to around 10 years ago, Norwegians paid their bills by posting a giro payment, through telephone banking or over the counter at their bank. Today, people pay their bills almost exclusively from their Internet bank accounts, and Internet banking has become the main channel for contact between banks and their customers (allbusiness.com,2010).

**c) In China:**

China Financial Certification Authority has published a survey report on China's Internet banks in 2008(chinatechnews.com). According to the report, the active users of personal Internet banks in China are mainly adults between 25 and 44, accounting for 62.2% of the total users. Of this total, the ratio of male users to female users is six to four.

Analyzed by professions, four kinds of people, including general staff of companies, corporate managing staff, professional technicians and students, are the major users of the online bank services. The average monthly income of these active Internet bank users is about CNY3,700 and their family monthly income is about CNY7,400.

In addition, in medium and large-sized Chinese cities, about 19.9% of the population use personal Internet banks while in the top ten most economically developed Chinese cities, the proportion reaches 44.9%, which is 7.1% higher than that of 2007.

The most frequently used online bank service is account inquiry with a utility rate of 67.6%, followed by online payment and online remittance and transfer with utility rates of 53.5% and 42.9%, respectively. The least used services include credit card repayment and personal loan acquisition.

### 2.7.5 The previous growth of internet banking around the world:

The graph below shows the rapid growth of Internet banking around the world from 2000-2004. While Internet banking is still most prevalent in the United States and western Europe, other parts of the world are gaining ground, as Internet use in Japan increased 8.72 times between 2000-2004, and use in other parts of the world not specifically designated. In the chart, it is increased 6.1 times during this period.

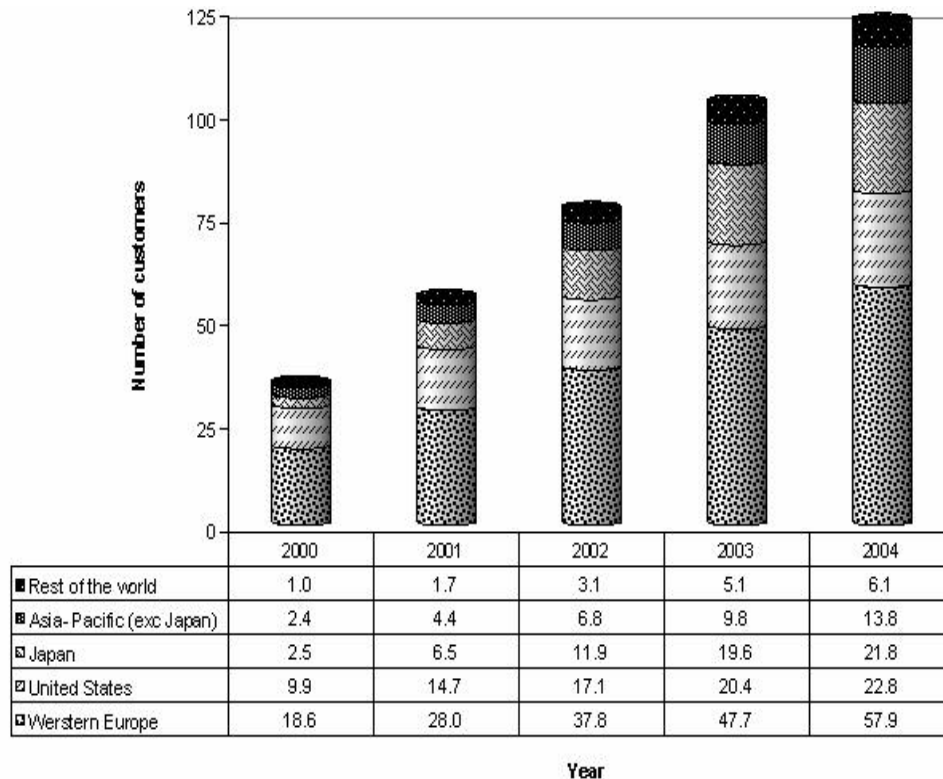


Figure (2.3): internet banking comparisons

(Source: Vignes Perumal & Bala Shanmugam,  
Internet Banking: Boon or Bane?, 2004)

- **Growth Tempered by Risk:**

While the number of Internet banking users in absolute terms has grown and will continue growing, the previous figure (2.3) demonstrates that the percentage of Internet users engaging in Internet banking activities has leveled off. In fact, it has slightly decreased - since 2004. A possible reason for this is what analysts have called the "trust gap"; many customers have become hesitant to bank online in light of the ever-increasing security risks posed by the Internet.

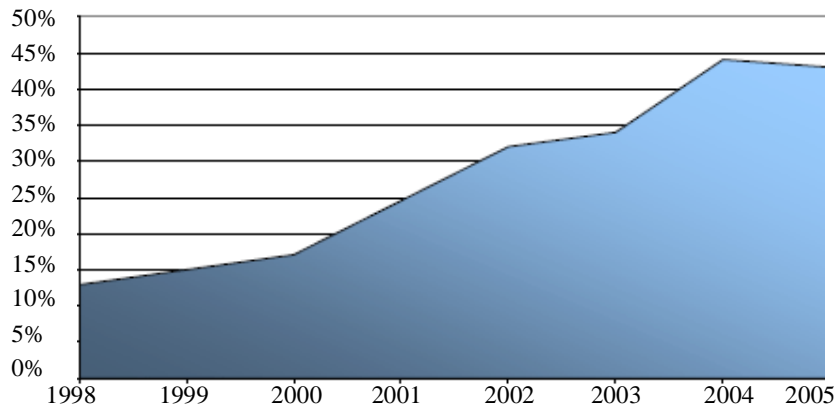


Figure (2.4): Percentage of Internet Users who bank online  
(Source: Pew Internet & American Life Project, Jun. 14, 2006)

As shown by the table(2.4), the results of a 2005 survey by business research organization, The Conference Board, demonstrate that American consumers are more concerned about security for online financial transactions than about security for any other type of online activity.

Table (2.4): US online Households' level of Concern Regarding security When Using the Internet for Select Activities, Q2 2005 (as a % of respondents)

Concerns	Extremely concerned	Somewhat concerned	Not very concerned	Not at all concerned
Financial transactions	57.4%	24.1%	10.9%	7.6%
Purchasing products	48.4%	32.8%	13.1%	5.7%
Personal communications or e-mail	29.2%	36.0%	26.0%	8.8%
Using search engines	24.4%	33.4%	27.3%	14.9%

Note: n=10,000 a household is classified as being online if the household head reports being online at least monthly this includes 74.2% of the respondents

(Source: David Hallerman, Worried Financial Consumers, iMEDIA CONNECTION, Oct. 21, 2005)

Thus, addressing the various risks of Internet banking is more important than ever.

### 2.7.6 selected international internet banks:

#### 1) Security First Network Bank, ([www.SFNB.com](http://www.SFNB.com)):

It is the first Internet bank to be The Federal Deposit Insurance Corporation (FDIC)-insured and approved by the Office of Thrift Supervision to operate on the World Wide Web. security first network bank, created a new channel for the delivery of financial services and has proven itself to be the pioneer bank of the Internet Age.

*from its services:*

- Insuring deposits.
- Examining and supervising financial institutions for safety and soundness and consumer protection.
- Managing receiverships.

#### 2) First Internet Bank (IB), ([www.firstib.com](http://www.firstib.com)):

With online banking from First IB, you'll be able to check your balances, pay bills, and transfer funds day or night, from anywhere in the

world. Of course, you probably expect that from an online bank. What you might not expect are the services they have added to enhance your online banking experience. First IB customers use their online banking site to:

- Order and re-order checks
- View copies of cancelled checks (front and back)
- Get deposit history about checking accounts or savings accounts
- Change a mailing address
- Set up funds transfers
- Redeem a Compact Disk
- Download transactions to Quicken or Microsoft Money

Plus, First IB processes transactions in real-time, so you'll always have up-to-the-minute information.

### **3) Citibank,( [www.citibank.com](http://www.citibank.com)):**

Citibank is a major international bank, founded in 1812 as the *City Bank of New York*, later *First National City Bank of New York*. Citibank is now the consumer banking giant arm of financial services Citigroup, one of the largest companies in the world, it is the largest bank in the United States by holdings.

With online Banking, you can do just about everything you need to do without ever visiting a branch or calling.

- Free online bill payment – Make payments to virtually anyone in the U.S. anytime.
- E-mail and wireless alerts – Have account updates delivered to your cell phone or e-mail.
- Online bank statements – Receive your monthly statement online instead of by mail.
- Online check images – View and print checks you've written that have cleared.



- Extensive transfer services – Move money within the U.S. or abroad and to citi or non-citi accounts.
- Safe Web Fraud Protection – Protects you against unauthorized transfers in your deposit account.
- 24/7 customer support – Call or send us a message online.

With Online Banking, you can do just about everything you need to do without ever visiting a branch or calling.

#### **4) HSBC, ([www.hsbc.com](http://www.hsbc.com)):**

Headquartered in London, HSBC is one of the largest banking and financial services organizations in the world. HSBC's international network comprises around 8,500 offices in 86 countries and territories in Europe, the Asia-Pacific region, the Americas, the Middle East and Africa.

from its services:

Everything from checking your statements and paying bills to opening new savings accounts and tracking your investments. If you're a HSBC Premier customer, you can do even more.

## **2.8 Internet banking in the Gaza Strip:**

Currently, there are 23 banks operating in Palestine through a network of more than 180 branches and representative offices. Of this total, there are eleven foreign banks that comprise of eight Jordanian and two Egyptian banks, in addition to one branch for the HSBC. Three of the banks operating in Palestine are Islamic and the remaining are commercial non-Islamic banks. (pma.ps,2010).

From all of these banks there are only twelve banks working in the Gaza Strip and at the same time having their own websites; table (2.5) indicates these banks and the internet banking services that they offer, as follows:

Table(2.5): Working banks in the Gaza Strip and their offering internet banking services

No.	Bank name	Applied internet banking types
1	Bank of Palestine	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> <li>- about money exchange prices.</li> <li>- about interest rates, new products, etc.</li> <li>- Follow up the bank news.</li> <li>- Check "FOREX" rates.</li> </ul> <p><b>b) Communicative/Simple transactional website:</b></p> <ul style="list-style-type: none"> <li>- View your account balances and statements.</li> <li>- Request cheque books.</li> <li>- E mail contacts.</li> </ul> <p><b>c) Advanced Transactional website:</b></p> <ul style="list-style-type: none"> <li>- Transfer money among your accounts inside the bank of Palestine only.</li> </ul>
2	Palestine Islamic Bank	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> <li>- about money exchange prices.</li> <li>- Follow up the bank news.</li> </ul> <p><b>b) Communicative/Simple transactional website:</b></p> <ul style="list-style-type: none"> <li>- The interaction is limited to e-mails only.</li> </ul>
3	Arab Islamic Bank	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> <li>- About market closed rates.</li> <li>- About money exchange prices.</li> <li>- Follow up the bank news.</li> </ul> <p><b>b) Communicative/Simple transactional</b></p>

		<p>website:</p> <p>The interaction is limited to e-mails only.</p>
4	Al-Quds Bank	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> <li>- about money exchange prices.</li> <li>- about interest rates, new products, etc.</li> <li>- Follow up the bank news.</li> </ul> <p><b>b) Communicative/Simple transactional website:</b></p> <ul style="list-style-type: none"> <li>- The interaction is limited to e-mails only.</li> </ul>
5	Palestine Investment Bank	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> <li>- about money exchange prices.</li> <li>- Follow up the bank news.</li> </ul> <p><b>b) Communicative/Simple transactional website:</b></p> <ul style="list-style-type: none"> <li>- The interaction is limited to e-mails only</li> </ul>
6	Bank of Jordan	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> <li>- Follow up the bank news.</li> </ul> <p><b>b) Communicative/Simple transactional website:</b></p> <ul style="list-style-type: none"> <li>- Order Cheque Book to be collected from your branch.</li> <li>- View Balance Summary.</li> <li>- The interaction is through e-mail, account inquiry.</li> </ul> <p><b>c) Advanced Transactional website:</b></p> <ul style="list-style-type: none"> <li>- Automated payment; for different types of invoices and bills.</li> <li>- Electronically transfer funds to/from their accounts.</li> </ul>

7	Cairo Amman Bank	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> <li>- Follow up the bank news.</li> <li>- about money exchange prices.</li> </ul> <p><b>b) Communicative/Simple transactional website:</b></p> <ul style="list-style-type: none"> <li>- View Balance Summary.</li> <li>- The interaction is through e-mail, account inquiry.</li> </ul>
8	The Housing Bank of Trade and Finance	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> </ul> <p><b>b) Communicative/Simple transactional website:</b></p> <ul style="list-style-type: none"> <li>- View Balance Summary.</li> <li>- The interaction is through e-mail, account inquiry.</li> </ul> <p><b>c) Advanced Transactional website:</b></p> <ul style="list-style-type: none"> <li>- Automated payment; for different types of invoices and bills.</li> <li>- Electronically transfer funds to/from their accounts.</li> </ul>
9	Egyptian Arab land bank	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> </ul>
10	The Arab bank	<p><b>a) Informational website:</b></p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> </ul> <p><b>b) Communicative/Simple transactional website:</b></p> <ul style="list-style-type: none"> <li>- The interaction is through e-mail, account inquiry.</li> <li>- View Balance Summary.</li> <li>- Account Statement and Transactions details.</li> <li>- Access your credit cards to view details, settle your card payment and view your card transactions.</li> </ul>

		<ul style="list-style-type: none"> <li>- View your fixed deposit details.</li> <li>- Change your address and update your information easily.</li> <li>- Order cheque book to be collected from your branch.</li> <li>- Send instructions or inquiries through the secure E-mail.</li> </ul> <p>c) Advanced Transactional website:</p> <ul style="list-style-type: none"> <li>- Settle your utility bills (Paltel and Jawwal).</li> <li>- Add credit to your mobile phone from Jawwal.</li> <li>- Transfer funds among your accounts.</li> <li>- Transfer funds to another account within Arab Bank Palestine.</li> <li>- Transfer funds to accounts worldwide.</li> <li>- Set up scheduled payment orders.</li> </ul>
11	Palestine Commercial Bank	<p>a) Informational website:</p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> <li>- about money exchange prices.</li> <li>- about interest rates, new products, etc.</li> <li>- Follow up the bank news.</li> </ul>
12	Palestine International Bank	<p>a) Informational website:</p> <ul style="list-style-type: none"> <li>- About the bank's products and services.</li> </ul>

(source: developed by the researcher)

## 2.9 Internet banking trends:

The following are common Internet banking trends identified by (European Payment Systems Observatory (EPSO), 2008):

- Closer integration with traditional banking strategies: the Internet is in the process of becoming the architectural platform of financial services and financial markets.

In a few years, there will be no distinction between finance and e-finance, all financial technology from “user interface”, through “middleware”, to the “core applications” and networks will be Internet enabled and Internet based.

- Stronger focus on profitability: Return On Investment (ROI), client acquisition, cross-selling and cost cutting. The global economic downturn has caused banks to cut their investments in E-Banking technology significantly, to focus on integrating the different delivery channels (to achieve channel, service and brand consistency), and the front and back-office processing systems, consequently, a slow down on investment in next generation technologies such as “account aggregation”, mobile and “iTV banking” are expected, as these lack in the short term a strong return on investment (ROI) case.
- Greater outsourcing of software development and operational services. The following technologies are expected to be implemented in the short to medium term:
  - Customer Relationship Management (CRM).
  - Straight Through Processing (STP), which, linked to the demand for channel integration, allows once-only data capture, cuts processing times for online applications and reduces banks' costs by reducing the number of manual processes.
  - Mobile banking technologies.
  - Account aggregation, which allows customers to view and manage all their accounts from one single web site.
  - Interactive Digital TV (IDTV) banking through different infrastructure types: satellite broadcasting with consumer antenna, Set Top Box and a phone connection as return path; cable TV; and terrestrial broadcasting.
  - There are contradictory opinions regarding the need for digital signatures and public key infrastructures to provide the necessary security for the further development of Internet banking services. Although these would provide increased security, their cost and complexity are expected to limit their use for securing on-line retail banking in the foreseeable future. However, the mobile phone could act as a catalyst in the adoption of digital signatures due to its

strong penetration, the storage and cryptographic capabilities of its “WIM/SIM” card and its user friendliness.

## **2.10. The Next Wave of Internet Banking**

To meet the challenge of creating an online banking service that is secure, robust and contemporary to satisfy a sophisticated customer, the banks need to regularly update their platforms with evolving technology.

Online banking has evolved considerably since its inception a decade ago. Along with the ATM and telephone, the Internet is an integral constituent in the delivery channels offered by banks worldwide. The Internet attracts the urban educated banking customers, who can be targeted for cross-selling and marketing along with other banking functions and services. These in turn can generate immense profits for banks. (docstoc.com,2009)

### **2.10.1 The Power of the Internet**

Statistics indicate that worldwide Internet usage has nearly tripled since 2000. An estimated 15 percent of the world's population is online today. In regions with a developed infrastructure like North America, UK, Sweden, Hong Kong and South Korea, the Internet penetration levels are over 60 percent, where the level of Internet banking activity is higher. (docstoc.com,2009).

The growing adoption of online banking is welcomed news for banks that have invested in the online channel. A comprehensive online banking service improves a customer's loyalty and helps reducing operating expenses. An analysis Bank of America revealed that customers, who both bank and pay bills online, were 21 percent more profitable. Banks responded to this cue creating online programs. Few banks successfully exploited the internet benefits including Bank of America (14.2 million online customers), Wells Fargo (7.2 million online customers) and “ING” direct (13 million customers globally), others are yet to make an impact. (docstoc.com,2009).

### **2.10.2 Ensuring Customer Adoption, State-of-the-art Internet Banking Platform**

Alenka Grealish, Senior Analyst at research firm Celent notices those banks that were early movers and committed to improving online banking had strong adoption

rates. In the US, banks that launched online banking service in 1996 have achieved an average penetration of 31 percent (active online banking end-users), almost twice that of those launched in 1998 and four times that of those launched in 2003. Early mover advantage is useful, but of greater importance is the commitment to improve the online offering. In the dynamic Internet world, banks must understand evolving technologies and customer preferences, and upgrade accordingly. “Over the past five years, banks have learned that merely providing online banking does not bring in customers. Banks must provide: technology-driven improvements, call center , other remote support, and branch support,” states Grealish (docstoc.com,2009).

So, what are the essential attributes of an Internet banking solution? Grealish indicates:

- Robustness and scalability are basic features of any online banking service. The Internet banking solution must grow the customer base and maintain the pace of the application. Security is critical. Interoperability is another important requirement. With banks increasingly offering a complete breadth of activities online, the online banking application needs to seamlessly integrate with a host of different applications including the core banking application.
- Interoperability performs with multi-channel integration when features like alerts are offered and customers can subscribe to alerts on e-mail, SMS, voice, fax and Internet. To ensure the high levels of interoperability demanded, the Internet banking application should incorporate a Services Oriented Architecture (SOA) approach. Further, the online banking platform must support the increasing variety of features menu. Banks till date focus on core functions like account access, account history, and standing instructions, with features like bill payment and funds transfer being projected as value added features. In the past 24 months, with the proliferation of broadband there has been a growing need to design services especially for the online channel. This has heralded a new era of Internet banking where features like real-time alerts, personal finance calculator and online customer support. This list will only grow with emerging capabilities.
- Finally the number of clicks need to be reduced and user interface needs to be familiar to the customer. George Tubin, Analyst at TowerGroup explains, “Having a rich interface for the internet service is essential because the competition includes the likes



of eBay and Amazon. Today customers are Internet savvy and demand a level of intuitiveness that they experience at other websites.”

