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Readiness of the Palestinian banking sector in adopting the electronic banking system (exploratory study)

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نتيجة الحكم على أطروحة ماجستير

بناءً على موافقة عمادة الدراسات العليا بالجامعة الإسلامية بغزة على تشكيل لجنة الحكم على أطروحة الباحثة/ ملاك خالد حسن أبو جبر لنيل درجة الماجستير في كلية *التجارة*/ قسم إدارة الأعمال وموضوعها:

"Readiness of the palestinian banking sector in adopting the electroonic banking system (exploratory study)"

وبعد المناقشة العلنية التي تمت اليوم السبت 26 ذو الحجة 1428هـ، الموافق 2008/01/05م الساعة الواحدة ونصف ظهراً، اجتمعت لجنة الحكم على الأطروحة والمكونة من:

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وبعد المداولة أوصت اللجنة بمنح الباحثة درجة الماجستير في كلية *التجارة*/قسم إدارة الأعمال.

واللجنة إذ تمنحها هذه الدرجة فإنها توصيها بتقوى الله ولزوم طاعته وأن تسخر علمها في خدمة دينها ووطنها.

والله ولي التوفيق ،،،

عميد الدراسات العليا

د. مازن إسماعيل هنية

ABSTRACT

The paradigm shift from traditional branch banking to electronic banking; the newly emerged service delivery channels and rapidly increasing penetration rates of e-banking are the motivators of this study. Innovations in telecommunications have led to usage of electronic services and products in banking. The purpose of this research is to investigate the readiness of the Palestinian 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 quantitative one based on a survey inquiry. The target to our survey was the information and technology department of the thirteen banks operate in Gaza strip. Thirty of the distributed questionnaires were retrieved and analyzed.

In general, the banking sector in Palestine has a variety of e-banking technologies. However there are different success and obstacles factors which influence the adoption readiness. The results shows 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 personnel, acceptance from customers: if the bank didn’t make effort to

understand what customer need and if there is no trust between the bank and its customers the ability to adopt and accept the e-banking will decrease and Lack of security: e-commerce legislation, privacy policy and authentication.

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

ملخص الدراسة

يعتبر التحول النموذجي من نظام المصارف التقليدية إلى نظام المصارف الإلكترونية، وظهور قنوات الاتصال الحديثة لإيصال الخدمات ، بالإضافة إلى الزيادة المضطردة في التطور التكنولوجي في الأعمال المصرفية ، تعتبر جميعها حافزاً للشروع في هذه الدراسة.
والتي يتلخص الهدف منها بدراسة مدى جاهزية القطاع المصرفي الفلسطيني، و استعداده لتبني و اعتماد التكونولجيا المصرفية الإلكترونية وذلك بتسليط الضوء على عوامل النجاح المتوفرة ، وكذلك على العقبات التي قد تواجه تقديم الخدمات الإلكترونية للمتعاملين.

ومن أجل الوصول لأدق نتائج ممكنة للدراسة، فقد تم استخدام المنهج الوصفي التحليلي، حيث تم استخدام أسلوب الحصر الشامل لمجتمع العينة، والذي تمثل بتوزيع إستبانات على أقسام تكنولوجيا المعلومات في المصارف العاملة في قطاع غزة والبالغ عددها ثلاثة عشرة مصرفاً، وقد تضمنت تلك الإستبانات جميع النواحي التي تتعلق بتطبيق نظام المصارف الإلكترونية، وبعد ذلك تم استرداد الإجابات لثلاثين إستبانة بما نسبته (86%) من مجتمع الدراسة، وتلخصت أهم النتائج التي تم الوصول إليها بما يلي:

1- هناك العديد من العوامل ذات التأثير الإيجابي على البنوك الإلكترونية والتي يجب توفرها من أجل تقديم تلك الخدمات، ومن أهم هذه العوامل: توفر الأمن الإلكتروني المرافق لتقديم الخدمات الالكترونية، تقديم الدعم اللازم للعملاء عند الحاجة، سهولة الاستخدام و الملائمة والمرونة، تسخير عدة طرق إعلانية مختلفة من أجل إيصال المعلومات عن هذه الخدمات للمتعاملين، و الفائدة الناتجة من تقديم الخدمات الإلكترونية.
2- كما اتضح من الدراسة، أن هناك بعض العوامل ذات التأثير السلبي والتي تمثل معوقات وعقبات أمام تقديم الخدمات الإلكترونية، والتي يمكن سرد أهمها بما يلي: ارتفاع تكلفة تقديم مثل تلك الخدمات، عدم توفر البيئة المناسبة، عدم اقتناع العملاء بقبول هذه الخدمات، وعدم توفر القوانين والتشريعات المناسبة التي تنظم كيفية تقديم هذه الخدمات.

وبالنظر إلى تلك النتائج التي تم التوصل إليها أثناء الدراسة، فقد تم الوصول إلى مجموعة من التوصيات تتمثل في:

- ضرورة مضاعفة الجهود اللازمة بتوجيه العملاء وتشجيعهم، بتوضيح مميزات استخدام الخدمات والمنتجات الإلكترونية.
- ضرورة قيام السلطات التنفيذية ممثلة بسلطة النقد الفلسطينية ، بتقديم الدعم اللازم لتوجهات البنوك في هذا المجال، عن طريق سن تشريعات و قوانين لحماية حقوق المتعامل و البنك في نفس الوقت، بالإضافة إلى تنظيم تقديم مثل هذه الخدمة.
- يجب على إدارات البنوك العليا، تقديم الدعم الكافي مادياً و معنوياً لأقسام تكنولوجيا المعلومات في البنوك من أجل توفير أنظمة الحماية و الأمن اللازم لتقديم مثل تلك الخدمات، بالإضافة إلى تخصيص الجهد و التمويل اللازمين لتقديم أنظمة إلكترونية ذات ميزات أفضل.

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DEDICATION

I would like to take this opportunity to express my deepest thanks and dedicate this work for my dear parents for their continuous support along the way, for my sisters, for Zeina and Mohammed my sister kids and for the memory of my brother.

Also I would like to dedicate this thesis to all my family, my dear friends and for all the lovely people that I know.

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ACRONYMS

ACH	**Automated Clearinghouse**
ATM	**Automated Teller Machine**
AVR	**Automated Voice Response**
CSFs	**Critical Success Factors**
E-BUSINESS	**Electronic-Business**
E-BANKING	**Electronic-Banking**
EC	**Electronic Commerce**
E-CASH	**Electronic Cash**
EDI	**Electronic Data Interchange**
EFT	**Electronic Funds Transfer**
EFTPOS	**Electronic Funds Transfer at Point Of Sale**
ICT	**Information and Communication Technology**
ID	**Identification**
IT	**Information Technology**
IVR	**Interactive Voice Response**
PC BANKING	**Personal Computer Banking**
PDA	**Personal Digital Assistance**
PIN	**Personal Identification Number**
PMA	**Palestinian Monetary Authority**
PNA	**Palestine National Authority**
POS	**Point Of Sale**
PSV	**Perceived Strategic Value**
SET	**Secure Electronic Transaction**
SMS	**Short Message Service**
WAP	**Wireless Application Protocol**

LIST OF TERMINOLOGIES

ELECTRONIC-BANKING	**The remote delivery of new and traditional banking products and services through electronic delivery channels.**
INTERNET BANKING	**Also called online banking, is the use of the Internet as a remote delivery channel for banking services, including traditional services, such as opening a deposit account or transferring funds among different accounts, as well as new banking services, such as electronic bill presentment and payment, which allow customers to receive and pay bills over a bank's Web site.**
TV-BASED BANKING	**Is a financial service provided to mass consumers through satellite digital TV. The users can conduct such businesses as funds allocating, savings transfer, balance checking and ask for materials as well. Deals with trust investment and foreign exchange transactions can also be carried out via TV.**
MOBILE BANKING	**Also known as M-Banking, is a term used for performing balance checks, account transactions, payments etc. via a mobile device**
PC BANKING	**Is a service that allows a bank customer to obtain account information and perform certain bank transactions through a personal computer**