### **2.10.3 Gearing Up**

Banks globally are realizing that new age technology is required to satisfy the new-age customer. They are evaluating and replacing their existing platforms. In 2004, DBS Bank in Singapore replaced its outdated 1997 online solution. Recently, Wachovia (US) overhauled its internet and bill pay platform with simpler, swifter navigation and seamless integration of various money management functions. ANZ (Australia) is replacing its first generation internet banking solution deployed in 1998. “We wanted a powerful updated solution to replace the incumbent system,” says Mike Grime, Managing Director of Operations, Technology and Shared Services at ANZ. In the Internet domain a 3 years old solution is categorized ‘legacy’. Banks must regularly reassess their platforms and continuously evolve to continue to exploit the potential of the Internet. (docstoc.com,2009)

### **2.11. Summary:**

We have introduced the current chapter by indicating the importance of internet banking and differentiating the terms of internet banking, electronic banking and online banking. Then, we have spoken about the internet Banking services, its types, benefits, advantages, and disadvantages. After that, moved to speak about internet banking in the world and focusing more on internet banking in the Gaza Strip. Finally, we ended the chapter by making a journey in the internet banking trends.

**Chapter Three:**  
**Research Model and Hypotheses Development**

### 3.1 Introduction

Many factors are seen to be influencing and contributing to the acceptance of new technology such as internet banking. It is important to take these factors into account when studying the adoption of new technology.

This study is built on the Technology Acceptance Model (TAM), Davis in 1986, (TAM) is one of the most widely used models to explain user's acceptance behavior towards adopting new technology.

TAM depends on many other theories such as:

- **First:** Theory of Reasoned Action (TRA).
- **Second:** Diffusion of innovations.
- **Third:** Unified Theory of Acceptance and Use of Technology.
- **Fourth:** Matching Person & Technology Model

So the researcher is going to discuss these theories before discussing the TAM theory; to explore the backgrounds and relationships between the TAM model and the other theories.

Not only that there are other variables were added to enhance the TAM model, but also we are going to discuss these added enhancing variables which get benefited from the previous researches on the critical factors which may have significant impact on the acceptance of internet banking. Finally, the review was concluded by proposing a model which was used to understand customer's adoption if internet banking in the Gaza Strip.

## 3.2 Research model Development:

### 3.2.1. TAM dependent theories:

First: The Theory of Reasoned Action (TRA).

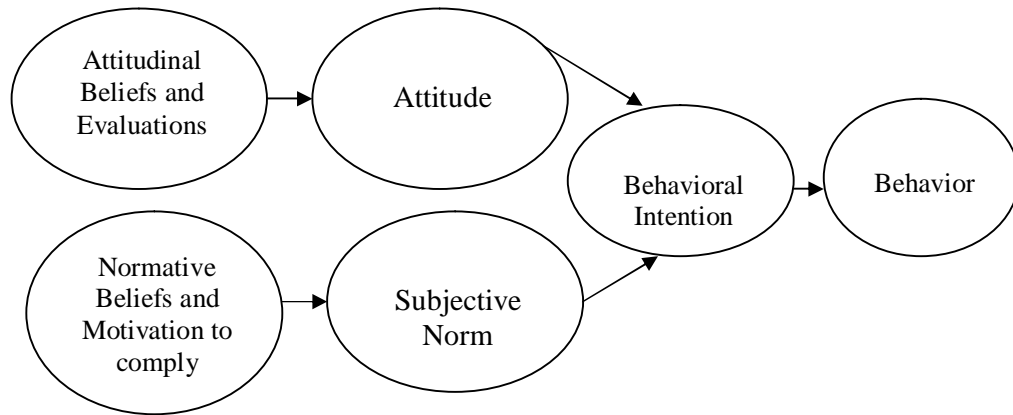


Figure (3.1): Theory of Reasoned Action

(source: Martin Fishbein and Icek Ajzen, 1980)

TAM is one of the most influential extensions of Ajzen and Fishbein's theory of reasoned action (TRA).

TRA figure(3.1.) was developed by Martin Fishbein and Icek Ajzen (1975 and 1980), derived from the previous researches that started out as the theory of attitude, which led to the study of attitude and behavior. The theory was, “born largely out of frustration with traditional attitude-behavior research, much of which found weak correlations between attitude measures and performance of volitional behaviors” (Hale, Householder, & Greene, 2003).

Derived from the social psychology setting, the theory of reasoned action (TRA) was proposed by Ajzen and Fishbein (1975 & 1980). The components of TRA are three general constructs:

- Behavioral intention (BI),
- Attitude (A),
- Subjective norm (SN).

TRA suggests that a person's behavioral intention depends on the person's attitude about the behavior and subjective norms:

$$BI = A + SN.$$

**Second:** Diffusion of innovations:

Diffusion of Innovations is a theory of how, why, and at what rate new ideas and technology spread through cultures. The concept has been first studied by the French sociologist Gabriel Tarde (1890) and by German and Austrian anthropologists as Friedrich Ratzel or Leo Frobenius (Dixon, 1928): *The Building of Cultures*).

Its basic epidemiological or internal-influence form was described by H. Earl Pemberton, who provided examples of institutional diffusions as postage stamps or compulsory school laws (Pemberton, H. E. (1936) 'The Curve of Culture Diffusion Rate'). The publication of a study of Ryan and Gross on the diffusion of hybrid corn in Iowa (Ryan and Gross, 1943; Rogers 1964).

The diffusion of hybrid seed corn in two Iowa communities was the first sustainable visible contribution in a broader interest in innovations which was especially popularized by the textbook of Everett Rogers (1962), *Diffusion of Innovations*. He defines diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system."

The key elements in diffusion research are: the innovation, types of communication channels, time or rate of adoption, and the social system which frames the innovation decision process.

**Third:** Unified Theory of Acceptance and Use of Technology:

Unified Theory of Acceptance and Use of Technology (UTAUT) is a technology acceptance model formulated by Venkatesh and others in "*User acceptance of information technology: Toward a unified view*". Fishbein, M., & Ajzen.

The UTAUT aims to explain user intentions to use an information system and subsequent usage behavior. The theory holds that four key constructs (performance expectancy, effort expectancy, social influence, and facilitating

conditions) are direct determinants of usage intention and behaviour. Gender, age, experience, and voluntariness of use are posited to mediate the impact of the four key constructs on usage intention and behavior. The theory was developed through a review and consolidation of the constructs of eight models that earlier research had employed to explain information systems usage behaviour (theory of reasoned action, technology acceptance model, motivational model, theory of planned behavior, a combined theory of planned behavior / technology acceptance model, model of personal computer utilization, innovation diffusion theory, and social cognitive theory). Subsequent validation of UTAUT in a longitudinal study found it to account for 70% of the variance in usage intention.

**Fourth: Matching Person & Technology Model:**

The Matching Person & Technology Model organize influences on the successful use of a variety of technologies: assistive technology, educational technology, and those used in the workplace, school, home; for healthcare, for mobility and performing daily activities. Specialized devices for hearing loss, speech, eyesight and cognition as well as general or everyday technologies are also included.

Research shows that although a technology may appear perfect for a given need, it may be used inappropriately or even go unused when critical personality preferences, psychosocial characteristics or needed environmental support are not considered. The use and non-use of technology as conceptualized in the Matching Person & Technology Model has been validated by many researchers and authors representing the fields of occupational therapy, physical therapy, speech language pathology, psychology, and others.

The Matching Person and Technology Model is operationalized by a series of reliable and valid measures that provide a person-centered and individualized approach to match individuals with the most appropriate technologies for their use. The Matching Person & Technology Model and measures were developed by Marcia J. Scherer, 1986.

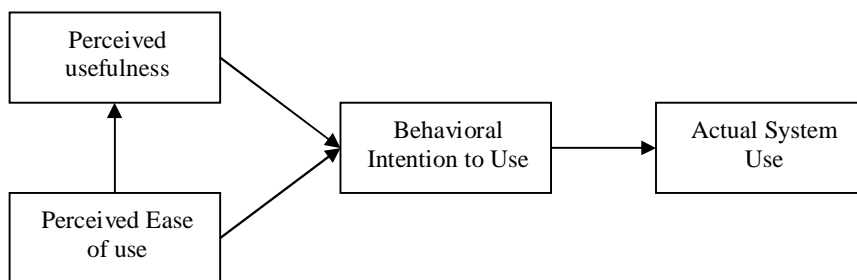
### 3.2.2.TAM Model:

**First:** Introduction:

TAM is specifically tailored for modeling user acceptance of information technology. The goal of the model is to provide an explanation of the determinants of computer acceptance by tracing the impact of external factors on internal beliefs, attitudes and intentions (Phillips et al., 1994). TAM is a valuable tool for predicting attitudes, satisfaction, and usage from beliefs and external variables cited by (Algahtani & King, 1999).

TAM is an information systems theory that models how users to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, notably:

- **Perceived usefulness** (PU) - This was defined by Davis as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989).
- **Perceived ease-of-use** (PEOU) - Davis defined this as "the degree to which a person believes that using a particular system would be free from effort" (Davis, 1989). As the following figure (3.2) indicates:



Figure(3.2): Diagram/schematic of theory

(Source: Davis et. Al., 1989; Venk atesh et. Al., 2003)

## **Second: Usage**

Several researchers have replicated Davis's original study (Davis, 1989) to provide empirical evidence on the relationships that exist between usefulness, ease of use and system use (Adams, Nelson & Todd, 1992; Davis et al., 1989; Hendrickson, Massey & Cronan, 1993). Much attention has focused on testing the robustness and validity of the questionnaire instrument used by Davis. Adams et al. (1992) replicated the work of Davis (1989) to demonstrate the validity and reliability of his instrument and his measurement scales. They also extended it to different settings, and using two different samples; they demonstrated the internal consistency and replication reliability of the two scales. Hendrickson et al. (1993) found high reliability and good test-retest reliability. Szajna (1994) found that the instrument had predictive validity for intent to use, self-reported usage and attitude toward use. The sum of this research has confirmed the validity of the Davis instrument, and to support its use with different populations of users and different software choices.

Segars and Grover (1993) re-examined Adams *et al.*'s (1992) replication of the Davis work. They criticized the used measurement model, and postulated a different model based on three constructs: usefulness, effectiveness, and ease-of-use. These findings do not yet seem to have been replicated.

Mark Keil and his colleagues have developed (or, perhaps rendered more popularisable). Davis's model into what they call the Usefulness/EOU Grid, which is a 2×2 grid where each quadrant represents a different combination of the two attributes. In the context of software use, this provides a mechanism for discussing the current mix of usefulness and EOU for particular software packages, and for plotting a different course if a different mix is desired, such as the introduction of even more powerful software (Keil, Beranek & Konsynski, 1995).

In an attempt to integrate the main competing user acceptance models, Venkatesh et al. formulated the UTAUT. This model was found to outperform each of the individual models (Adjusted R square of 69 percent) (Bagozzi, 2007).



Table (3.1): Summary of TAM model and its dependent theories

No.	Theory	Used factors	Source
1	Theory of reasoned action (TRA).	-behavioral intention (BI). -Attitude (A). -Subjective norm (SN).	Martin Fishbein and Icek Ajzen (1975, 1980)
2	Diffusion of innovations.	-the innovation - types of communication channels - time or rate of adoption - the social system	- Gabriel Tarde (1890) - Friedrich Ratzel (1928) -Leo Frobenius (1928)
3	Unified Theory of Acceptance and Use of Technology.	- performance expectancy. - effort expectancy - social influence - facilitating conditions	- Venkatesh and others - Fishbein, M., & Ajzen.
4	Matching Person & Technology Model	- critical personality preferences - psychosocial characteristics, or - needed environmental support are not considered	Marcia J. Scherer, 1986.
5	Technology Acceptance Model (TAM)	- Perceived usefulness. - Perceived ease of use	Davis, 1986

(Source: developed by the researcher)

### 3.2.3. Comparisons between TAM and other models:

After the researcher has discussed TAM Model and its related dependent theories, here we are going to make comparisons between TAM model and the other most famous models in this field as the following:

#### **First:** Cost-benefit paradigm Model

The cost-benefit paradigm from behavioral decision theory is also relevant to perceived usefulness and ease of use. (Davis and Arbor, 1989).

#### **Second:** Channel Disposition Model

Swanson (1982, 1987) introduced and tested a model of “channel disposition” for explaining the choice and use of information reports. The concept of channel

disposition is defined as having two components: attributed information quality and attributed access quality. (Davis and Arbor, 1989)

**Third:** Theory of Planned Action Model

Benbasat and Zmud (1999) noted as a successful example, “IT research based on Theory of Planned Action and its extensions, such as the TPB, to the study of IT adoption, implementation, and use.” They suggested that once a sizable body of literature exists regarding a phenomenon. “it does become possible to synthesize this literature”. (Ma and Liu, 2004)

**Fourth:** The Theory of Planned Behavior Model (TPB)

Behavior is determined by intention (I) to perform the behavior. Intention is predicted by three factors: attitude toward the behavior (A), subjective norms (SN), and perceived behavioral control (PBC). (Mathieson, 2001)

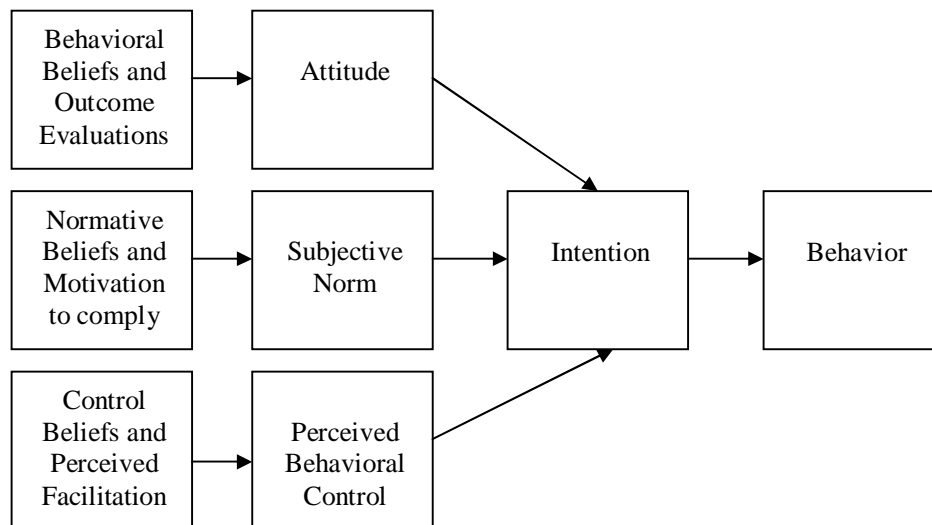


Figure (3.3): The Theory of Planned Behavior

(Source: Adapted from Mathieson,2001)

**Differences between TAM and TPB:**

Three criteria were suggested for comparing the models:

*The first* was their ability to predict intention to use a system. Clearly, both TAM and TPB explain intention quite well. Although TAM explained more variance than TPB,

the difference is not large enough to conclude that one model is better than the other on purely empirical grounds.

*The second* criterion was the value of the information provided by the models. TAM supplies very general information about ease of use and usefulness. TPB delivers more specific information.

*The third* criterion was the cost of using the models. TAM is easier to use than TPB.

There are three main differences between TAM and TPB:

*The first* is their varying degree of generality (Mathieson, 2001), TAM assumes that beliefs about usefulness and ease of use are always the primary determinants of use decisions. While TPB uses beliefs that are specific to each situations. The model does not assure that beliefs that are applied in one context also applied in other contexts.

*The second* major difference between TAM and TPB is that TAM does not explicitly include any social variables. These are important if they capture variance that is not already explained by other variables in the model. However, the social variables in TPB may still capture unique variance in intention.

*The third* difference is TAM and TPB treatment of behavioral control, referring to the skills, opportunities, and resources needed to use the system. (Mathieson, 2001). TAM provides a quick and inexpensive way to gather general information about individuals' perceptions of a system. (Mathieson, 2001).

### **3.3 The validity of the Technology Acceptance Model (TAM):**

Over the last two decades, the TAM has grown to be one of the most used models for technology adoption (Hirschheim, 2007; Jeyaraj et al., 2006). At present, TAM-related articles have been estimated to constitute about 10% of the journal space in the information system field (Lee et al., 2003).

The basic TAM postulates that most of the variance in Behavioural Intention (BI) to use a system is related to the variance in two independent variables: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), (Lee et al., 2003).

According to both the basic TAM and the bulk of its derivatives, the most important criteria for adoption of a technology are Perceived Usefulness (PU) and

Perceived Ease of Use (PEOU). Usually these two constructs account for about 40% of the variance in Behavioural Intention to use the technology (Lee et al., 2003).

TAM was originally developed for a work situation and has been applied in both discretionary and compulsory settings (Fu et al., 2006).

In fact, TAM has been used in a myriad of settings (Lee et al., 2003), which is also in line with Davis original intentions (Davis et al., 1989):

“The goal of TAM is to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behavior across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified.”

It has been suggested that the strive towards a single model for a broad spectrum of systems or use situations is unfortunate and that we need to have different approaches to different systems (Benbasat and Barki, 2007).

Despite, or to some extent because of, TAM's popularity much criticism has been directed at it. It has been suggested that TAM diverts attention from more pressing areas (Benbasat and Barki, 2007), that it is unscientific (Silva, 2007) or that it is skewed by common methods variance (CMV) (Straub and Burton-Jones, 2007), that it has little relevance for practitioners and that it is commonsensical (Silva, 2007).

One of the most salient contributions of TAM is the stress of perceived usefulness and perceived ease of use . Benbasat and Barki (2007) expressed this as follows:

“After 17 years of research and a large multitude of studies investigating TAM and its many variants, we now know almost to the point of certainty that perceived usefulness (PU) is a very influential belief and that perceived ease of use (PEOU) is an antecedent of perceived usefulness and an important determinant of use in its own right.”

With that in mind, it is tempting to draw the conclusion that the most important part of the implementation of information systems is the development of the software, making it both easy to use and to be useful. However, perceived usefulness and perceived ease of use can be affected post development through education, experience and manipulation from the change agent.

One must not forget that the perceptions, rather than some objective measure of usefulness and ease of use, are the underlying constructs in TAM.

However; In later research, insensitivity to different contexts has been addressed by developing different variations of TAM for different technologies. The goal to develop a family of models is justified by a recent metareview of 63 studies that showed that the type of technology is likely to have a significant moderating effect on acceptance (Schepers & Wetzels, 2007). The authors categorized the various studies into four types of technology:

Specific software applications (e.g., word processors), Internet-related technologies (e.g., internet banking), microcomputers (e.g., PC), and communications technologies (e.g., e-mail).

### **3.4 Technology Acceptance Model in other context than Internet**

#### **banking:**

McFarland and Hamilton (2004) extended TAM in research about the effect of self-efficacy on computer usage in Finnish companies. Their TAM incorporates self-efficacy and the determinants of it (experience and organizational support) as the factors are having an impact on computer anxiety, perceived ease of use and perceived usefulness and finally the actual use of computer technology. Self-efficacy, computer experience and organizational support were proven to have significant direct effect on perceived ease of use. The results imply that “perceived ease of use plays very important role in mediating the relationships between experience, anxiety, self-efficacy and perceived usefulness.” Furthermore, “self efficacy, computer anxiety, perceived ease of use and usefulness partially mediate the effect of experience and organizational support on self-reported usage behaviour” McFarland and Hamilton (2004).

Yi and Hwang (2003) again studied self-efficacy in the context of TAM with university students. They used web-based class management system as the piece of technology examined. Self-efficacy appeared to directly influence the usefulness and ease of use. Usefulness and ease of use in turn influenced the decision through behavioural intention.

There are many similarities between adopting other e-commerce activities and Internet banking. In many ways the reasons for adoption or rejection are alike. Eastin

(2002) examined four different e-commerce activities (shopping, banking, investing and online services) and their diffusion in the United States. The outcome was that self efficiency, amount of internet use, perceived convenience, perceived economic advantage, and overall adoption of similar innovation positively have positive influence to the overall adoption of e-commerce. According to them, perceived risk has a negative impact, and therefore it works as a barrier to the adoption of any kind of e-commerce.

Jiang et al. (2000) utilized TAM in their empirical study about user behaviour and e-commerce. Their model had five constructs: utilization of the Internet, near term consequences, facilitating conditions and experience with the Internet. They found out that the most important driving factor influencing the utilization of the Internet is prior experience. Another significant positive relationship was found between facilitating conditions and utilization of the Internet. This implies that the more familiar the users are with the Internet, and the better they feel they can get information from the sites, the more likely they are to use the Internet service in question.

### **3.5 Technology Acceptance Model and Internet banking:**

Many researchers have applied TAM when studying acceptance of Internet banking; the done researches about Internet banking and TAM are reviewed next, presenting the major findings of them and the empirical environment.

Sudarraj et al. (2003) used deconstructed TAM to measure the importance of usefulness and ease of use in internet and “telephone banking”. They successfully validated the model with Canadian university students. Karjaluoto et al. (2002) built a model based on TRA and TAM, which was empirically tested with private Finnish retail bank customers. Their conclusion is that “prior computer experience, prior technology experience, personal banking experience, reference group, and computer attitudes strongly affect attitude and behaviour towards internet banking.” (Karjaluoto et al. 2002) Supporting findings were those of Lassar et al. (2005) who studied internet banking adoption in the United States in the light of TAM. They concluded that the intensity of Internet usage is significantly influencing individuals' adoption of Internet banking.

These findings suggest that the more experienced the consumers are in using the computers and the Internet, the more likely they will start using Internet banking.

Pikkarainen et al. (2004) added perceived enjoyment, information on online banking, security and privacy and quality of Internet connection to the model. Surprisingly, they found only perceived usefulness and information of online banking significantly affecting the use of Internet banking services in Finland.

Hong Kong students were used to empirically test another modification of TAM; in this study Chau and Lai (2004) also discovered that perceived usefulness could be the only major factor directly influencing the attitude towards online banking, perceived ease of use influenced also directly, but mainly via perceived usefulness .

Other measured factors like alliance services, personalization and task familiarity influenced through perceived usefulness , and accessibility through perceived ease of use . Suh and Han (2002) added trust to the original TAM model; they studied their model by empirically evaluating responses from personal customers of five major banks in South Korea and discovered trust to be a very significant determinant of user acceptance of Internet banking. Eriksson et al. (2004) made the same conclusion while studying the meaning of trust with Estonian private customers. Trust had a significant positive effect on both perceived ease of use and perceived usefulness , out of which perceived usefulness appeared to be stronger in predicting the intention to use Internet banking.

Trust was handled also by Wang et al. (2003). Their research aimed on recognizing the determinants of user acceptance of Internet banking. In this research they introduced perceived credibility as a new factor to TAM, in addition to self-efficacy, perceived usefulness and perceived ease of use. The model was empirically tested by phoneinter views with Taiwanese consumers. Surprising results were found: perceived ease of use and perceived credibility were more significant than perceived usefulness in predicting the behavioural intention to use Internet banking. The surprising factor in this was, that majority of TAM related research has concluded that PU is the ruling factor over perceived ease of use . Self-efficacy again was found to have significant effect through the three abovementioned factors.

### **3.6 Factors influence the customers adoption of internet banking:**

One criticism of the current TAM studies is that there are other external variables that affect the perceived usefulness and perceived ease of use (Gefen and Keil, 1998). That's what we are going to discuss widely and comprehensively here.

Many factors are seen to be influencing and contributing to the acceptance of new technology such as internet banking. It is important to take these factors into account when adopting new technology.

#### **A. Culture and perceived usefulness**

Moreover Culture is equivalent to subjective norms and are defined as other people's opinion, superior influence, and peer influence. (Taylor and Todd, 1995), culture has an impact on the perceived usefulness of the technology. This factor is especially important in our study as we are applying TAM model on Arab country which is far of the environment which formed the TAM model (Koskosas and Massalas, 2008; Cheung,2001; Dasgupta, et al.,1999; Straub et al.,2001; Goodman and Green, 1992; Hofstede,1994; Venkatesh and Morris,2000; Davis et al.,1989).

#### **B. Awareness of service and perceived usefulness:**

Khan,2007, Pikkarainen,2004; Sathye,1999 and Howcroft et al.,2002; reported that the amount of information a customer has about internet banking and its benefit may has a critical impact on the adoption of internet banking. Furthermore, these researchers confirm that low awareness of internet banking is a major factor that prevents customer to accept internet banking; it influences strongly the perceived usefulness of internet banking. Howcroft et al.(2002) also confirms that lack of awareness of internet banking services and its benefits is found to be a reason for consumers to be reluctant to use internet banking services offered by banks.

#### **C. Self efficacy and perceived ease of use**

Many studies found evidence for the relationship between self efficacy and the use of technological product such as internet banking (Pituch and Lee, 2006 ;Wang et al., 2003, Eastin, 2002; Bandura, 1977; Monsuwé et al., 2004; Wang and Newlin, 2002; Davis et al ,1989 ; Wang et al, 2003) found that computer self efficacy and perceived ease of use are related. The stronger a person's self efficacy beliefs, the more likely he or she tries to achieve the required outcome (Igbaria and Iivari,1995; Gerrard and



Cunningham, 2003; Polatoglu and Ekin, 2001; Lassar et al., 2005; McFarland and Hamilton, 2004; Yi and Hwang ,2003).

**D. Technical service quality and perceived ease of use:**

In another studies Sathye, 1999; Pikkarainen et. al.,2004; suggest without a proper Internet connection, the use of internet banking is not possible and the quality of the Internet connection has a positive effect on the consumers' acceptance of internet banking and his perceived ease of use (Kuisma, Laukkanen and Hiltunen, 2007; Almogbil's, 2005; Vriens and Harmen, 2000; Bahi and Nantel, 2000; AlSukkar and Hassan, 2005).

**E. Perceived ease of use and perceived usefulness:**

Adams et al., 1992; Venkatesh and Davis, 2000; Venkatesh and Morris, 2000; Agawal and Prasad, 1999; Chau, 1996; Al-Sukkar A. and Hasan H., 2004; Lai and Li, 2005; Venkatesh et al., 2003; Chi Shing Yiu, Kevin Grant, David Edgar, 2007; Alsajjan and Dennis, 2008; Yiu, Grant and Edgar, 2007; Chi Shen and Chiou,2009; Ming-Chi Lee,2008; Ramayah, Rouibah, Gopi and Rangel, 2009) they stated that perceived ease of use had the biggest effect on the perceived usefulness of internet banking.

**F. Perceived ease of use and attitude:**

(Chi Shing Yiu, Kevin Grant, David Edgar, 2007; Alsajjan and Dennis, 2008; Yiu, Grant and Edgar, 2007; Ming-Chi Lee,2008; Ramayah, Rouibah, Gopi and Rangel, 2009; Davis et al., 1989; Jackson et al., 1997; Venkatesh and Morris, 2000; Venkatesh et al., 2003; Suh and Han, 2002; Eriksson et al., 2004; Wang et al., 2003 ;Agawal and Prasad, 1999; Davis, 1993; Hu, et al., 1999; Moon and Kim, 2001, Al-Sukkar and Hasan H., 2005; 2004a, b; Al-gahtani and King, 1999; Lu and Gustafsen, 1994; Moore and Benbasat, 1991; Venkatesh and Davis, 1996) all of them discovered that perceived ease of use has direct and significant effect on the attitude of the customers to use and adopt the internet banking.

**G. Perceived usefulness and attitude:**

(Chi Shing Yiu, Kevin Grant, David Edgar, 2007; Alsajjan and Dennis, 2008; Yiu, Grant and Edgar, 2007; Ming-Chi Lee,2008; Ramayah, Rouibah, Gopi and Rangel, 2009; Davis and Venkatesh,19961; Sudarraj et al.,2003; Chau and Lai ,2004; Eriksson et al., 2004; Davis, 1993; Hu, et al., 1999; Moon and Kim, 2001; Al-Sukkar and Hasan

H., 2005; 2004a, b; Al-gahtani and King, 1999; Lu and Gustafsen, 1994; Moore and Benbasat, 1991; Venkatesh and Davis, 1996) they founded that perceived usefulness has a direct and significant effect on the attitude of the customers to use and adopt the internet banking.

#### **H. Trust and Attitude:**

Customer attitudes towards internet banking are also driven by trust, which plays an important role in increasing usability within the internet banking environment. The issue of trust is more important in the internet as opposed to offline banking (Alsajjan and Dennis, 2008; Yiu, Grant and Edgar, 2007; Chi Shen and Chiou, 2009; Alsajjan and Dennis, 2006; Suh and Han, 2002; Lewicki and Bunker, 1996; Tyler and Degoey, 1996; Lewicki and Bunker, 1996; Powell, 1996; Tyler and Degoey, 1996; Lippert, 2001 and practitioners; Lippert, 2001; Alike Sathye, 1999; Yousafzai et al., 2003; Mukherjee and Nath, 2003; Sivasailam, et. al., 2002).

#### **I. Attitude and behavioural intention to use:**

It has also been found that users' attitudes towards acceptance of a new information system have a critical impact on successful information system adoption. It influences the behavioural intention to use internet banking which leads to the actual use of the system (Laukkanen, Sinkkonen and Laukkanen, 2009; Davis et al, 1989, Venkatesh and Davis, 1996, Succi and Walter, 1999; Venkatesh and Morris, 2000; Venkatesh et al., 2003; Tan and Thoen, 2000).

#### **J. Demographic characteristics and Attitude:**

Previous studies have investigated the effects of customers' demographic characteristics such as age, gender, income and educational level on their attitude towards acceptance of new technologies (Al-Somali, Gholami and Clegg, 2008; Algeband, 2006; Wang et al., 2003; Karjaluoto, et al., 2002; Harrison and Rainer, 1992; Burke, 2002; Li et al., 1999; Lai and Li, 2005; Polatoglu and Ekin, 2001; Eastin, 2002; Venkatesh and Morris, 2000; Crawford, 2002; Jun Wu, 2005).

Researchers and organizations have been trying to find factors that influence an individual's acceptance of information technology in order to enhance its usage. Several theoretical models that address the subject of technology acceptance were proposed that have their roots in information systems, psychology and sociology (Venkatesh et al., 2003).

In light of the above discussions, the following factors which influence the adoption of internet banking and their related hypothesis can be summarized:

### **3.6.1 The factors:**

**First:** TAM factors:

**a.** Perceived Usefulness (PU).

PU is the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989).

**b.** Perceived Ease Of Use (PEOU).

PEOU is the degree to which a person believes that using a particular system would be free of effort (Davis, 1989).

**Second:** Attitude Towards Using (ATU).

It has been found that users' attitudes towards acceptance of new technology system have a critical impact on successful information system adoption (Davis 1989).

**Third:** Behavioral Intention to use:

TAM was adopted and based on the Theory of Reasoned Action (TRA) a psychological theory that seeks to explain an individual's behaviour which is determined by his/her Behavioural Intention (BI) to perform that behaviour (Fishbein and Ajzen, 1975).

**Fourth:** Demographic Characteristics:

**a.** Age:

Younger adults are seen to be more interested in using new technologies, like the Internet to conduct activities such as looking for new products and product information to compare and evaluate their

options. (Czaja and Sharit, 1998; Czaja et al., 2001; Lu et al., 2003. Wang et al., 2003) found that age has a significant influence on user acceptance of Internet banking.

**b. Financial Income:**

Income has been shown to potentially exert a strong effect on the adoption and diffusion of technology. Older individuals between 26 and 45 are over- represented in categories of higher income, higher occupational positions, and higher educational qualifications (Venkatesh and Morris, 2000).

**c. Gender:**

studies have found that there is a difference between the males and females in using various types of technology (Burke, 2002). Venkatesh and Morris, (2000), investigated gender differences in the overlooked context of individual adoption and sustained usage of technology in the workplace.

**d. Education Level:**

Education also plays a significant role as education affects positively the individual's level of Internet literacy (Burke, 2002).

**Fifth: Trust (TR):**

The issue of trust is more important in online as opposed to offline banking because transactions of this nature contain sensitive information parties involved in the financial transactions are concerned about access to critical files and information on transferred via the internet (Alsajjan and dennis,2006; Suh and Han,2002).

**Sixth: Culture:**

Culture is the collective programming of the mind which distinguishes the members in one human group from another. Hofstede's (1980)

**Seventh:** Self efficiency:

individual's self confidence in his or her ability to perform tasks across multiple computer application domains and the use of technological product such as online banking (Wang , 2003, Eastin, 2002, Bandura, 1977)

**Eighth:** Awareness of services and its benefits (AW).

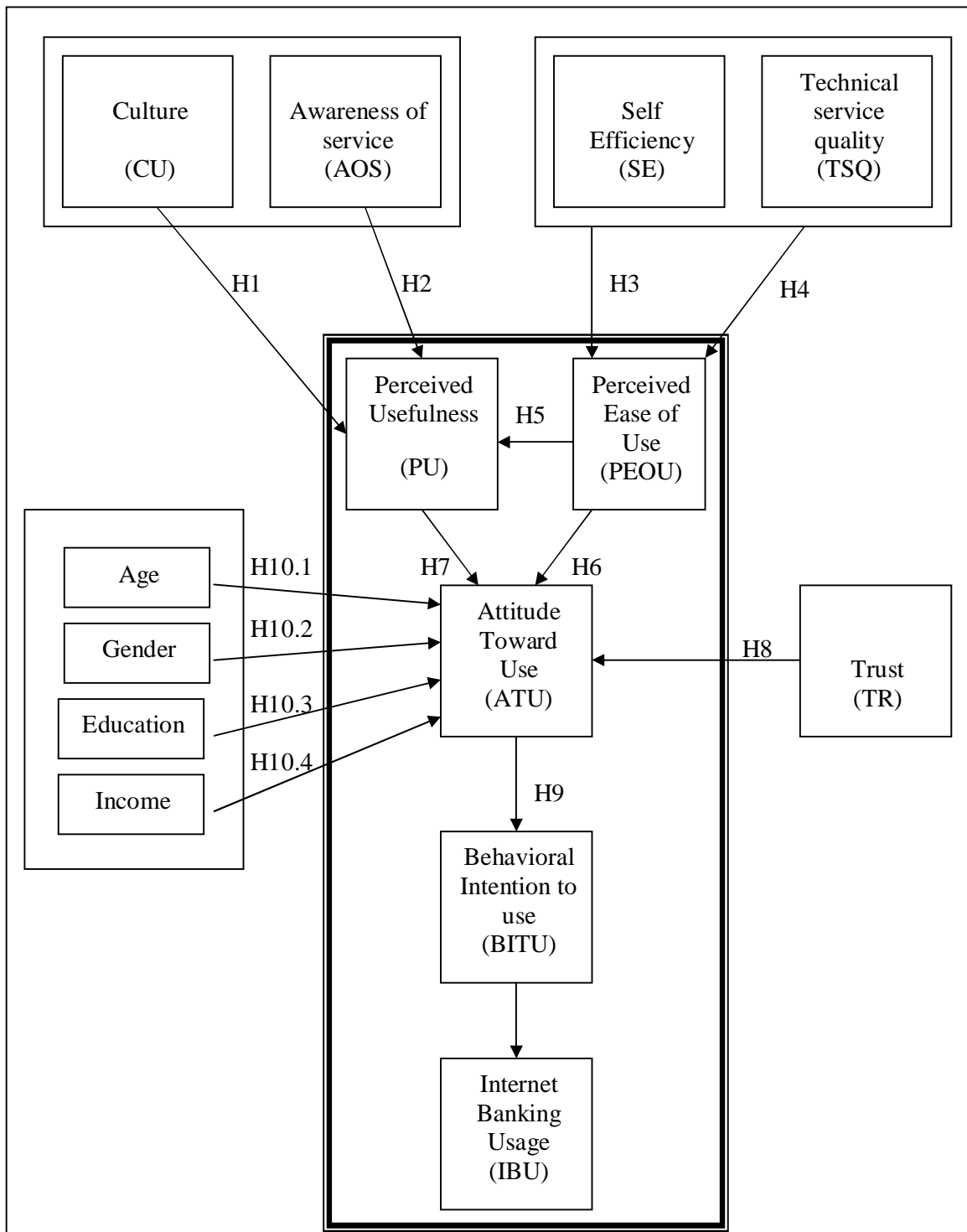
Pikkarainen (2004) reportes that the amount of information a customer has about internet banking and its benefit may has a critical impact on the adoption of internet banking.

**Ninth:** Technical Service Quality (TSQ).

Pikkarainen (2004) identifies the importance of a decent internet connection and its quality in adopting internet banking and he concludes that without a proper internet connection, the use of internet banking is not possible.

### **3.6.2. The Model:**

The following model figure (3.4) summarize the factors, hypothesis and their relationships; this model can help us to understand the customers adoption of internet banking in the Gaza Strip:



Figure(3.4.): Model indicates the hypotheses and research factors relationships

(source: developed by the researcher)

### **3.7 Summary**

In this chapter, the researcher has discussed the TAM and its relations with other theories and models. Then we have performed a Comparison between TAM and other models; the validity of the TAM; the research on TAM in other context than Internet banking; the TAM and Internet banking. At the end we have summarized the factors which influence the customer' adoption of internet banking.

**Chapter Four:**  
**Research Methodology and Design**



## **4.1 Introduction**

This chapter covered the research methods used in this study. We described the chosen methods, concerning research purpose, research approach, research strategy, target population, sample selection, data collection method and data measurement. Additionally, we discussed the analysis of used data concerning the validity and reliability of the used questionnaire.

## **4.2 Research Purpose**

Research can be categorized into different types depending on the nature of the purpose or research problem. The purpose of the academic research can be exploratory (ambiguous problem), descriptive (aware of problem), or explanatory (clearly defined problem) (Yin, 1994; Zikmund, 2000). Saunders et al. (2000) argue that more than one purpose can be employed in a study, Yin (1994) highlights that the boundaries between the categories are not always clear.

### **4.2.1. Exploratory Research**

According to Zikmund 2000, exploratory research is conducted to clarify and research a better understanding of the nature of the problem. Consequently, exploratory research is appropriate to be used when there is little prior knowledge of the researched problem. Exploratory study is a valuable means of founding out “what is happening; to seek new insight; to ask questions and to assess phenomena in a new light”. The purpose of the exploratory research is to provide insight and understanding, not conclusive evidence. Saunders and Thornhill (2003) argue that exploratory research is advantageous because it is flexible and adaptable to change. An explorative investigation is appropriate when research problem is instructed and difficult to delimit. (Erikson and Wiedersheim- Paul, 1999).

#### **4.2.2. Descriptive Research**

The objective of the descriptive is to “portray an accurate profile of a person, event or situation” (Robson, 1993), and may be an extension of, or forerunner to, a piece of exploratory research. Zikmund (2000) elucidates descriptive research as, when research problem is known but the researcher is not fully aware of situation. When a particular phenomenon of the nature is under study, it is understandable that the research needs to describe it, to explain its properties and inner relationship (Huczynski and Buchanan, 1991). According to Zikmund (2000), descriptive research will answer who, what, where and how questions and does not give any explanation for the cause of the findings.

#### **4.2.3. Explanatory Research**

The emphasis of explanatory researches is on studying a problem or a phenomena in order to establish a causal relationship among variables (Saunders et al., 2000). Explanatory research is sometimes referred to as causal research (Zikmund, 2000). Normally, Exploratory and descriptive research is conducted first and then explanatory research tries to establish and explain patterns related to phenomenon of interest (Saunders et al., 2000).

The starting point of our research purpose is the research problem, what are the factors influencing adoptions of internet banking. Depending on research problem, literature review has been conducted in order to specify research questions and construct framework. The research purpose and research questions reveal that this study is primarily descriptive, when aiming to find out and describe specific factors and problems as data is collected and analyzed. Then the study becomes somewhat exploratory so that it provides us, the researchers, with both a course for the task at issue as well as an insight into existing theories within the subject. Finally, the study becomes slightly explanatory, as the research questions of this study was answered in the final chapter.