CHAPTER ONE

BACKGROUND CONTEXT

1.1 INTRODUCTION

1.2 THE PROBLEM STATEMENT

1.3 RESEARCH VARIABLES

1.4 RESEARCH HYPOTHESES

1.5 IMPORTANCE OF THE RESEARCH

1.6 OBJECTIVES OF THE RESEARCH

1.7 METHODOLOGY

1.8 PREVIOUS STUDIES

1.9 RESEARCH LIMITATIONS AND DIFFICULTIES

1.10STRUCTURE OF THE RESEARCH

1-1 INTRODUCTION:

“The future of banking sector belongs to companies which can not only offer products and services fallen with needs of an individual client, but can provide them at anytime and anywhere as well” Tom Peterson (Binda, 2005).

Technological innovations are the most important source of economic growth. Rapid advancements in technology, if properly and timely captured and implemented in production, contribute to sustained economic development of a country. Conversely, a country that fails to benefit from new technologies, or even delays their implementation, eventually finds itself persistently lagging behind the others (Andriy, 2001).

One of the most important and the most dynamic spheres of innovations is the new economy, which came into being through the revolutions in electronics, computers, computer networks and eventually the development of the Internet. Some part of the economy has moved into electronic space. The physical market is being gradually replaced or at least supplemented by the virtual one (Andriy, 2001).

Therefore, the new economy, also called cyber-economy, constitutes a new paradigm of business. On this virtual market electronic-business(E-business) is a new form of an exchange of resources by means of information technology systems and internet technologies, conducted *on-line* through electronic connections and an information exchange by use of electronic multimedia such as Internet, cable and satellite television, telephony, electronic cards, Intra and Extranet at the national and international level. It consists of electronic trading, business intelligence and technological, capacities to self-service business processes conducted. For that reason

e-business is a new source of speed, innovation initiatives, efficiency and new ways to create values in the organization (Binda, 2005).

But the technological changes affect not only production and trade, or in other words ‘real economy’, but also financial intermediaries and banks in particular. Thus, virtual production and electronic commerce come hand in hand with electronic banking. Therefore, banks are trying to attract customers in different ways. The most trivial way is in raising interest rates. It is a rival way and all banks that engage in the price war eventually loose. Additionally, this way did not prove to be efficient because of growing costs and an unstable clientele in search of higher interest rates on deposits. There are also non-rival ways to attract customers. Nowadays, the most popular way is in making financial innovations and introductions of new products to the market. Electronic banking is becoming the way for development of banking system.

For the purpose of optimal regulation and stimulation of electronic banking it is important to understand which banks are most likely to adopt electronic banking before others (Andriy, 2001).

As expected the adopters of electronic banking had a “high use” of Information Technology (IT) (Cameron and Joyce, 2001).

To succeed in the e-banking arena, companies need to identify the basic IT technologies to build the basic infrastructure. Also current business designs and organizational models are insufficient to meet the challenges of doing business in the e-commerce era. Therefore one critical issue is re-engineering of the business processes which also include technological processes and security, which may include protection of consumers' personal data and safe transactions to prevent frauds, is paramount for the growth of any sort of

online trade, including e-banking. Security includes secure transactions as well as secure front end and back end systems (Shah and others, 2005).

For these importances of electronic banking system, the objective of this research is to identify and describe the success and obstacles factors that influencing the adoption of electronic banking in the Palestinian banking sector.

1-2 THE PROBLEM STATEMENT:

The e-banking is a new technology in Palestine which means it needs a lot of efforts and sources to be adopted by our banks so we will identify the needed sources by answering the following questions

The problem statement can be summarized by answering the following main question:

Does the Palestinian banking sector ready to adopt the electronic banking system?

Other related questions are as follows:

1-What are the success factors of e-banking adoption?

2-What are the obstacles factors of e-banking adoption?

3-Do banks have enough sources for e-banking adoption?