## **4.3 Research Approach:**

### **4.3.1. Quantitative Approach:**

Quantitative approach is one in which the investigator primarily uses post positivist claims for developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and questions, use of instrument and observation, and the test of theories), employing strategies of inquiry such as experiments and surveys and collecting data on predetermined instruments that yield statistical data (Creswell 2003).

Quantitative research is frequently referred to hypothesis-testing research. Characteristically, studies begin with statements of theory from which research hypotheses are derived. Then an experimental design is established in which the variables in question (the dependent variables) are measured while controlling for the effects of selected independent variables. In the study the subject included is randomly selected is desirable to reduce error and to cancel bias. The sample of subjects is drawn to reflect the population (Newman & Benz 1998).

### **4.3.2. Qualitative Approach:**

Qualitative research is multi method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, and attempt to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Newman & Benz 1998).

Qualitative approach is one in which the inquirer often makes knowledge claims based primarily on constructivist perspectives (i.e., the multiple meaning of individual experiences, is socially and historically constructed, with an intent of developing a theory or a pattern) or advocacy / participatory perspectives (i.e., political, issue-oriented, collaborative or change oriented) or both. It also uses strategies of inquiry such as narratives, phenomenology, ethnography, grounded theory studies or case studies. The researcher collects open-ended, emerged data with the primary intent of developing themes from the data (Creswell 2003).

Since the purpose is to gain a better understanding of the factors which affect the customer's adoption of internet banking.

Qualitative research is found to be more appropriate for this study.

#### 4.4 Research Strategy:

Research strategy was a general plan of how researcher answered the research questions that has been set by researcher. It contain clear objectives which are derived from research questions to specify the sources from which researcher intend to collect data and consider the constraints that researcher will inevitably have such as access to data, time, location and money, ethical issues (Thornhill et. al., 2003).

It is based on three conditions:

- 1) Form of research question.
- 2) Requires control over behavioral events and
- 3) Focus on contemporary events.

Yin (1994) identified five search strategies in social science; these are: experiments, surveys, archival analysis, histories and case studies (see table 4.1).

Table (4.1) : Relevant situations for different research strategies

Strategy	Form of research question	Requires control over behavioral events?	Focuses on contemporary events?
Experiment	How, why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Archival analysis	Who, what, where, how many, how much	No	Yes/ No
History	How , why	No	No
Case Study	How , why	No	Yes

(Source: Yin, 1994)

The most important condition for selecting research strategy is to identify the type of research questions that are being asked. “Who”, “What”, “Where”, “how” and “Why” are the categorization scheme for the types of research questions. Two possibilities need to be investigated by asking the “what” question. First, some types of what questions are justifiable for conducting study and the goal is to develop pertinent hypotheses and propositions for further inquiry. Any of the five research strategies can be used in that situation- exploratory survey, exploratory experiment, or an exploratory case study. The second type of what question is actually form a “how many” or “how much” line of inquiry and the outcomes from a particular situation. The survey or archival analysis are more favorable than other strategies. If the researcher needs to know the “how” question, the better strategy will be a history or a case study. (Yin 1994).

Since this study aims to find out the factors which influence the customer's adoption of internet Banking, the best suitable strategy is the survey strategy The five W's of research are specific to a descriptive design, as they have been identified (Malhotra, 1999:88):

- Who? (customers),
- When? (currently),
- Where? (in the Gaza Strip),
- Why? (to investigate factors influencing the adoption of internet banking),
- Way? (by identifying customers demographic characteristics, perceptions and attitudes towards internet banking).

The survey strategy is a popular and common strategy in business research that is usually associated with the deductive approach. Survey allows the collection of large amount of data from a sizeable population in a highly economical way. Questionnaire, structured observation and structures interviews are often falls into this strategy (Thornhill et. al., 2003). In order to support the result of the case, a quantitative survey was done as a way of further confirming for our findings.

#### 4.5 Target Population:

The aim of the study is to determine the factors which influence the banking customers who adopt the internet banking during their deal with their banks in Gaza strip so the target population were the customers of the resident nine banks in the Gaza Strip. They have an exist in internet with at least static web site whether customers use their banks websites to get on information only or for advanced internet banking activities such as money transfer. These customers can use internet banking whether in their homes or at their working areas.

The following table (4.2) indicates the target population number:

Table (4.2) : The target population of the research

No.	Bank name which has an exist in internet	Bank Website Address	Internet banking users numbers	source
1.	The Arab bank	<a href="http://www.arabbank.ps">www.arabbank.ps</a>	450	Computer Department
2.	Bank of Jordan	<a href="http://www.bankofjordan.com">www.bankofjordan.com</a>	254	Information Technology Department
3.	The Housing Bank of Trade and Finance	<a href="http://www.hbtf.com">www.hbtf.com</a>	97	Information technology Division
4.	Arab Islamic Bank	<a href="http://www.aibnk.com">www.aibnk.com</a>	44	Research and Studies Unit
5.	Palestine Investment Bank	<a href="http://www.pinvbank.com">www.pinvbank.com</a>	39	Computer Department
6.	Al-Quds Bank	<a href="http://www.alqudsbank.ps">www.alqudsbank.ps</a>	34	Computer Department
7.	Palestine Islamic Bank	<a href="http://www.islamicbank.ps">www.islamicbank.ps</a>	27	Information Technology Division
8.	Cairo Amman Bank	<a href="http://www.cab.jo">www.cab.jo</a>	23	Computer department
9.	Palestine Commercial Bank	<a href="http://www.pcb.ps">www.pcb.ps</a>	18	Computer Department
Total		986 internet banking customers		

(source: developed by the researcher)

The researcher excluded the following internet banks:

- Palestine bank: as they didn't cooperate with the researcher (source: public relations unit).
- Palestine International bank: as the bank stopped working with its website for nearly eight years due to internal problems in the bank (source: IT department).
- Egyptian Arab Land Bank: as the service is for Egyptians only (source: computer department).

#### **4.6 Sample Selection**

The basic idea of sampling is that by selecting some of the elements in a population, researcher may draw conclusions about the entire population. There are several compelling reasons for sampling, including: lower cost, greater accuracy of result, greater speed of data collection and availability of population selection (Cooper & Schindler 2003).

Selection of the sampling method to be used in a study depends on a number of related theoretical and practical issues. These include considering the nature of the study, the objectives of the study and the time and budget available. Traditional sampling method can be divided into two broad categories: probability and non-probability sampling (Samouel et. al., 2003).

Probability sampling is most commonly associated with survey-based research where researcher needs to make inferences from the sample about a population to answer the the research questions or to meet research objectives (Saunders et. al., 2003). In probability sampling, sampling elements are selected randomly and the probability of being selected is determined ahead of time by the researcher. If done properly, probability sampling ensures that the sample is representative (Hairet. al., 2003).

Non-probability sampling provides a range of alternative techniques which are based on researcher subjective judgment (Saunders et. al., 2003). In non-probability sampling the selection of elements for the sample is not necessarily made with the aim of being statistically representative of the population. Rather the researcher uses the subjective methods such as personal experience, convenience, expert judgment and so on to select the elements in the sample. As a result the probability of any element of the being chosen population is not

known (Samouel et. al., 2003).

Since in this study we want to generalize result to whole users of internet banking population, so the probability sampling method was chosen.

Depending on our previously mentioned target population we used the following equation to calculate our sample number to distribute the survey for them:

$$SS = [ Z^{2*} (P) * (1-P) ] / [ C^2 ]$$

Where:

SS = Sample Size

Z = Z value (e.g. 1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal (0.5 used for sample size needed)

c = confidence interval, expressed as decimal (e.g., .04 = ±4)

(Source:isixsigma.com,2010)

Depending on the previous mentioned equation, the next table(4.3) is resulted which aims to indicates the distribution of the total sample size among the targeted internet banking users and the returned numbers.



Table(4.3): The sample size details

No.	Bank Name which has an exist in internet	Internet banking users numbers	The sample number	The sample number after excluding the Pilot sample number	The returned numbers of the distributed questionnaire
1.	The Arab bank	450	207	201	174
2.	Bank of Jordan	254	153	148	127
3.	The Housing Bank of Trade and Finance	97	78	75	63
4.	Arab Islamic Bank	44	40	37	34
5.	Palestine Investment Bank	39	35	32	28
6.	Al-Quds Bank	34	31	28	22
7.	Palestine Islamic Bank	27	25	23	21
8.	Cairo Amman Bank	23	22	19	16
9.	Palestine Commercial Bank	18	17	15	12
Totals internet banking users		986	608	578	497

(source: developed by the researcher)

From the sample number (608), the researcher distributed the questionnaire to (30) individuals for pilot study purposes which was indicated next in this chapter. These 30 individuals had been excluded from the sample number, then the researcher distributed the questionnaire to the remain sample numbers (578). The rate of the returned questionnaire numbers was (497) from the (578) which represent 86% of the population which is statistically accepted number.

#### 4.7. The characteristics of the respondents:

Table (4.4) shows the obtained results from analyzing the characteristics of the respondents. The frequency and percentage for each variable is listed according to the survey categories. The following table describes these results:

Table (4.4): Analyzing Demographic Variables Result

Variable	Variable items	Frequency	Percentage %
Customer Gender	Male	359	72.2
	Female	138	27.8
	Total	497	100%
Customer age	25-less 35	236	47.3
	35-less 45	122	24.6
	18-less 25	85	17.2
	45-less 55	42	8.4
	more than 55	12	2.5
	Total	497	100%
Customer Education	Bachelor	337	67.8
	Diploma	76	15.3
	secondary class and less	57	11.5
	Master	17	3.4

	PhD	10	2.0
	Total	497	100%
Customer monthly income in Sheqel	1000-less2500	247	49.7
	2500-less3500	125	25.2
	3500-less4000	60	12.1
	Less1000	53	10.7
	4000 and more	12	2.4
	Total	497	100%

(source: developed by the researcher)

From the previous table (4.4), we can find that:

- A.** Customer's Gender: 359 (72.2%) of the respondents were male and 138 (27.8%) were female. The percentage of males who participated in the survey is higher than the percentage of females.

According to the last statistics in the first quarter of 2007, which was performed by Palestinian Central Bureau of Statistics (pcbs.gov.ps,2010), the main findings of this survey was as the followings:

- The participation rate in labor force in the Gaza Strip is 43.0 but the participation of women in labor force is 10.8 only, so the individuals who use internet banking at work by women was very low in according to males.
- The total population in the Gaza strip was (1,416,543), 50.74% of this population was males and 49.26% was females, so the number of males in general was abet greater than the number of females in the Gaza strip.

The results of testing this factor agree with some of previous studies as follows:

1. Alagheband, (2006) asserts that males are more likely to adopt internet banking than females.
2. Burke, (2002) indicates that males are using internet banking in large numbers than females.
3. Venkatesh and Morris, (2000) confirms the previous results.

**B.** Customer's age: the results show that the percentage of age from 25-less 35 is the highest at 236 (47.3%), followed by the 35-less 45 which is equal to 24.6%. The age group from 18-less 25 years is 17.2%. The age group from 45-less 55 years is 8.4%; the age group who are more than 55 years is 2.5%.

According to the last statistics in the first quarter of 2007 which was performed by Palestinian Central Bureau of Statistics (pcbs.gov.ps,2010), from the main findings of this survey was the followings :

- The youth represent about 27.0% of the total population: 27.1% of males and 26.8% of females. The youth are distributed into two main categories: the first category, adolescents (15-19 years), represents 41.8% in the Gaza Strip, and the second, young people (20-29 years), represents 58.2% in the Gaza Strip. Thus the population in the Gaza Strip is considered to be young.
- The age group (25-29 years) was the highest group with participation in the labor force, 85.7% for males and 22.6% for females.
- Palestinian youth (15-29 years) constitute a basic pillar in the society, as its size is relatively stable, and is representative of the Palestinian future. The significance of this category of society (its size, reality and challenges) makes it the group which is mostly affected by both positive and negative phenomena within society.

The results of testing this factor agree with some of previous studies as follows:

1. Pollit, (2002) reveals that 18 to 34 years age group are the most internet banking users in the American United States.

2. Czaja and Sharit, (1998); Czaja et al., (2001); Lu et al., (2003). Wang et al., (2003) all these studies confirm that young people are adopting the internet banking in large numbers than olds.

**C. Customer Education:** the survey shows that the highest number of respondents hold Bachelors degrees(67.8%). 5.4% have a higher level of education than a Bachelor's degree, while 26.8% have a Diploma or lower.

In 2007, available statistics showed that 44.1% of the youth (15-29 years) were enrolled in education (pcbs.gov.ps,2010); which represent a high level of education among youths.

The results of testing this factor agrees with some of previous studies as follows:

1. Jun Wu, (2003) in south Africa, indicates that 82% of those internet banking customers are university graduates; including higher university degrees.
2. Burke, (2002) education is often positively correlated with an individual's level of Internet literacy.

**D. Customer's monthly income:** the data shows that the majority of respondents are 49.7% are in near to the middle income group. The lower income group is 10.7%. The higher income group is 39.7%.

Israel's economic siege of Gaza's borders was in June 2007, the majority of Gazans are living below the income poverty line, says the UNDP. It defines the line as a family of six subsisting on 500 dollars per month; more than half of those families living below the poverty are living in extreme hardship, on less than 250 dollars each month, or approximately 1.35 dollars per person per day (endthesiege.blogspot.com, 2010).

Although of this bad economic conditions, surprisingly the monthly income of the internet banking did not influence the adoption of internet banking. This is due to the facts that:

- To be able to connect to internet banking you need to have a computer, and internet line whether via telephone or directly from the nearest internet provider; these costs are low in general.
- Educated people income is considered from the high incomes in the Gaza Strip in general; especially the people who have high university degrees.

The results of testing this factor agrees with some of previous studies as follows:

1. Jun Wu, (2003) in south Africa, indicates that 63% of those internet banking customers are medium income group.
2. Venkatesh and Morris, (2000) reveals that the most internet banking users are medium to high medium regarding their income.

#### **4.8.Data Collection:**

A questionnaire was prepared to determine the factors which influence the customer adoption of internet banking. The questionnaire was designed in Arabic language as not all of the target population are familiar with the English language and to be sure that the questions are understood by the respondents of the questionnaire (see Appendix A); English version was developed as well and attached (See Appendix B)

##### **A. Pilot testing and assessing validity of the questionnaire:**

In this research, prior to the pilot study, the questionnaire was distributing to a panel of experts in the same field of the thesis to be sure of the validity of the questionnaire topics and its relevancy to the thesis objectives (see Appendix C).

Experts suggestions and modifications were taken into consideration after they were discussed with the supervisor of the thesis.

After the questionnaire had been tested by the panel of experts the pilot study was conducted. The purpose of the pilot test was to refine the questionnaire so that respondents do not have problems in answering the questions and they were recording answers correctly and when if needed visual aids should have been provided. In addition, it enabled to obtain some assessment of the questions' validity

and the likely reliability of the data to be collected. Preliminary analysis used the pilot test data to ensure that the collected data was enabling the investigative questions to be answered. Furthermore, the pilot test on the structure of the questionnaire, helped to establish the content's validity (Mitchell, 1996).

The pilot study were conducted by distributing the questionnaire to thirty internet banking users; the questions in the general information section about the respondents were open questions. After the researcher found the answers range of these questions, they were converted to close ones. After distributing and collecting the pilot questionnaires the researcher revised and tested the data using SPSS.

Editing is the process of ascertaining that questionnaires were filled out properly and completely. This involves checking for interviewer and respondent mistakes. Coding refers to the process of grouping and assigning numeric codes and identifying various respondents with a particular question. As mentioned previously, the questionnaires were edited and coded.

Questionnaire was discarded if they fell outside the sample parameters, and if it appeared that a respondent had not understood the question then a decision was made whether to leave out that question or the whole questionnaire. Answers were also checked for inconsistencies. Some parts especially questions in the awareness of the internet banking service, were incompletely or incorrectly answered and the omission of certain elements were done.

Those thirty internet banking users were excluded from the sample of the thesis as we have mentioned previously in this chapter.

#### **B. Data Collection Administration:**

After defining the banks which have at least a static websites on the internet; the process of data collection about the target population began. The first difficulty that I have faced is that the headquarters of the banks and especially the Information technology departments locations are in the west bank definitely in Ramallah; so I wrote formal letters and I have sent them through the bank branches here in Gaza but this way did not work a lot Bank of Palestine refused to cooperate to finish this study, the Arab Bank was the best cooperated bank.

the next try was by contacting the head of information technology or the research departments directly by phone; I have motivated them to cooperate to be part of the study which benefited the banking sector in the Gaza strip. This way worked and I got information about the numbers of the internet banking users in the Gaza strip; some banks specially like the Arab Bank asked me to give them the questionnaire after I have indicated the different parts of the questionnaire to them. The employees themselves began to distribute the questionnaire to the visitors of the bank who are internet banking users, unfortunately most of the other banks were not cooperated in distributing the questionnaire to the internet banking users so the third trial was by forming a team to perform this duty. I formed a team of my brothers, relatives and their friends who finish or in the last years of their bachelor degrees. I explained every part of the questionnaire clearly to them, our target population and different bank branches addresses in the Gaza strip. The team visited these different banks branches specially in the crowded days like the salary days of different employees sectors in the Gaza strip. They began by asking the bank visitor if he is internet banking user; if so the internet banking user was given a questionnaire and they helped the internet banking users to fill the questionnaire at time otherwise if the bank visitor is not internet banking user he was not given a questionnaire. In some of the banks like the Islamic Arab Bank and the Housing Bank, I found that some of the employees of the banks are internet banking users for their own banks, so they cooperated by filling the questionnaire.

#### **4.9.Data Measurement**

In order to be able to select the appropriate method of analysis, the level of measurement must be understood. For each type of measurement, there is/are an appropriate method/s that can be applied. In this research, ordinal scales were used. Ordinal scale as shown in Table (4.5) is a ranking or a rating data that normally uses integers in ascending or descending order. The numbers are assigned according to the importance (1,2,3,4,5) do not indicate that the interval between scales are equal, nor do they indicate absolute quantities. They are merely numerical labels. Based on Likert scale we have the following table (4.5)



(Iyer and Jha, 2005; Ugwu and Haupt, 2007):

Table (4.5): Ordinal scale used for data measurement

The Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Scale	5	4	3	2	1

#### **4.10. Data Analysis:**

The researcher would use both qualitative and quantitative data analysis methods. The Data analysis was made utilizing Statistical package for the social science (SPSS) version 15. The researcher would utilize the following statistical tools:

- 1) Cronbach's Alpha and split half tests were for Reliability Statistics.
- 2) Spearman Rank correlation for Validity.
- 3) Frequency and Descriptive analysis to describe the demographic variables.
- 4) Simple linear regression to test the hypotheses.
- 5) Kolomogrov Simrnov to test the normality of the sample.
- 6) Nonparametric Tests (Mann-Whitney test, Kruskal-Wallis test and Sig. test)

In the following we are going to measure the validity and the reliability of the questionnaire:

##### **4.10.1. Validity of the scales:**

Validity refers to the degree to which an instrument measures what it is supposed to measure. Validity has a number of different aspects and assessment approaches (George and Mallery, 2003).

Statistical validity is used to evaluate instrument validity, which includes criterion-related validity and construct validity as the following:

##### **4.10.1.1. Criterion validity (Internal Validity):**

This test measures the correlation coefficient between each paragraph in one field and the whole related field. In our research this test was applied as the

following:

Table (4.6): Correlation Coefficient for Perceived usefulness of using internet banking

No.	Perceived usefulness paragraphs	Spearman's Correlation	Sig.
1	Internet banking helps me to accomplish banking activities more quickly	0.761	0.000 (**)
2	Internet banking helps me to improve my banking activities	0.842	0.000 (**)
3	Internet banking enables me to accomplish more banking activities	0.809	0.000 (**)
4	Internet banking gives me greater control over banking activities	0.892	0.000 (**)

\*\* Correlation is significant at the 0.01 level

Table (4.6) above clarifies the correlation coefficient for each item of Perceived usefulness factor. All the coefficients are positive and refer to significance at (0.01), which means a content internal reliability is valid for what is being measured.

Table (4.7): Correlation Coefficient for Perceived ease of use of internet banking

No.	Perceived ease of use of internet banking paragraphs	Spearman's Correlation	Sig.
1	Interaction with internet banking is clear and understandable.	0.877	0.000 (**)
2	It is easy to accomplish what I want to do using internet banking.	0.860	0.000 (**)
3	Learning to use internet banking is easy.	0.891	0.000 (**)
4	I am already or I expect to become skilled at using internet banking.	0.877	0.000 (**)
5	Overall, internet banking is easy to be used.	0.728	0.000 (**)

\*\* Correlation is significant at the 0.01 level

The previous table (4.7) clarifies the correlation coefficient for each item of Perceived ease of use factor. All the coefficients are positive and refer to significance at (0.01), which means a content internal reliability is valid for what is being measured.

Table (4.8): Correlation Coefficient for Attitude towards using internet banking

No.	Attitude towards using internet banking paragraphs	Pearson Correlation	Sig.
1	Internet banking development will support and serve customers	0.670	0.000 (**)
2	In general I am not satisfied with traditional ways in accomplishing the deals and different banking services	0.779	0.000 (**)
3	Using internet banking is a good idea	0.868	0.000 (**)
4	I feel using internet banking is enjoyable	0.819	0.000 (**)
5	From my point of view, the best is to use internet banking	0.802	0.000 (**)

\*\* Correlation is significant at the 0.01 level

Table (4.8) above clarifies the correlation coefficient for each item of Attitude factor. All the coefficients are positive and refer to significance at (0.01), which means a content internal reliability is valid for what is being measured.

Table (4.9): Correlation Coefficient for Behavioral intention to use internet banking

No.	Behavioral intention to use internet banking paragraphs	Spearman's Correlation	Sig.
1	I will use internet banking on regular basis in the future.	0.606	0.000 (**)
2	I expect using or my use of internet banking for handling my financial transactions to continue in the future.	0.895	0.000 (**)
3	I will strongly recommend others to use internet banking.	0.887	0.000 (**)

\*\* Correlation is significant at the 0.01 level

The previous table (4.9) clarifies the correlation coefficient for each item of Behavioral intention to use factor, all the coefficients are positive and refer to significance at (0.01), which means a content internal reliability is valid for what is being measured.

Table (4.10): Correlation Coefficient for Trust in using internet banking

No.	Trust in using internet banking paragraphs	Spearman's Correlation	Sig.
1	I trust in the benefits of internet banking website over the internet.	0.842	0.000 (**)
2	The internet banking keeps its promises and commitments.	0.946	0.000 (**)
3	I trust in internet banking in accomplishing banking services in general	0.910	0.000 (**)
4	I am not reluctant in giving private information via internet banking	0.758	0.000 (**)
5	It is difficult to hack the internet banking site via the internet	0.561	0.000 (**)

\*\* Correlation is significant at the 0.01 level

Table (4.10) above clarifies the correlation coefficient for each item of Trust factor. All the coefficients are positive and refer to significance at (0.01), which means a content internal reliability is valid for what is being measured.

Table (4.11): Correlation Coefficient for Culture influence on using internet banking

No.	Culture influence on using internet banking paragraphs	Spearman's Correlation	Sig.
1	Internet banking is used as a social appearance	0.864	0.000 (**)
2	When trying new technology, I trust my own instinct more than advice from others.	0.916	0.000 (**)
3	Most people who are important to me think that I should continue using internet banking.	0.886	0.000 (**)
4	The usage of my friends to internet banking influenced my internet banking usage positively	0.806	0.000 (**)

\*\* Correlation is significant at the 0.01 level

The previous table (4.11) clarifies the correlation coefficient for each item of Culture factor. All the coefficients are positive and refer to significance at (0.01), which means a content internal reliability is valid for what is being measured.

Table (4.12): Correlation Coefficient for self efficiency to use internet banking

No.	Self efficiency to use internet banking paragraphs	Spearman's Correlation	Sig.
1	I would conduct banking operations through internet banking if I had only the system manuals for reference.	0.860	0.000 (**)
2	I would perform banking operations through internet banking system if I had seen someone else using it before trying it myself.	0.857	0.000 (**)
3	I would conduct banking operations through internet banking system if I could call someone for help if I got stuck.	0.778	0.000 (**)
4	I am confident of using internet banking system even if I have never used such a system before.	0.820	0.000 (**)

\*\* Correlation is significant at the 0.01 level

Table (4.12) above clarifies the correlation coefficient for each item of self efficiency factor. All the coefficients are positive and refer to significance at (0.01), which means a content internal reliability is valid for what is being measured.

Table (4.13): Correlation Coefficient for Quality of service

No.	Quality of service paragraphs	Spearman's Correlation	Sig.
1	My access to the Internet is easy.	0.617	0.000 (**)
2	The Internet banking ensures completing all banking operations	0.850	0.000 (**)
3	The Internet banking website is available on internet without cut around the hour	0.716	0.000 (**)
4	Internet banking is able to perform my banking deals accurately	0.749	0.000 (**)
5	I can get on quick immediate reply or within 24 hours on the complaints that I face regarding banking services via internet	0.733	0.000 (**)

\*\* Correlation is significant at the 0.01 level

The previous table (4.13) clarifies the correlation coefficient for each item of technical service quality factor. All the coefficients are positive and refer to significance at (0.01), which means a content internal reliability is valid for what is being measured.

Table (4.14): Correlation Coefficient for Awareness of service and its benefits

No.	Awareness of service and its benefits paragraphs	Spearman's Correlation	Sig.
1	I always receive information about internet banking from the bank.	0.853	0.000 (**)
2	I receive enough information about the benefits of internet banking.	0.786	0.000 (**)
3	I receive enough information about using internet banking.	0.781	0.000 (**)
4	I receive enough information about internet banking services.	0.588	0.000 (**)

\*\* Correlation is significant at the 0.01 level

Table (4.14) above clarifies the correlation coefficient for each item of Awareness of service and its benefits factor. All the coefficients are positive and refer to significance at (0.01), which means a content internal reliability is valid for what is being measured.

#### **4.10.1.2. Construct Validity (Structure Validity):**

Testing the validity of the questionnaire structure is by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one field and all the fields of the questionnaire that have the same level of similar scale. In our research, this test was applied as the following:

Table (4.15): Correlation coefficients of each field of the questionnaire and the whole fields of the questionnaire

No.	The fields	Spearman's Correlation	Sig.
1	Perceived usefulness	0.855	0.000 (***)
2	Perceived ease of use	0.935	0.000 (***)
3	Attitude towards using	0.889	0.000 (***)
4	Behavioral Intention to use	0.883	0.000 (***)
5	Trust	0.862	0.000 (***)
6	Culture	0.877	0.000 (***)
7	Self efficiency	0.793	0.000 (***)
8	Technical service quality	0.766	0.000 (***)
9	Awareness of services and its benefits	0.848	0.000 (***)

\*\* Correlation is significant at the 0.01 level

Table (4.15) above clarifies the correlation coefficients of each field of the questionnaire and the whole fields of questionnaire were significance at (0.01) level, that's means the structure validity for all fields were valid to measure what they were being measured.

#### 4.10.2. Reliability analysis:

This section presents a test of reliability of questionnaire according to the pilot study.

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring (Polit & Hunger, 1985). The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample of people on two occasions and then compares the scores obtained by computing a reliability coefficient (Polit & Hunger, 1985).

It was difficult to return the scouting sample of the questionnaire that is used to measure the questionnaire reliability to the same respondents due to the different work conditions to this sample. Therefore two tests can be applied to the scouting sample in order to measure the reliability of the questionnaire. The first test is the Cronbach's Coefficient Alpha, and the second is Half Split Method.

### **A. Chronbach's coefficient alpha**

Chronbach's coefficient alpha (George and Mallery, 2003) is designed as a measure of internal consistency, that is, it dose all items within the instrument measure the same thing? Chronbach.s alpha is used here to measure the reliability of the questionnaire between each field. The normal range of Chronbach's coefficient alpha value between (0.0 and + 1.0) The closer the Alpha is to 1, the greater the internal consistency of items in the instrument being assumed. The formula that determines alpha is fairly simple and makes use of the items (variables), k, in the scale and the average of the inter-item correlations, r:

$$\alpha = [kr] / [1 + (k-1) r]$$

As the number of items (variables) in the scale (k) increases the value, it becomes large. Also, if the intercorrelation between items is large, the corresponding will also be large.

Since the alpha value is inflated by a large number of variables then there is no set interpretation as to what is an acceptable alpha value. A rule of thumb that applies to must situations is:

$0.9 \leq \alpha \leq 1.0$	Excellent
$0.8 \leq \alpha \leq 0.9$	Good
$0.7 \leq \alpha \leq 0.8$	Acceptable
$0.6 \leq \alpha \leq 0.7$	Questionable
$0.5 \leq \alpha \leq 0.6$	Poor
$0.0 \leq \alpha \leq 0.5$	Unacceptable



The Chronbach's coefficient alpha was calculated for each field of the questionnaire.

The most identical values of alpha indicate that the mean and variances in the original scales do not differ much, and thus standardization does not make a great difference in alpha.

Next table (4.16) shows the values of Chronbach's Alpha for each filed of the questionnaire and the entire questionnaire. For the fields, values of Chronbach's Alpha were in the range from 0.890 to 0.966. This range is considered high; the result ensures the reliability of each field of the questionnaire. Chronbach's Alpha equals 0.980 for the entire questionnaire which indicates an excellent reliability of the entire questionnaire to be distributed for the population sample.

Table (4.16): Results of Chronbach's Alpha Test

No.	The field	Cronbach's Alpha	Number of Items
1	Perceived usefulness	0.939	4
2	Perceived ease of use	0.959	5
3	Attitude towards using	0.933	5
4	Behavioral Intention to use	0.891	3
5	Trust	0.927	5
6	Culture	0.966	4
7	Self efficiency	0.941	4
8	Technical service quality	0.952	5
9	Awareness of services and its benefits	0.890	4
Total		0.980	39

## B. Half Split Method:

This method depends on finding Spearman correlation coefficient between the means of odd questions and even questions of each field of the questionnaire. Then, correcting the Pearson correlation coefficients can be done by using Spearman Brown correlation coefficient of correction.

The normal range of corrected correlation coefficient ( $2r / r+1$ ) is between (0.0 and + 1.0) As shown in table (4.17), all the corrected correlation coefficients values are between (0.0 and +1.0) and the significant ( $\alpha$ ) is less than 0.05 so all the corrected correlation coefficients are significance at  $\alpha = 0.05$ . It can be said that according to the Half Split method, the groups of satisfaction statements are reliable.

Table(4.17): Results of Split-Half Coefficient method

No.	The fields	Number of Items	correlation coefficient	Coefficient	p- value	Type
1	Perceived usefulness	4	0.784	0.879	0.000	Spearman
2	Perceived ease of use	5	0.922	0.960	0.000	GuttMan
3	Attitude towards using	5	0.773	0.872	0.000	GuttMan
4	Behavioral Intention to use	3	0.750	0.857	0.000	GuttMan
5	Trust	5	0.778	0.875	0.000	GuttMan
6	Culture	4	0.889	0.941	0.000	Spearman
7	Self efficiency	4	0.778	0.875	0.000	Spearman
8	Technical service quality	5	0.934	0.966	0.000	GuttMan
9	Awareness of services and its benefits	4	0.809	0.895	0.000	Spearman
Total		39	0.983	0.991	0.000	

#### **4.10. Summary**

This chapter covered the research methods which were used in this thesis: the chosen methods concerning research purpose, research approach, research strategy, data collection method and analysis approach. In the next chapter we are going to test the main hypotheses of the thesis, after we have approved the reliability of the questionnaire and its valid structure.

**Chapter Five:**  
**Data Analysis and Results**

## 5.1 Introduction:

This chapter presents the results of the data analysis for the main phase of this research. The data was collected and analyzed by different methods approaches using SPSS. Descriptive statistics were used for the quantitative analysis of the responses to the survey then the hypotheses were tested.

The following table (5.1) indicates the types and relationships among the used variables and the types of SPSS tests that were used:

Table (5.1): The used variables and tests

Hypotheses		Independent Variable	Dependent Variable	The related used SPSS test type	
Main	Sub				
H1		Culture	Perceived usefulness	Simple Linear Regression	
H2		Awareness of services and its benefits	Perceived usefulness		
H3		Self efficiency	Perceived ease of use		
H4		Technical service quality	Perceived ease of use		
H5		Perceived ease of use	Perceived usefulness		
H6		Perceived ease of use	Attitude towards using		
H7		Perceived usefulness	Attitude towards using		
H8		Trust	Attitude towards using		
H9		Attitude towards using	Behavioral Intention to use		
H10	H10.1	Age	Attitude towards using	Kolmogorov-Smirnov	Kruskal Walls
	H10.2	Gender			Man witny
	H10.3	Education			Kruskal Walls
	H10.4	Income			Kruskal Walls

(source: developed by the researcher)

## 5.2 Testing the paragraphs of the fields :

### 5.2.1. The normality of data:

Conducting Kolomogrov Simrnov Test is necessary to examine whether the data is parametric or non parametric.

From table (5. 2) we can conclude that the distribution for each component is not normally distributed and based on Kolmogorov-Smirnov test, since the P-value (sig.) is smaller than the level of significance  $\alpha = 0.05$ ; so the non parametric tests are going to be used.

Table (5. 2): Kolmogorov-Smirnov test for the fields

No.	Fields	Questions numbers	Kolmogrov Simrnov Test values (Z value)	P value (Sig.)
1	Perceived usefulness	4	4.740	0.000
2	Perceived ease of use	5	4.777	0.000
3	Attitude towards using	5	3.501	0.000
4	Behavioral Intention to use	3	4.709	0.000
5	Trust	5	3.849	0.000
6	Culture	4	4.408	0.000
7	Self efficiency	4	3.984	0.000
8	Technical service quality	5	4.658	0.000
9	Awareness of services and its benefits	4	3.597	0.000
Total		39	4.057	0.000

(source: developed by the researcher)

### 5.2.2. Analyzing and discussing the dimensions of the questionnaire:

Unless the data are non parametric, the researcher is going to use Sig. test with each of these components, as follows:

#### 1. Analyzing the Perceived usefulness field Paragraphs:

Table(5.3): The analyses of the questions of the Perceived usefulness field

No.	Questions	Weight	Mean	Sig.
1	Internet banking helps me to accomplish banking activities more quickly	69.4	3.47	0.000
2	Internet banking helps me to improve my banking activities	64.8	3.24	0.000
3	Internet banking enables me to accomplish more banking activities	72	3.60	0.000
4	Internet banking gives me greater control over banking activities	67.2	3.36	0.000
Total		68.4	3.42	0.000

The previous table (5.3) indicates that the answers of the sample individuals for the paragraphs (1-4) were positives, where the weight for these paragraphs is more than the average (which is 3 and equal 60 percent). This means that the sample individuals agree with these paragraphs and the Sig. is less than 0.05.

**The results of testing this Perceived usefulness field Paragraphs agree with some of previous studies as follows:**

- Davis, 1989; Davis,1989; Lai and Li, 2005; all of them agree that using internet banking involve many usefulness to internet users and increase their usefulness of banking services.

2. Analyzing the Perceived ease of use field Paragraphs:

Table(5.4): The analyses of the questions of the Perceived ease of use field

No.	Questions	Weight	Mean	Sig.
1	Interaction with internet banking is clear and understandable.	68.8	3.44	0.000
2	It is easy to accomplish what I want to do using internet banking.	65.8	3.29	0.000
3	Learning to use internet banking is easy.	67.2	3.36	0.000
4	I am already or I expect to become skilled at using internet banking.	64.6	3.23	0.000
5	Overall, internet banking is easy to be used.	64.8	3.24	0.000
Total		66.2	3.31	0.000

The previous table (5.4) indicates that the answers of the sample individuals for the paragraphs (1-5) were positives, where the weight for these paragraphs is more than the average (which is 3 and equal 60 percent). This means that the sample individuals agree with these paragraphs and the Sig. is less than 0.05.

**The results of testing this Perceived ease of use field Paragraphs agree with some of previous studies as follows:**

- Davis, 1989; Davis,1989; Agarwal and Karahanna, 2000; agree that using internet banking is free of efforts for internet banking users.



3. Analyzing the Attitude field Paragraphs:

Table(5.5): The analyses of the questions of the Attitude field

No.	Questions	Weight	Mean	Sig.
1	Internet banking development will support and serve customers	75.8	3.79	0.000
2	In general I am not satisfied with traditional ways in accomplishing the deals and different banking services	84.4	4.22	0.000
3	Using internet banking is a good idea	77.2	3.86	0.000
4	I feel using internet banking is enjoyable	79.4	3.97	0.000
5	From my point of view, the best is to use internet banking	76	3.80	0.000
Total		78.6	3.93	0.000

The previous table (5.5) indicates that the answers of the sample individuals for the paragraphs (1-5) were positives, where the weight for these paragraphs is more than the average (which is 3 and equal 60 percent). This means that the sample individuals agree with these paragraphs and the Sig. is less than 0.05.

**The results of testing this Attitude field Paragraphs agree with some of previous studies as follows:**

- Davis, 1989; Davis,1989; Lederer et al, 2000; Venkatesh and Davis,2000; agree that attitude towards using internet banking has a critical impact on successful adoption of internet banking.

4. Analyzing the Behavioral intention to use field Paragraphs:

Table(5.6): The analyses of the questions of the Behavioral intention to use field

No.	Questions	Weight	Mean	Sig.
1	I will use internet banking on regular basis in the future.	80.6	4.03	0.000
2	I expect using or my use of internet banking for handling my financial transactions to continue in the future.	64.4	3.22	0.000
3	I will strongly recommend others to use internet banking.	67	3.35	0.000
Total		70.7	3.53	0.000

The previous table (5.6) indicates that the answers of the sample individuals for the paragraphs (1-3) were positives, where the weight for these paragraphs more than the average (which is 3 and equal 60 percent). This means that the sample individuals agree with these paragraphs and the Sig. is less than 0.05.

**The results of testing this Behavioral intention to use field Paragraphs agree with some of previous studies as follows:**

- Fishbein and Ajzen, 1975; Moon and Kim, 2001 agree that individual's behaviour which is determined by his/her Behavioural Intention (BI) to perform that behaviour affect positively adoption of internet banking.

5. Analyzing the Trust field Paragraphs:

Table(5.7): The analyses of the questions of the Trust field

No.	Questions	Weight	Mean	Sig.
1	I trust in the benefits of internet banking website over the internet.	66	3.30	0.000
2	The internet banking keeps its promises and commitments.	60.2	3.01	0.001
3	I trust in internet banking in accomplishing banking services in general	59.8	2.99	0.013
4	I am not reluctant in giving private information via internet banking	47.4	2.37	0.000
5	It is difficult to hack the internet banking site via the internet	82.4	4.12	0.000
Total		63.2	3.16	0.000

The previous table (5.7) indicates that the answers of the sample individuals for the paragraphs (1,2,5) were positives, where the weight for these paragraphs is more than the average (which is 3 and equal 60 percent). This means that the sample individuals agree with these paragraphs and the Sig. is less than 0.05. In contrast,

the paragraphs (3,4) answers of the sample individuals were negatives, where the weight for these paragraphs is less than the average (which is 3 and equal 60 percent). This means that the sample individuals disagree with these paragraphs and the Sig. is less than 0.05.