1-3 RESEARCH VARABILES:

Dependant variable: success and obstacles of e-banking

Independent variables are as follows:

1- Success variables;

1.1 Security availability (security of data transactions and privacy)

1.2 Customer supply

1.3 Ease of use

1.4 Convenience

1.5 Advertisement

1.6 Usefulness (Enlarging geographical reach, Enlarging client satisfaction)

2- Obstacles variables;

2.1 Expensive cost (high cost of technologies)

2.2 Acceptance from customers

2.3 Lack of security

2.4 Appropriate environment

1-4 RESEARCH HYPOTHESES:

H1: There is a significant relation between availability of adoption factors and e-banking success.

This hypothesis can be divided to the following sub-hypotheses:

H1.a: there is a significant relation between security availability and electronic banking success.

H1.b: there is a significant relation between customer supply and electronic banking success.

H1.c: there is a significant relation between ease of use and electronic banking success.

H1.d: there is a significant relation between convenience and electronic banking success.

H1.e: there is a significant relation between advertisement availability and electronic banking success.

H1.f: there is a significant relation between usefulness and electronic banking success.

H2: There is a significant relation between determining obstacles factors and electronic banking success.

This hypothesis can be divided to the following sub-hypotheses:

H2.a: there is a significant relation between expensive cost and electronic banking success

H2.b: there is a significant relation between acceptance from customers and electronic banking success.

H2.c: there is a significant relation between lack of security and electronic banking success.

H2.d: there is a significant relation between an appropriate environment and electronic banking success.

1-5 IMPORTANCE OF THE RESEARCH

Arises from the following points:

- First: the importance of the electronic banking itself through the benefits that it can contribute in serving customers and also the bank developments, as the technology today is becoming the main success element in any sector

- Second: it attempts to evaluate the readiness of the banking sector in Gaza strip to adopt an electronic banking system with all the difficulties

it may force due to the current circumstances in Gaza that arises from occupation and it effects in the development process.

- Third: it is considered to be the first study in Palestine regarding electronic banking services

- Fourth: study the readiness of the banking sector in implementing the electronic banking system will explain the benefits of this system which may encourage many banks that don't have this system in implementing it.

1-6 OBCETIVES OF THE RESEARCH:

The main objectives of this research are as follows:

1- To identify the benefits of implementing the electronic system to the bank's customer and for the banking processes itself.
2- To identify the obstacles in implementing the electronic system in Palestine.
3- To identify the banking systems development processes in Palestine.
4- To identify the key requirements for adopting the electronic banking systems in Palestine, these needs are: the technological infrastructure (software and hardware with regard to the system security), the qualified man power and the collaborated environment between Banks in order to face the challenges and risk in implementing the system

1-7 Methodology:

For the purpose of this study the descriptive analytical method will be used.

1-7-1: Data Collection:

1. Secondary resources: the researcher will utilize the relevant literature, and publications related to the subject of the study.

2. Primary resources: needed data is collected from the population of the study through a questionnaire designed to cover variables of the research and by surfing the banks` websites.

1-7-2: The Population and the Sample of the research:

The population of the study consists of the operating banks in Gaza strip that have any kind of e-banking services. They are thirteen banks as follows:

Table 1.1: Banks in Gaza strip

	Bank name
1	Bank of Palestine
2	Palestine Islamic bank
3	The Palestine investment bank
4	Arab Islamic bank
5	Al-Quds bank for development and investment
6	Bank of Jordan
7	Cairo Amman bank
8	The housing bank of trade and finance
9	Egyptian Arab land bank
10	The principle bank of development and agriculture credit
11	The Arab bank
12	The commercial bank of Palestine
13	Palestine international bank

1-7-3: The Sampling:

The technology and information system departments in the thirteen banks operate in Gaza are targeted in this study as follows:

Table 1.2: The targeted banks in the research

	Bank name	Number
1	Bank of Palestine	5
2	Palestine Islamic bank	6
3	The Palestine investment bank	2
4	Arab Islamic bank	2
5	Al-Quds bank for development and investment	2
6	Bank of Jordan	5
7	Cairo Amman bank	6
8	The housing bank of trade and finance	2
9	Egyptian Arab land bank	1
10	The principle bank of development and agriculture credit	2

The Arab bank and the commercial bank of Palestine were excluded from the research because of the refusal of the bank's board to participate in the researcher, also Palestine international bank was excluded of the research since IT employee of the bank was not available.