We conclude that most of the respondents don't trust internet banking in general, this miss in trust leads to the reluctance in giving private information via internet banking (see Table 5.7).

The implication is that low trust in internet banking is a critical factor in causing customers not to adopt or use internet banking.

**The results of testing this Trust field Paragraphs agree with some of previous studies as follows:**

- AlSukkar, 2005; AlSukkar and Hassan, 2005; Yousafzai et al, 2003;Pikkarainen et al, 2004; agree that the issue of trust has an important effect on internet banking user to adopt internet banking.

6. Analyzing the culture field Paragraphs:

Table(5.8): The analyses of the questions of the culture field

No.	Questions	Weight	Mean	Sig.
1	Internet banking is used as a social appearance	78.2	3.91	0.000
2	When trying new technology, I trust my own instinct more than advice from others.	78.8	3.94	0.000
3	Most people who are important to me think that I should continue using internet banking.	77.8	3.89	0.000
4	The usage of my friends to internet banking influenced my internet banking usage positively	71.4	3.57	0.000
Total		76.6	3.83	0.000

The previous table (5.8) indicates that the answers of the sample individuals for the paragraphs (1-4) were positives, where the weight for these paragraphs is more

than the average (which is 3 and equal 60 percent). This means that the sample individuals agree with these paragraphs and the Sig. is less than 0.05.

**The results of testing this culture field Paragraphs agree with some of previous studies as follows:**

- Venkatesh and Davis, 2000; agrees that culture of the society has a positive impact on the decision of the internet banking to adopt internet banking.
- 7. Analyzing the self efficiency field Paragraphs:

Table(5.9): The analyses of the questions of the self efficiency field

No.	Questions	Weight	Mean	Sig.
1	I would conduct banking operations through internet banking if I had only the system manuals For reference.	68	3.40	0.000
2	I would perform banking operations through internet banking system if I had seen someone else using it before trying it myself.	77.4	3.87	0.000
3	I would conduct banking operations through internet banking system if I could call someone For help if I got stuck.	76.4	3.82	0.000
4	I am confident of using internet banking system even if I have never used such a system before.	79.6	3.98	0.000
Total		75.4	3.77	0.000

The previous table (5.9) indicates that the answers of the sample individuals for the paragraphs (1-4) were positives, where the weight for these paragraphs more than the average (which is 3 and equal 60 percent). This means that the sample individuals agree with these paragraphs and the Sig. is less than 0.05.

**The results of testing this self efficiency field Paragraphs agrees with some of previous studies as follows:**

- Wang , 2003, Eastin, 2002, Bandura, 1977; Agarwal and Karahanna, 2000; Pituch and Lee, 2006; agree that user's self confidence of using computer different application has a positive impact on customer adoption of internet banking.

8. Analyzing the Technical Quality of service field Paragraphs:

Table(5.10): the analyses of the questions of the Technical Quality of service field

No.	Questions	Weight	Mean	Sig.
1	My access to the Internet is easy.	69.8	3.49	0.000
2	The Internet banking ensures completing all banking operations	74.6	3.73	0.000
3	The Internet banking website is available on internet without cut around the hour	74.2	3.71	0.000
4	Internet banking is able to perform my banking deals accurately	69.6	3.48	0.000
5	I can get on quick immediate reply or within 24 hours on the complaints that I face regarding banking services via internet	72	3.60	0.000
Total		72	3.60	0.000

The previous table (5.10) indicates that the answers of the sample individuals for the paragraphs (1-5) were positives, where the weight for these paragraphs is more than the average (which is 3 and equal 60 percent). This means that the sample individuals agree with these paragraphs and the Sig. is less than 0.05.

**The results of testing this Technical Quality of service field Paragraphs agree with some of previous studies as follows:**

- AlSukkar and Hassan, 2005; Pikkarainen et al, 2004; Pikkarainen, 2004; agree that a decent internet connection with banks websites is an important factor for users to adopt internet banking.

9. Analyzing the Awareness of service and its benefits field Paragraphs:

Table(5.11): The analyses of the questions of the Awareness of service and its benefits field

No.	Questions	Weight	Mean	Sig.
1	I always receive information about internet banking from the bank.	53.4	2.67	0.117
2	I receive enough information about the benefits of internet banking.	62.8	3.14	0.000
3	I receive enough information about using internet banking.	81.8	4.09	0.000
4	I receive enough information about internet banking services.	83.2	4.16	0.000
Total		70.3	3.52	0.000

The previous table (5.11) indicates that the answers of the sample individuals for the paragraphs (2,3,4) were positives, where the weight for these paragraphs is more than the average (which is 3 and equal 60 percent). This means that the sample individuals agree with these paragraphs and the Sig. is less than 0.05. In contrast, the paragraph (1) the answers' of the sample individuals were negatives, where the weight for these paragraphs is less than the average (which is 3 and equal 60 percent). This means that the sample individuals disagree with these paragraphs and the Sig. is less than 0.05.

This means that we also found that most of the respondents never received information about internet banking from the bank and the item weight for this particular construct scored the lowest loading (53.4) among other items (see Table 5.11).

The implication is that low awareness of internet banking is a critical factor in causing customers not to adopt or use internet banking.

**The results of testing this Awareness of service and its benefits field Paragraphs agrees with some of previous studies as follows:**

- Sathye, 1999; Pikkarainen et al ,2004; agree that is known information a bout internet banking and its benefits have a critical impact on the adoption of internet banking.

### **5.3 Testing the Hypotheses:**

Regression analysis was chosen to test the first nine hypotheses for its fitness in analyzing the relationships between the independent variables and the dependent variables. Linear regression is based on correlation between the variables, in this case Pearson product-moment correlation, but it enables more detailed and sophisticated examination of the interrelationship of the variables. As David Stockburger says: "Regression models are powerful tools for predicting a score based on some other score. They involve a linear transformation of the predictor variable into the predicted variable. The parameters of the linear transformation are selected such that the least squares criterion is met, resulting in an "optimal" model. The model can then be used in the future to predict either exact scores, called point estimates, or intervals of scores, called interval estimates" (Stockburger, 1998). Fitness of the built model for this study is examined by this kind of standard regression analysis. The Structural model can be assessed by examining the path coefficients beta weight which illustrates positives of the relationship between the dependent and independent variables. the  $R^2$  value which shows the amount of variance explained by independent variables. Both, the  $R^2$  and the path coefficients indicate how well the model is performing.  $R^2$  shows predictive power of the model, and the values should be interpreted in the same way as  $R^2$  in a regression analysis. The path coefficients should be significant and consistent with expectations (Chwelos et al. 2001).

### 5.3.1 Testing the first hypothesis:

H1: "Culture has a positive impact on customer's perceived usefulness"  
at Significance Level  $\alpha = 0.05$

Table (5.12): Testing culture and perceived usefulness variables relationships

Hypothesis	Independent Variable	Dependent Variable	R Square	Beta	p-value(sig.)
H1	Culture	Perceived usefulness	0.612	0.783	0.000

#### A. From the previous table (5.12), we can reveal the followings:

1. Since  $p\text{-value} = 0.000 \leq 0.05$ , we shall accept the previous hypothesis which ensure that culture has its positive impact on customer's perceived usefulness.
2. The linear regression analysis of the original model reveals that the R-square of the model is 0.612. This means the model explains 61% of the variability in which the perceived usefulness is explained by culture and leads to the actual use of the system. This Approves the fitness of the model in explaining the results.
3. Beta equals 0.783 which approves the positives of the hypothesis.

#### B. The results of testing this hypothesis agree with some of previous studies as follows:

1. Koskosas and Massalas (2008); Cheung (2001); indicates that classmates, friends, colleagues, parents, are likely to have an influence on potential adopters and existing users of internet banking.
2. Dasgupta, et al. (1999) conclude that organizational and environmental factors have a significant impact on Information Technology (IT) adoption decisions of the customers.
3. Straub et al. (2001) study the influence of cultural beliefs and values on the inference of IT in the Arab world. They develop a cultural influence model of



Information Technology Transfer (ITT) that presupposes the effect of culture, price attractiveness, top management support and required staff time on ITT. Surveys and interviews within the Arab cultural beliefs are very strong predictors of resistance to the systems and to ITT.

4. Goodman and Green (1992) argue that cultural and political factors are the main explanations for the lack of IT diffusion in the Middle East. This is because the Western assumption that a free movement of information has positive connotations violates the cultural belief system of many Middle Eastern countries.
5. The study, "The Role of Culture and IT policy in developing world, the case of Egypt and the Arab Culture" (2002) reveals that there is a relationship between Arabic culture and the policy of transferring of IT to some Arabic countries. The culture in this study was defined as beliefs and values.
6. To better understand culture, Hofstede (1994) developed a framework recognizing five dimensions of culture: power distance, uncertainty avoidance, individualism versus collectivism, masculinity versus femininity, and long term versus short-term. Hofstede's work represents the largest study attempting to classify nations based on broad value differences. His work still has an impact today, and has been replicated and reviewed by many experts. The major motivation behind this classification framework is that it is able to establish "the degree to which cultural environment systematically influences employees' attitudes and behavior" (Paik et al., 1996, p. 20).
7. In a similar vein, Davis et al. (1989) believe that in some circumstances people might use a technology to comply with others' mandates rather than their own feelings and beliefs.
8. Venkatesh and Morris (2000) confirm that social influence plays an important role in determining the acceptance and usage behavior of adopters of new ITs.
9. Taylor and Todd's (1995) study, social influences were equivalent to subjective norm and defend as other people's opinion, superior influence, and peer influence. Furthermore, customers may have unfavorable or favorable perceptions towards online banking use because of the perceptions of a family member, acquaintances or peers influence.

10. Several studies assert that culture plays a significant role in IT diffusion (Hodgetts and Luthans, 1997; Burn, 1995; Ein-Dor, et al., 1993; Kedia and Bhagat, 1988; Hempel and Chang, 2002; Thatcher and William Foster 2004)

**C. The result of testing this hypothesis disagrees with some others of previous studies as follows:**

1. (Jun Wu,2005), the results of this study indicates that adoption is not affected by social influences. In other words, opinions of friends, parents or colleagues are not considered as an important factor when deciding whether to adopt internet banking service.

A possible reason for this is that internet banking services are seen as an extension of other banking services. The decision to bank at a particular bank may be affected by social influences such as what other people might think of that bank. Once the bank has been accepted, the decision to adopt an additional service such as internet banking at this particular bank would be relatively unaffected by the opinions of other people. Another possible explanation is that extensive information is readily available on the Internet and, in particular, on each of the individual banks' website. This relatively easy access to comprehensive information results in potential users being less dependent on other sources such as the opinions of friends, parents and colleagues.

### **5.3.2 Testing the second hypothesis:**

H2: " Awareness of services and its benefits has a positive impact on customer's perceived usefulness"

At Significance Level:  $\alpha = 0.05$

Table (5.13): Testing awareness of service and perceived usefulness variables relationships

Hypothesis	Independent Variable	Dependent Variable	R Square	Beta	p-value(sig.)
H2	awareness of service and its benefits	perceived usefulness	.669	0.818	0.000

**A. From the previous table (5.13), we can reveal the followings:**

1. Since  $p\text{-value} = 0.0000 \leq 0.05$ , we shall accept the previous hypothesis which ensures that awareness of service and its benefits has a positive impact on customer's perceived usefulness.
2. The linear regression analysis of the original model reveals that the R-square of the model is 0.669. This means the model explains 67% of the variability in which the perceived usefulness is explained by awareness of service and its benefits and leads to the actual use of the system. This Approves the fitness of the model in explaining the results.
3. Beta equals 0.818 which approves the positives of the hypothesis.

**B. The results of testing this hypothesis agree with some of previous studies as follows:**

1. Pikkarainen (2004), has reported that the amount of information a customer has about Internet banking and its benefit may has a critical impact on the adoption of Internet banking.
2. Khan (2007), Sathye (1999) note that low awareness of Internet banking is a critical factor in causing customers not to adopt internet banking.
3. Howcroft et al. (2002) find that lack of awareness of Internet banking services and its benefits are found to be reasons for consumers' reluctance to use Internet banking.

### 5.3.3 Testing the third hypothesis:

H3: " Higher computer self efficacy has a positive impact on customer's perceived ease of use"

At Significance Level:  $\alpha = 0.05$

Table (5.14): Testing self efficacy and perceived usefulness variables relationships

Hypothesis	Independent Variable	Dependent Variable	R Square	Beta	p-value(sig.)
H3	Self efficiency	perceived ease of use	0.714	0.845	0.000

#### A. From the previous table (5.14), we can reveal the followings:

1. Since  $p\text{-value} = 0.000 \leq 0.05$ , we shall accept the previous hypothesis which ensures that Higher computer self efficacy has a positive impact on customer's perceived ease of use".
2. The linear regression analysis of the original model reveals that the R-square of the model is 0.714. This means the model explains 71% of the variability in which the PERCEIVED EASE OF USE is explained by SELF EFFICIENCY the and leads to actual use of the system. This Approves the fitness of the model in explaining the results.
3. Beta equals 0.845 which approves the positives of the hypothesis.

#### B. The results of testing this hypothesis agree with some of previous studies as follows:

1. Igarria and Iivari (1995) extended Technology Acceptance Model in research about the effect of self-efficacy on computer usage in Finnish companies. Their TAM incorporated self-efficacy and the determinants of it as the factors that have an impact on computer anxiety, perceived ease of use and perceived usefulness and finally the actual use of computer technology.

2. Several studies have examined the relationship between self-efficacy with respect to computer use (e.g.) Eastin, 2002; Bandura, 1977; Monsuwe et al., 2004; Wang and Newlin, 2002). Davis et al. (1989) and Wang et al. (2003), they find that 'computer self-efficiency and 'perceived ease of user's are related in the area of internet banking.
3. Researchers have found positive relationships between perceptions of convenience and the use of internet banking (Gerrard and Cunningham, 2003; Lassar et al., 2005).

Polatoglu and Ekin (2001) imply that customers, who are familiar with the Internet and e-mail, should not find internet banking to be complex. Based on the theoretical and empirical support from the IS literature, it can be concluded that, the stronger a person's self-efficacy beliefs, the more likely he or she tries to achieve the required outcome.

4. McFarland and Hamilton (2004), Yi and Hwang (2003), confirmed the findings.

#### 5.3.4 Testing the fourth hypothesis:

H4: " Technical service quality has a positive impact on customer's perceived ease of use"

At Significance Level:  $\alpha = 0.05$

Table (5.15): Testing Technical service quality and perceived ease of use variables relationships

Hypothesis	Independent Variable	Dependent Variable	R Square	Beta	p-value(sig.)
H4	technical service quality	perceived ease of use	0.771	0.878	0.000

**A. From the previous table (5.15) we can reveal the followings:**

1. Since  $p\text{-value} = 0.000 \leq 0.05$ , we shall accept the previous hypothesis which ensures that Technical service quality has a positive impact on customer's perceived ease of use.
2. The linear regression analysis of the original model reveals that the R-square of the model is 0.771. This means the model explains 77% of the variability in which the perceived ease of use is explained by technical service quality and leads to the actual use of the system. This Approves the fitness of the model in explaining the results.
3. Beta equals 0.878 which approves the positives of the hypothesis.

**B. The results of testing this hypothesis agree with some of previous studies as follows:**

1. Kuisma, Laukkanen and Hiltunen (2007) used Internet access as one of the factors affecting the adoption of Internet banking; without a proper Internet connection the use of Internet banking is not possible.
2. Sathye (1999); Pikkarainen et. al. (2004) identifies the importance of a decent Internet connection and its quality in adopting Internet banking and he conclude that without a proper Internet connection, the use of Internet banking is not possible.
3. Almogbil's (2005) study confirm that there is a significant relationship between the speed of Internet access and the use of internet banking services. He found that 63% of the customers in Saudi Arabia access the Internet through dial up services.
4. Individual perception analysis of technology quality is a critical key to improving technology quality (Vriens and Harmen, 2000; Bahi and Nantel, 2000) within the banking sector, because it provides a good basis for understanding what the individuals need during the technology delivery process (Parasuraman, et al., 1985).

### 5.3.5 Testing the fifth hypothesis:

H5 : “Customer's perceived ease of use has a positive impact on his/her perceived usefulness of internet banking”

at Significance Level:  $\alpha = 0.05$

Table (5.16): Testing perceived ease of use and perceived usefulness variables relationships

Hypothesis	Independent Variable	Dependent Variable	R Square	Beta	p-value(sig.)
H5	perceived ease of use	perceived usefulness	0.898	0.948	0.000

#### A. From the previous table (5.16), we can reveal the followings:

1. Since  $p\text{-value} = 0.000 \leq 0.05$ , we shall accept the previous hypothesis which ensures that Customer's perceived ease of use has a positive impact on his/her perceived usefulness of internet banking.
2. The linear regression analysis of the original model reveals that the R-square of the model is 0.898. This means the model explains 89% of the variability in which the perceived usefulness is explained by perceived ease of use and leads to the actual use of the system. This Approve the fitness of the model in explaining the results.
3. Beta equals 0.948 which approves the positives of the hypothesis.

#### B. The results of testing this hypothesis agree with some of previous studies as follows:

1. A wide range of research over the past decade provides evidence of the significant effect of perceived ease of use on usage intention in a way or other through its effect on perceived usefulness (Chi Shing Yiu, Kevin Grant, David Edgar, 2007; Alsajjan and Dennis, 2008; Yiu, Grant and Edgar, 2007; Chi Shen and Chiou, 2009; Ming-Chi Lee, 2008; Ramayah, Rouibah, Gopi and Rangel, 2009).

2. Perceived usefulness and perceived ease of use have been studied as key determinants of technology acceptance and usage (Davis, 1989; Adams et al., 1992; Venkatesh and Davis, 2000; Venkatesh et al., 2003; Davis et al., 1989; Venkatesh and Morris, 2000; Venkatesh et al., 2003; Lai and Li, 2005).
3. Previous studies have reported results including a positive relationship (Agawal and Prasad, 1999; Chau, 1996; Al-Sukkar A. and Hasan H., 2004; 2004a, b).

### 5.3.6 Testing the sixth hypothesis:

H6: “Customer's perceived ease of use has a positive impact on his/her attitude towards using Internet banking”

At Significance Level:  $\alpha = 0.05$

Table (5.17): testing perceived ease of use and attitude variables relationships

Hypothesis	Independent Variable	Dependent Variable	R Square	Beta	p-value(sig.)
H6	perceived ease of use	attitude towards using	0.671	0.819	0.000

#### A. From the previous table (5.17) we can reveal the followings:

1. Since  $p\text{-value} = 0.000 \leq 0.05$ , we shall accept the previous hypothesis which ensures that Customer's perceived ease of use has a positive impact on his/her attitude towards using Internet banking.
2. The linear regression analysis of the original model reveals that the R-square of the model is 0.671. This means the model explains 67% of the variability in which the attitude towards using is explained by perceived ease of use and leads to the actual use of the system. This Approve the fitness of the model in explaining the results.
3. Beta equals 0.819 which approves the positives of the hypothesis.



**B. The results of testing this hypothesis agree with some of previous studies as follows:**

1. Extensive research in information system context provides evidence of the significant effect of perceived usefulness on attitude towards usage (Chi Shing Yiu, Kevin Grant, David Edgar, 2007; Alsajjan and Dennis, 2008; Yiu, Grant and Edgar, 2007; Ming-Chi Lee, 2008; Ramayah, Rouibah, Gopi and Rangel, 2009)
2. All the studies related to TAM have examined perceived ease of use in many ways earlier. Suh and Han (2002), Eriksson et al. (2004), Wang et al. (2003) for example have used extensions of TAM in their studies, also examining the importance of perceived ease of use .

According to them it is a key factor. However, often perceived ease of use influences indirectly via perceived usefulness . All in all, it is clearly an important factor also for corporate customers.

3. Perceived ease of use (perceived ease of use ) has impact on the attitude toward using, (Agawal and Prasad, 1999; Davis, 1993; Hu, et al., 1999; Moon and Kim, 2001, Al-Sukkar and Hasan H., 2005; 2004a, b; Al-gahtani and King, 1999; Lu and Gustafsen, 1994; Moore and Benbasat, 1991; Venkatesh and Davis, 1996). They confirm the effect of the ease of use of attitude toward using IT/IS.
4. (Chau ,1996; Davis et al., 1989; Jackson et al., 1997; Venkatesh and Morris, 2000; Venkatesh et al., 2003) explains that the relationship between perceived ease of use and attitude toward the technology is dependent upon the stage of technology diffusion or technology life cycle. In other words, in the early stage of diffusion, users need some skills to handle the technology. Hence perceived ease of use showed a positive relationship with the attitude toward the technology, or behavioural intention to use.

However, stage users had much less difficulty in using the technology.

Accordingly, there was no relationship, which seems to be a plausible explanation for the inconsistent results.

**C. The result of testing this hypothesis disagree with some others of previous studies as follows:**

1. As many researchers have argued (Adams, et al., 1992; Chau, 1996; Davis, 1989; Keil, et. al., 1995), perceived ease of use may not be an important variable for explaining user's acceptance of technology. A possible reason for this is that , there are some factors that have an influence on the relationship between perceived ease of use and attitude or behavioural intention, as this thesis take into consideration. Those factors encompass technology characteristics (technology quality, technology life cycle and technology category) and user characteristics (trust, and culture). Therefore, this study indicates that a more sophisticated theoretical framework that reflects broad influential factors including technology characteristics and user characteristics should guide the study of technology acceptance.

**5.3.7 Testing the seventh hypothesis:**

H7: “Customer's perceived usefulness has a positive impact on his/her attitude towards using internet banking”

At Significance Level:  $\alpha = 0.05$

Table (5.18): Testing perceived usefulness and attitude variables relationships

Hypothesis	Independent Variable	Dependent Variable	R Square	Beta	p-value(sig.)
H7	Perceived usefulness	Attitude towards using	0.703	0.838	0.000

**A. From the previous table(5.18) we can reveal the followings:**

1. Since  $p\text{-value} = 0.000 \leq 0.05$ , we shall accept the previous hypothesis which ensures that customer's perceived usefulness has a positive impact on his/her attitude towards using internet banking.
2. The linear regression analysis of the original model reveals that the R-square of the model is 0.703. This means the model explains 70% of the variability in

which the attitude towards using is explained by perceived usefulness and leads to the actual use of the system. This Approves the fitness of the model in explaining the results.

3. Beta equals 0.838 which approves the positives of the hypothesis.

**B. The results of testing this hypothesis agree with some of previous studies as follows:**

1. Chi Shing Yiu, Kevin Grant, David Edgar, 2007; Alsajjan and Dennis, 2008; Yiu, Grant and Edgar, 2007; Ming-Chi Lee,2008; Ramayah, Rouibah, Gopi and Rangel, 2009; Davis and Venkatesh,1996; concluded that perceived usefulness has a major impact on user acceptance of a system. Sudarraj et al. (2003) validated that perceived usefulness is very important factor for determining online banking usage in Canada.
2. Chau and Lai (2004) also discovered perceived usefulness to be the only major factor directly influencing the attitude towards internet banking.
3. Eriksson et al. (2004) also stated that perceived usefulness is the most important factor in predicting acceptance of Internet banking among retail customers in Estonia.
4. perceived usefulness with the attitude toward using were supported.  
(Agawal and Prasad, 1999; Davis, 1993; Hu, et al., 1999; Moon and Kim, 2001, Al-Sukkar and Hasan H., 2005; 2004a, b; Al-gahtani and King, 1999; Lu and Gustafsen, 1994; Moore and Benbasat, 1991; Venkatesh and Davis, 1996). They confirm the effect of the ease of use of attitude toward using IT/IS.
5. Only one researcher did notice that perceived ease of use was more powerful predictor than perceived usefulness (Wang et al, 2003), whereas most TAM-related studies have concluded that perceived usefulness is the ruling factor over perceived ease of use .

### 5.3.8 Testing the eighth hypothesis:

H8: "Customer's trust has a positive impact on his/her attitude towards using internet banking"

At Significance Level:  $\alpha = 0.05$

Table(5.19): Testing trust and attitude variables relationships

Hypothesis	Independent Variable	Dependent Variable	R Square	Beta	p-value(sig.)
H8	Trust	Attitude	0.586	0.765	0.000

#### A. From the previous table (5.19), we can reveal the followings:

1. Since  $p\text{-value} = 0.000 \leq 0.05$ , we shall accept the previous hypothesis which ensures that customer's trust has a positive impact on his/her attitude towards using internet banking.
2. The linear regression analysis of the original model reveals that the R-square of the model is 0.586. This means the model explains 58% of the variability in which the ATU is explained by TR and leads to the actual use of the system. This Approves the fitness of the model in explaining the results.
3. Beta equals 0.765 which approves the positives of the hypothesis.

#### B. The results of testing this hypothesis agree with some of previous studies as follows:

1. Customer attitudes towards Internet banking are driven by trust, which plays an important role in increasing usability within the internet banking environment. The issue of trust is more important in online as opposed to offline banking because transactions of this nature contain sensitive information and that are parties in the financial transaction are concerned about access to critical files and information transferred via the Internet (Alsajjan and Dennis, 2008; Yiu, Grant

and Edgar, 2007; Chi Shen and Chiou,2009;Alsajjan and Dennis, 2006; Suh and Han, 2002).

2. Institution trust appears in trust in managerial competence and trust in an organization's support of information technology (Lewicki and Bunker, 1996; Tyler and Degoey, 1996). This dimension reflects the trust of both relevant others who might be users of technology with whom would offer interact using the information technology. (Lewicki and Bunker, 1996; Powell, 1996; Tyler and Degoey, 1996).
3. Trust in information systems technology is becoming more important to academics (Lippert, 2001b) and practitioners (Lippert, 2001c, 2001d) alike. The notion of technology trust (Lippert, 2001a, 2002) attempts to quantify what is meant by the user's trust in the inanimate information systems technologies – hardware and software – employed in daily life. Various organizations provide privacy assurance services including TRUSTe, BBBOnline, and Web Trust. Each of these assurance seals are designed to increase trust in privacy and security associated with commercial website applications. Some IS research has investigated commercial Internet trust symbols (Sivasailam, et. al., 2002; Pikkarainen et al,2004) as dimensions of web assurance in business to individual (B2C) electronic commerce.
4. According to a study conducted by Sathye (1999), 73% avoided the adoption online banking because they are concerned about safety and security of transactions over the internet. moreover, Sathye (1999) found that consumers were not ready to change from present familiar ways of banking to Internet banking unless their specific need is satisfied.
5. Consumers trust in their online transactions is important and has been identified as a key to the development of e-commerce (Yousafzai et al.,2003)
6. Mukherjee and Nath (2003); AlSukkar (2005); tested a model of trust in India in which shared value, communication and opportunistic behaviour were key antecedents of trust. They concluded that both shared value and communication played a significant positive role on trust and that trust had a significant positive influence on commitment.

### 5.3.9. Testing the ninth hypothesis:

H9: "Customer's attitude towards using internet banking has a positive impact on his/her intention to use it"

At Significance Level:  $\alpha = 0.05$

Table (5.20): Testing attitude and intention to use variables relationships

Hypothesis	Independent Variable	Dependent Variable	R Square	Beta	p-value(sig.)
H9	Attitude towards using	Behavioral intention to use	0.767	0.876	0.000

#### A. From the previous table (5.20), we can reveal the followings:

1. Since  $p\text{-value} = 0.000 \leq 0.05$ , we shall accept the previous hypothesis which ensures that Customer's attitude towards using internet banking has a positive impact on his/her intention to use it.
2. The linear regression analysis of the original model reveals that the R-square of the model is 0.767. This means the model explains 76% of the variability in which the behavioral intention to use is explained by attitude towards using and leads to the actual use of the system. This Approves the fitness of the model in explaining the results.
3. Beta equals 0.876 which approves the positives of the hypothesis.

#### B. The results of testing this hypothesis agree with some of previous studies as follows:

1. Attitude towards usage is found to impact the intention to use Internet banking context (Laukkanen, Sinkkonen and Laukkanen, 2009; Tan and Thoen, 2000).
2. This finding is in accordance with previous empirical findings concerning advertising, web site effectiveness, Internet banking acceptance and user acceptance of technology (Agawal and Prasad, 1999; Bruner and Kumar, 2000;

Choi, 2000; Choi, *et al.*, 2001; Davis, 1993; Gefen and Straub, 2000; Hu, *et al.*, 1999; Moon and Kim, 2001; Stevenson, *et al.*, 2000, Al-Sukkar A. and Hasan H., 2005; 2004a,b). This study indicates that respondents intend to behavioural Internet banking when they have more favourable attitude toward it.

**5.3.10. Testing the tenth hypothesis:**

A. Kolomogrov Simrnov Test:

Conducting Kolomogrov Simrnov Test is necessary to examine whether the data is parametric or non parametric.

The distribution for each component is not normally distributed and based on Kolmogorov-Smirnov test, since the P-value (sig.) is smaller than the level of significance  $\alpha = 0.05$  see table (5.21)

Table(5.21):Kolomogrov Simrnov test for demographic variables

Hypotheses		Independent Variable	Dependent Variable	P-value (sig.)
Main	Sub			
H10	H10.1	Age	Attitude towards using	0.000
	H10.2	Gender		0.000
	H10.3	Education		0.000
	H10.4	Income		0.000

So the researcher is going to use Kruskal Walls test with gender variable which has two levels and Man witny test with the variables age, education and income which all of them are formed of five levels.

**H 10.1:** “Age has an effect on customer's attitude towards using internet banking”  
 The Kruskal-Wallis test is used to check and if there are any significant difference among respondents regarding age to attitude towards using .

Table (5.22) Testing the age and ATU variables relationships

Kruskal Wallis Test	
Sig.	0.151

**A.** Table (5.22) shows that the p-value (Sig.= 0.151) of Kruskal-Wallis test is greater than the level of significance  $\alpha = 0.05$ , then there is insignificant difference among the respondents regarding age to attitude towards using . It was concluded that the respondents' age has no effect on the attitude towards using . This is due to the fact that the respondents are educated people; %88.5 of them have diploma degree and more reaching to PhD degree. So there were no differences in the answers of respondents regarding their age; if we perform the chi square test between age and education we can find that the (sig.= 0.000 <  $\alpha$  (0.05)) which means that there is meaningful statistical relation between age and education.

**B. The results of testing this hypothesis agree with some of previous studies as follows:**

1. Al-Somali, Gholami and Clegg (2008);Algheband,2006; age, had no effect on attitudes towards use, as indicated by the no significant and negative path.

**C. The result of testing this hypothesis disagree with some others of previous studies as follows:**

1. Wang et al., (2003) found that age has a significant influence on user acceptance of Internet banking.
2. Alagheband ( 2006) asserts that young individuals are more likely to adopt Internet banking.



3. Harrison and Rainer, 1992 suggest that there is a strong relationship between age and the acceptance of innovation where he found that older consumers are found to hold more negative attitudes towards new technologies.
4. Research quoted earlier showed that in Finland, (Karjaluoto, et al., 2002:263) age had an impact on the use of internet banking. The age of the typical user was identified as being between 35-49 years. However, it emerged that internet banking users in South Africa are not the same as the literature from other continents suggests. In this study, the age group 30-39 accounts for 64 percent of internet banking users, which is a relatively high proportion of younger user than previous studies (Karjaluoto, et al., 2002:263) have indicated. The data suggests that age has an impact on the use of internet banking in South Africa.

**H10.2:** “Gender has an effect on customer's attitude towards using internet banking”

Mann-Whitney test is to examine if there is a statistical significant difference among respondents regarding attitude towards using to gender.

Table (5.23). Testing the gender and ATU variables relationships

Mann-Whitney Test	
Sig.	0.070

A. Table (5.23) shows that the p-value (Sig.=0.070) of Mann-Whitney test is greater than the level of significance  $\alpha = 0.05$  for each field, then there is insignificant difference among the respondents regarding gender to attitude towards using . It was concluded that the respondents' gender has no effect on the attitude towards using .

This is due to the fact that females participate and share males in the daily life in the Palestinian society, females working, educating, electing, which cover the previously existing gap between males and females in our society.

**B. The results of testing this hypothesis agree with some of previous studies as follows:**

1. When it comes to gender, studies have found that there is no difference between the males and females in using various types of technology (Burke, 2002; Li et al., 1999).
2. Al-Somali, Gholami and Clegg (2008); gender, had no effect on attitudes towards use, as indicated by the no significant and negative path.

**C. The result of testing this hypothesis disagree with some others of previous studies as follows:**

1. Venkatesh and Morris, (2000), investigated gender differences in the overlooked context of individual adoption and sustained usage of technology in the workplace. They found that gender is an important determinant of short-term usage, and can be used to predict sustained usage behaviour in individual adoption and continued usage of technology in work places.

**H10.3:** “Education has an effect on customer's attitude towards using internet banking.”

Table (5.24): Testing the education and ATU variables relationships

Kruskal Wallis Test	
Sig.	0.028

**A.** Table (5.24) shows that the p-value (Sig.=0.028) of Kruskal-Wallis test is less than the level of significance  $\alpha = 0.05$ , then there is a significant difference among the respondents regarding education to attitude towards using .

It was concluded that the respondents education has an effect on the attitude towards using, and as table (5.25) indicates, respondents who have PhD degree are the most effective people.

Table (5.25): Mean ranks for respondents education levels

Education	Mean Rank
Secondary school and less	283.02
Diploma	278.64
Bachelor	234.84
Master	261.03
PhD	347.00

**B. The results of this hypothesis agrees with some of previous studies as follows:**

1. Education also plays a significant role with regards to attitude toward technology use. Higher educated customers such as university graduates are more comfortable in using technology, like the internet or Internet banking. A reason for this is that education is often positively correlated with an individual's level of Internet literacy (Burke, 2002; Lai and li,2005).
2. Education levels are regarded as an influential factor in consumers' use of internet banking services with high education levels being particularly significant. As earlier research has indicated, high levels of education enhance a consumer's ability to process more complex information and make decisions (Polatoglu and Ekin, 2001:159).

**H10.4:** “Income has an effect on customer's attitude towards using internet banking.”

Table (5.26): testing the income and ATU variables relationships

Kruskal Wallis	
Sig.	0.082

**A.** From the previous table (5.26) shows that the p-value (Sig.= 0.082) of Kruskal-Wallis test is greater than the level of significance  $\alpha = 0.05$ , then there is insignificant difference among the respondents regarding income to attitude towards using .

It was concluded that the respondents income has no effect on the attitude towards using . This is due to the fact that the most homes in our Palestinian society has a computer and internet connections as well as the institutions; especially the prices of computers and internet connections are low in general and our respondents income are near to the high income in general.

**B. The results of testing this hypothesis agree with some of previous studies as follows:**

1. Al-Somali, Gholami and Clegg (2008);Eastin,2002; gender had no effect on attitudes towards use, as indicated by the no significant and negative path.

**C. The results of testing this hypothesis disagree with some others of previous studies as follows:**

1. Older individuals between 26 and 45 are overrepresented in categories of higher income, higher occupational positions, and higher educational qualifications (Venkatesh and Morris, 2000).
2. According to a European survey conducted in 2002, adult decision makers with a personal annual income of 77, 240 USD are rapidly embracing new technology, with 26 per cent using a WAP (wireless application protocol) phone. (Crawford, 2002).
3. (Jun Wu,2005), The results of this study indicate that on the one hand, 64 percent of internet banking users have an income of more than R5000 per month. In South Africa, this represents the middle-to-high income group. On the other hand, 66 percent of the non-users have an income of less than R 4000 per month. Only 10 percent of the non-users have an income of more than R 5000 per month.
4. This finding concurs with the studies of Karjaluoto, et al. (2002) which showed that income has a major effect on the adoption of internet banking. Internet banking users generally earn a higher income than non-users.

In the following table (5.27), the researcher is going to summarize the results of tested hypotheses; and the conditions of them by indicating if they were accepted or not:

Table (5.27): Summary of the results of tested hypotheses

Hypothesis		Independent Variable	Dependent Variable	The used test	p-value	Conditions
Main	Sub					
H1		Culture	Perceived usefulness	Simple Linear Regression	0.000	Accepted
H2		awareness of service and its benefits	Perceived usefulness		0.000	Accepted
H3		self efficiency	Perceived ease of use		0.000	Accepted
H4		technical service quality	Perceived ease of use		0.000	Accepted
H5		Perceived ease of use	Perceived usefulness		0.000	Accepted
H6		Perceived ease of use	attitude towards using		0.000	Accepted
H7		Perceived usefulness	attitude towards using		0.000	Accepted
H8		Trust	attitude towards using		0.000	Accepted
H9		attitude towards using	behavioral intention to use		0.000	Accepted
H10	H10.1	Age	attitude towards using	Kruskal Walls	0.151	Rejected
	H10.2	Gender		Man Witny	0.070	Rejected
	H10.3	Education		Kruskal Walls	0.028	Accepted
	H10.4	Income		Kruskal Walls	0.082	Rejected

## 5.4 Summary

We have discussed the respondents' characteristics and tested the hypotheses of the thesis using different SPSS tests; in the next chapter we are going to answer the thesis questions and give our recommendations.

**Chapter Six:**  
**Conclusions and Recommendations**

## **6.1 Conclusions:**

The main goal of this research is to answer the problem statement questions which were asked in chapter one; based mainly on the previous chapters, the researcher is going to answer these asked questions; as the followings:

### **6.1.1. What are the factors that influence the customers adoption of internet banking?**

we identified different factors that can affect the adoption of internet banking, these factors were extracted from related theories and literature review of previous studies in the subject of adoption of internet banking; then they were tested through the questionnaire and analyzed using SPSS.

According to our findings, the followings are the factors influence customer's adoption of internet banking:

- 1) Culture.
- 2) Awareness of service.
- 3) Self Efficiency.
- 4) Technical service quality.
- 5) Perceived Ease of Use.
- 6) Perceived Usefulness.
- 7) Attitude Toward Use.
- 8) Trust .
- 9) Behavioral Intention to use .
- 10) Education



### 6.1.2. What is the importance of these factors?

Referring to table (5.22) in chapter (5); we can reveal the followings:

- All factors are important except the age, gender and income which were rejected.

### 6.1.3. What is the nature and strength of the relationship among these factors?

This question can be answered by arranging the factors ascending according to their R square values table (6.1), as the followings:

Table (6.1): R square values of the tested hypotheses

Main Hypothesis	Independent Variable	Dependent Variable	R square
H5	perceived ease of use	perceived usefulness	0.898
H4	technical service quality	perceived ease of use	0.771
H9	Attitude towards using	behavioral intention to use	0.767
H3	Self efficiency	perceived ease of use	0.714
H7	perceived usefulness	attitude towards using	0.703
H6	perceived ease of use	attitude towards using	0.671
H2	awareness of service and its benefits	perceived usefulness	0.669
H1	culture	perceived usefulness	0.612
H8	Trust	attitude towards using	0.586

And for the demographic variables the strong important factor is the education; the others have no influence on customer's adoption of internet banking.

from the previous table (6.1), we can reveal the followings too:

This study represents a contribution towards validating previous TAM results from different contexts and shows the applicability of a uniquely extended TAM in predicting the factors that influence the customers adoption of internet banking in the Gaza Strip. This is consistent with King and He (2006) stating that TAM is a powerful, highly reliable, valid and robust

predictive model that may be used in a variety of contexts; as the perceived ease of use and the perceived usefulness were the strongest influences and important factors as their R square value is 0.898.

**After Answering the thesis questions, the researcher also found that:**

- a) There are low awareness of internet banking and its benefits, users rarely received information from their banks regarding this issue.
- b) When banks developed their websites, they did not take care enough the ease of use of their websites as many links were hidden in menus or even submenus.
- c) There are no co operations between banks and NGO's in Gaza Strip, this influence negatively the role of banks to serve the Palestinian community and spreading the culture of using computers.
- d) Most banks have their own training centers and computer labs but they did not try to hold training sessions special to the internet banking users.
- e) Although banks advertise for different types of campaigns for different reasons, they did not try to develop special campaigns to internet banking users.
- f) Banks did not take care enough of their websites security in general and specially those which did not offer money transfer among accounts.
- g) There is not any special care of educated customers in the banks although most of internet banking users have bachelor degree or more (73.2%).
- h) Most banks have static websites as they did not have IT infrastructure.

**There are other conclusions on the used model and theories such as:**

- a) E-system becomes more and more important. In order to reduce cost / benefit ratio, we must examine the gap between system design and system acceptance. So the study of the technology acceptance models becomes more and more important and critical.
- b) TAMs have been developed in response to a need to evaluate users' subjective satisfaction rates, and to use such rates as a predictor of a system's success (Davis, 1989; Davis et al., 1989). Different theories and models conceptualize the acceptance in various ways, but a common characteristic is that all of them

belong to the research tradition of social cognition, a field that tries to account for human action by applying psychological constructs such as attitudes, values or norms. For example, Fishbein's and Ajzen's (1975) theory of reasoned action (TRA) and theory of planned behaviour (TPB) have been used extensively in various information technology attitude measurement scales (Dillon & Morris, 1996).

- c) TAM has been the instrument in many empirical studies and it has been found that its ability to explain intention and attitude towards using IT is better than TRA and TPB.
- d) (Mathieson, 1991). Chang (2008) used TAM to identify consumers' acceptance of intelligent agent (IA) technology for the automation of auction websites. Chang (2008) used questionnaires of a total of 388 Taiwanese consumers with online auction experience and found that PU was the most influential in promoting intention to use auction website.
- e) The outcome of another study by Wang et al. (2003) confirmed the validity of TAM with different populations of users and different software choices. It is worth noting that King and He (2006) conducted a statistical meta analysis of TAM as applied in various fields using 88 published studies and the results showed TAM to be a powerful, highly reliable, valid and robust predictive model that may be used in a variety of contexts. Moreover, Hernandez's et al.'s (2008) study demonstrated that a basic TAM model can correctly explain the acceptance level of a technology in the business context as long as the focus and subject proposed are correct. Many researchers have introduced additional variables to TAM and suggested that these external variables may be added as a way of improving the model's predictive power (AlSukkar, 2005; Davis et al., 1989; Davis, 1993).

## 6.2 Recommendations:

The researcher recommends the following points to improve the customers' adoption of internet banking in the Gaza Strip:

1. The implication is that low awareness of internet banking is a critical factor in causing customers not to adopt or use internet banking. Banks in the Gaza Strip need to encourage customers by using various types of advertising media such as brochures , SMS messages through mobile phones and e-mail. This will result in the widespread promotion of the services to a wider audience and educate potential customers about the benefits of internet banking as the service is quite new to many customers.
2. When banks intend to develop their websites, they should take care of the ease of use of the website, the ease of use of the website affects the perceived usefulness and the attitude toward adopting internet banking.
3. Technical service quality and the exist of the website 24 hours are important factors which influence the perceived ease of use which affect the adoption of customers to internet banking.
4. Banks should take their role in serving the Palestinian society especially in the Gaza Strip and cooperating with the NGO's in distributing the knowledge of computer using to reach to the self efficiency of the users which influences the customers to adopt internet banking.
5. Banks should hold special sessions to teach their internet banking users how to use the bank's website specially when banks offer new internet banking services, and specially if these services regards money transactions. This will improve the computer self efficiency of the users.
6. Banks should cooperate with Palestinian telecommunications and Hadara company which are responsible for distributing internet services to individuals and companies through offering special offers to individuals and companies who are banking users and like to use the internet banking services. This will participate in distributing the culture of using internet which will lead to the using and adopting internet banking.

7. Banks should adopt more internet services over their websites to increase the perceived usefulness for customers to use banks websites. At the same time banks should increase the awareness of its current offered services of the website through using different types of advertising and communications including bank website itself.
8. Banks should take care of the security of their websites to prevent any hacking activities to make users trust internet banking; trust is an important factor which influence a lot adopting internet banking.
9. Most of the respondents don't trust internet banking in general; this miss in trust leads to the reluctance in giving private information via internet banking and this will limit the benefits from the internet banking and will prevent new users to adopt internet banking, so improving the security of banks websites only is not enough. Banks should increase the awareness of its taken procedures to improve their websites security through different means such as the bank website itself through adding adds regarding this issue or holding conferences in universities especially most internet banking users are educated people or through local radios, televisions and SMS .
10. Most of internet banking users are educated users so banks should increase their care of these people as 73.2% of the users have bachelor degree or more. This can take place through cooperating with universities and participating in different festivals that are hold in universities, these are the potential users of internet banking.
11. Most banks are using informational websites; banks should improve their internet banking services and offer communicative/Simple transactional services and go a step forward and offer advanced transactional services; see chapter two.
12. banks should offer special offers and campaigns such as a campaign to let internet banking users only buy laptops through the bank with low price and admeasurements pay; such offers and campaigns will encourage current internet banking users to continue using and adopting internet banking and it will positively influence their friends and colleagues.

13. Banks should convert some of its traditional banking services such as information and querying the users accounts to internet banking services; this will improve the users' attitude towards using and adopting internet banking.
14. Banks should create internet banking account for every new customer when they open the new account for him, banks should create accounts for customers who are young and educated specially if they are good users of computer and have internet connection, as they are the earlier adopters of internet banking.

### **6.3 Future research**

Internet banking is still a new technology, this research covered the factors that affect customers to adopt internet banking in the Gaza Strip; there are many other areas can be covered as the followings:

4. Future studies could further extend the TAM model to include other variables such as customer's loyalty to Internet banking, cost, perceived value and perceived risk.
5. To focus upon the factors affecting business customers rather than consumers.
6. The study could even be extended to include other countries operating in similar conditions to see if comparable results are achieved.

**More research in other related fields to internet banking can be studied such as:**

#### **1. The impact of trust on acceptance of internet banking**

Trust is integrated into the technology acceptance Model-TAM –(Davis, 1989) . TAM can be discussed in depth , and to add external variables that can be suitable for the internet banking context.

#### **2. The behavioral perspective model : a proposed theoretical framework to understand and predict online consumer behavior**

To introduce the behavioral perspective model ( BPM) as an alternative instance to attitude theories such as theory of reason action ( TRA) and theory of planned behavior ( TPB) which dominate research on online consumer behavior . the BPM framework first sees consumer behavior as a result of previous behavior

consequences . Second, the BPM includes consumer behavior setting as an important predicting variable otherwise lacking in cognitive attitude theories like TRA and TPB . Based on the BPM framework, concepts like chaining , motivation and rule –governed behavior can be discussed in relationship to each other to understand and predict online consumer behavior.

### **3. The impact of banks website quality on customer satisfaction**

The purpose of this research is two folds, first: to gain a better understanding of the impact of web site quality factors on customer's satisfaction and second: to provide a clear relation between e-trust, satisfaction and quality.

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## Appendix A

الإخوة و الأخوات الأفاضل مستخدمي الانترنت المصرفي في قطاع غزة

السلام عليكم و رحمة الله،،،

الموضوع: ملئ استبانته لدراسة العوامل المؤثرة في تبني الزبائن للانترنت المصرفي في قطاع غزة

شكرا لاهتمامكم بهذا البحث و الذي يأتي بغرض استكمال البحث التكميلي كمتطلب الحصول علي درجة الماجستير في إدارة الأعمال. الرجاء الإجابة بدقة و موضوعية علي جميع الأسئلة في هذا الاستبيان؛ إن إجابتكم الدقيقة و الموضوعية علي جميع أسئلة الاستبيان لهو حجر الأساس في إنجاح هذه الدراسة و اشكر لكم ذلك.

إجابتكم كأفراد أو كمؤسسات علي أسئلة الاستبيان سيتم التعامل معها بسرية و لن تستخدم إلا لأغراض البحث العلمي فقط.

و لكم كل الاحترام و التقدير،،،

الباحث  
وائل نصار بدح

الرجاء وضع إشارة ( ✓ ) في الخانة ذات العلاقة بإجاباتكم:

أولاً: معلومات عامة:

1	الجنس:	( ) ذكر ( ) أنثي
2	العمر بالسنوات:	( ) من 18 - أقل من 25 ( ) من 25 - أقل من 35 ( ) 35 - أقل من 45 ( ) 45 - أقل من 55 ( ) من 55 و أكبر
3	المستوي التعليمي:	( ) ثانوية عامة و أقل ( ) دبلوم ( ) بكالوريوس ( ) ماجستير ( ) دكتوراه
4	الدخل الشهري:	( ) أقل من 1000 شيكل ( ) من 1000 - أقل من 2500 شيكل ( ) من 2500 - أقل من 3500 شيكل ( ) من 3500 - أقل من 4000 شيكل ( ) من 4000 شيكل و أكثر

ثانياً: فوائد استخدام الانترنت المصرفي:

الرقم	السؤال	الإجابة			
		لا أوافق بشدة	لا أوافق	محايد	أوافق بشدة
1	الانترنت المصرفي يساعدني في انجاز الخدمات البنكية بشكل أسرع				
2	الانترنت المصرفي يساعدني في تحسين أداء مهامي البنكية				
3	الانترنت المصرفي يمكنني من انجاز خدمات بنكية أكثر				
4	الانترنت المصرفي يمنحني تحكم اكبر في الخدمات البنكية				

ثالثاً: سهولة الاستخدام للانترنت المصرفي:

الرقم	السؤال	الإجابة			
		لا أوافق بشدة	لا أوافق	محايد	أوافق بشدة
1	التفاعل مع الانترنت المصرفي واضح و مفهوم				
2	من السهل انجاز ما أريد باستخدام الانترنت المصرفي				
3	من السهل تعلم استخدام الانترنت المصرفي				
4	أنا الآن أو من المتوقع أن أكون ماهراً في استخدام الانترنت المصرفي				
5	بشكل عام استخدام الانترنت المصرفي سهل				

رابعاً: الموقف من استخدام الانترنت المصرفي:

الرقم	السؤال	الإجابة			
		لا أوافق بشدة	لا أوافق	محايد	أوافق بشدة
1	تطور الانترنت المصرفي سوف يدعم و يخدم العملاء				
2	بشكل عام أنا غير راضي عن الطرق التقليدية في انجاز المعاملات و الخدمات البنكية المختلفة				
3	استخدام الانترنت المصرفي فكرة جيدة				
4	اشعر أن استخدام الانترنت المصرفي ممتع				
5	من وجهة نظري، الأفضل هو استخدام الانترنت المصرفي				

خامساً: العزم السلوكي علي الاستخدام:

الرقم	السؤال	الإجابة			
		لا أوافق بشدة	لا أوافق	محايد	أوافق بشدة
1	سوف استخدم الانترنت المصرفي بشكل منتظم في المستقبل				
2	أتوقع أن استخدم أو أن استمر في استخدام الانترنت المصرفي للقيام بالأعمال المالية في المستقبل				
3	سوف أوصي الآخرين باستخدام الانترنت المصرفي				

سادساً: الثقة باستخدام الانترنت المصرفي:

الرقم	السؤال	الإجابة			
		لا أوافق بشدة	لا أوافق	محايد	أوافق بشدة
1	أنا أثق بفوائد موقع الانترنت المصرفي عبر الانترنت				
2	الانترنت المصرفي يحافظ علي الوعود و الالتزامات				
3	أثق بالانترنت المصرفي في إجراء الخدمات البنكية عامة				
4	أنا لا أتردد في إعطاء معلومات خاصة بي عبر الانترنت المصرفي				
5	من الصعب اختراق موقع الانترنت المصرفي عبر الانترنت				

سابعا: تأثير الثقافة علي استخدام الانترنت المصرفي:

الرقم	السؤال	الإجابة			
		لا أوافق بشدة	لا أوافق	محايد	أوافق بشدة
1	يستخدم الانترنت المصرفي كمظهر اجتماعي				
2	عندما أجرب تقنية جديدة، أنا أثق بمقدرتي أكثر من نصائح الآخرين				
3	معظم الناس المهمين بالنسبة لي يعتقدون أن علي مواصلة استخدام الانترنت المصرفي				
4	استخدام أفراني للانترنت المصرفي كان له تأثير ايجابي علي استخدامي للانترنت المصرفي				

ثامنا: الكفاءة الشخصية لاستخدام الانترنت المصرفي:

الرقم	السؤال	الإجابة			
		لا أوافق بشدة	لا أوافق	محايد	أوافق بشدة
1	استطيع أن أقوم بالعمليات البنكية عبر الانترنت إذا ما توفر لدي دليل الاستخدام للنظام				
2	استطيع أن أقوم بالعمليات البنكية عبر الانترنت إذا ما شاهدت أحدا ما يستخدم النظام أمامي				
3	استطيع أن أقوم بالعمليات البنكية عبر الانترنت إذا ما استطعت أن اتصل بشخص للمساعدة عند الضرورة				
4	أنا أثق باستخدام النظام المصرفي عبر الانترنت حتى و لو لم استخدم مثل تلك الأنظمة من قبل				

تاسعا: جودة الخدمة

الرقم	السؤال	الإجابة			
		لا أوافق بشدة	لا أوافق	محايد	أوافق بشدة
1	من السهل أن أصل إلي الانترنت				
2	يضمن الانترنت المصرفي إتمام جميع المعاملات البنكية				
3	موقع الانترنت المصرفي متوفر عبر الانترنت دون انقطاع علي مدار الساعة				
4	الانترنت المصرفي قادر علي أداء جميع معاملاتي البنكية بدقة				
5	يمكن أن احصل علي رد سريع فوري أو خلال 24 ساعة علي الشكاوي التي أوجهها بخصوص الخدمات المصرفية عبر الانترنت				

عاشرا: إدراك الخدمة و منافعها:

الإجابة					السؤال	الرقم
أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة		
					أنا أتلقى دائما معلومات عن الانترنت المصرفي من البنك	1
					أنا أتلقى معلومات كافية عن فوائد الانترنت المصرفي	2
					أنا أتلقى معلومات كافية عن كيفية استخدام الانترنت المصرفي	3
					أنا أتلقى معلومات كافية عن خدمات الانترنت المصرفي	4

## **Appendix B**

Dear brothers and sisters of internet banking users in Gaza strip,

**Subject: Filling the questionnaire to study the factors which influence the  
Customers adoption of internet banking in the Gaza Strip**

Thank you for your interest in this research which comes as complementary research to get on master degree in business administration. Please answer accurately and objectively to all questions in current questionnaire, your accurate and objective answer to all questionnaire questions is the main stone in the success of this research and thank you for that.

Your answer as individuals or institutions to the questionnaire questions will be dealt with secretly and will be used for scientific research only.

Best respects and regards,

**The researcher,  
Wail Nassar Badah**

In the cell related according to your answer: (  ) Please put the mark

**First: General Information:**

1	Gender:	<input type="checkbox"/> Male <input type="checkbox"/> Female
2	Age (in years)	<input type="checkbox"/> 35-less than 45 <input type="checkbox"/> 18-less than 25 <input type="checkbox"/> 25-less than 35 <input type="checkbox"/> 55 and more <input type="checkbox"/> 45-less than 55
3	Education level	<input type="checkbox"/> secondary class and less <input type="checkbox"/> Diploma <input type="checkbox"/> Bachelor <input type="checkbox"/> Master <input type="checkbox"/> PhD
4	Monthly income	<input type="checkbox"/> less than 1000 Shekels <input type="checkbox"/> 1000 Shekels - less than 2500 Shekels <input type="checkbox"/> 2500 Shekels - less than 3500 Shekels <input type="checkbox"/> 3500 Shekels - less than 4000 Shekels <input type="checkbox"/> 4000 Shekels and more

Please answer all the following sections. They apply to both institutions and individuals.

**Second: Perceived usefulness of using internet banking:**

No.	Question	Answer				
		Strongly not agree	Not agree	Neutral	Agree	Strongly agree
1	Internet banking helps me to accomplish banking activities more quickly					
2	Internet banking helps me to improve my banking activities					
3	Internet banking enables me to accomplish more banking activities					
4	Internet banking gives me greater control over banking activities					



**Third: Perceived ease of use of internet banking:**

No.	Question	Answer				
		Strongly not agree	Not agree	Neutral	Agree	Strongly agree
1	Interaction with internet banking is clear and understandable.					
2	It is easy to accomplish what I want to do using internet banking.					
3	Learning to use internet banking is easy.					
4	I am already or I expect to become skilled at using internet banking.					
5	Overall, internet banking is easy to be used.					

**Fourth: Attitude towards using internet banking:**

No.	Question	Answer				
		Strongly not agree	Not agree	Neutral	Agree	Strongly agree
1	Internet banking development will support and serve customers					
2	In general, I am not satisfied with traditional ways in accomplishing the deals and different banking services					
3	Using internet banking is a good idea					
4	I feel using internet banking is enjoyable					
5	From my point of view, the best is to use internet banking					

**Fifth: Behavioral intention to use internet banking:**

No.	Question	Answer				
		Strongly not agree	Not agree	Neutral	Agree	Strongly agree
1	I will use internet banking on regular basis in the future.					
2	I expect using or my use of internet banking for handling my financial transactions to continue in the future.					
3	I will strongly recommend others to use internet banking.					

**Sixth: Trust in using internet banking:**

No.	Question	Answer				
		Strongly not agree	Not agree	Neutral	Agree	Strongly agree
1	I trust in the benefits of internet banking website over the internet.					
2	The internet banking keeps its promises and commitments.					
3	I trust in internet banking in accomplishing banking services in general					
4	I am not reluctant in giving private information via internet banking					
5	It is difficult to hack the internet banking site via the internet					

**Seventh: Culture influence on using internet banking:**

No.	Question	Answer				
		Strongly not agree	Not agree	Neutral	Agree	Strongly agree
1	Internet banking is used as a social appearance					
2	When trying new technology, I trust my own instinct more than advice from others.					
3	Most people who are important to me think that I should continue using internet banking.					
4	The usage of my friends to internet banking influenced my internet banking usage positively					

**Eighth: self efficiency to use internet banking:**

No.	Question	Answer				
		Strongly not agree	Not agree	Neutral	Agree	Strongly agree
1	I would conduct banking operations through internet banking if I only had the system manuals for reference.					
2	I would perform banking operations through internet banking system if I had seen someone Else using it before trying it myself.					
3	I would conduct banking operations					

	through internet banking system if I could call someone for help if I got stuck.					
4	I am confident of using internet banking system even if I have never used such a system before.					

**Ninth: Technical Quality of service:**

No.	Question	Answer				
		Strongly not agree	Not agree	Neutral	Agree	Strongly agree
1	My access to the Internet is easy.					
2	The Internet banking ensures completing all banking operations					
3	The Internet banking website is available on internet without cut around the hour					
4	Internet banking is able to perform my banking deals accurately					
5	I can get on quick immediate reply or within 24 hours on the complaints that I face regarding banking services via internet					

**Tenth: Awareness of service and its benefits:**

No.	Question	Answer				
		Strongly not agree	Not agree	Neutral	Agree	Strongly agree
1	I always receive information about internet banking from the bank.					
2	I receive enough information about the benefits of internet banking.					
3	I receive enough information about using internet banking.					
4	I receive enough information about internet banking services.					

## **Appendix C**

**The questionnaire reviewed by the following Islamic university professors:**

**Dr. Samir Safi**

**Dr. Sami Abu El Rous**

**Dr. Yousif Bahar**

**Dr. Rushdi Wadi**