1-8: PREVIOUS STUDIES:

1.8.1 The study of Aghdassi and others (2007) titled "association between strategic values and e-banking adoption in Iranian banks"

This research attempts to understand strategic value of e-banking for Iranian banks and examine the causal effect of perceiving e-banking as a value and its adoption.

The researchers propose an e-banking adoption model that is identifying five factors that have been found to be influential in the perception of strategic value of IT: performance support, operational support, managerial productivity, and strategic decision aids. They also identified eight factors that influence electronic banking adoption: organizational readiness, Infrastructural readiness, external dependency, Intangible pressure, persuasive pressure, perceived ease of use, and perceived usefulness. Data are collected via a questionnaire-based survey from Decision maker unit of Iranian Banks.

Two hundred questionnaires were distributed to respondents and One hundred and sixty individuals completed the survey for a response rate of 80%.

In order to test the model, a statistical analysis was conducted in two stages. The first step employed factor analysis to measure whether the number of factors and loadings of items involved in the two main constructs (perceived strategic value and adoption) conform to the proposed model, canonical analysis was utilized in the second step in order to explore how the perceptions of strategic value influence the decision to adopt e-commerce.

The finding of this study indicate that in a developing country like Iran and a big industry like banking, although the items of the adoption factors model are

applied, the story is a bit different. In this country the e-commerce adoption specifically e-banking adoption is in its beginning stages. And still there are lots of gaps. These gaps could be technological, economical, socio-cultural, geopolitical and other gaps.

Although the factors in this research were examined, yet there are other factors that can be put in the model. However six other factors were replaced with two factors (Organizational Support) and (External Pressure) in the model as a result of factor analysis, three to the PSV (Performance Support, Operational Support and Relationship Support) and three to the Adoption (Infrastructural Readiness, Intangible pressure, Persuasive pressure, External dependency).

Finally the result of this study can be expressed such that bank managers' perception through e-commerce is very positive and effective in their adoption trend. It can defiantly make their steps towards such an important issue faster and help them to remove impediments more rapidly. Thus, interventions toward changing managers' perceptions about the strategic value of e-banking can be devised in order to increase the adoption/utilization of electronic banking by banks.

1.8.2 The study of daghfous and toufaily (2007) titled "the adoption of E-banking by Lebanese banks :success and critical factors"

This research was conducted on the factors that can lead to success on adoption of e-banking and the other factors that can constitute a barrier to it's adoption, it focus on the organizational, structural and strategic factors which

can accelerate or, on the contrary, slow the adoption of this electronic mode of distribution and communication by the banks, by analyzing the case of the Lebanese market.

In order to test the validity of the theoretical framework structured survey was used, it consist of a fifty-minute personal interview questionnaire that was given to e-banking managers or to information technology managers of all the banks on the official list of institutions operating on the Lebanese market, with a total of 57 banks, 31 of them operate internationally and 26 are strictly local.

The degree of adoption of e-banking by an institution is measured by the rate of use of seven types of electronic distribution and communication channels of financial services. These channel are “TV banking”, “mobile banking”, “automated teller machine”, “phone banking”, “PC banking”, “extranet banking”, “internet banking”.

The result of the analysis show that the total sample is made up primarily of banks which adopt e-banking at a lower level (71.7%), and secondly, of banks which adopt e-banking at a moderate level (20.8%)

The banks which have high level of adoption rate represent only 7.5% of the total sample. Foreign and national banks with international activities have a higher level of adoption, confirming that international banks are, on average, more willing to introduce new e-banking channels than banks with exclusively local activities.

The rate of adoption for each type of electronic channel indicates that the most frequently used electronic channel are (ATMs), phone banking and internet banking.

In order to test the hypothesis about the relationship between the degree organizational adoption of new e-banking channels and the organizational, structural and strategic variables bivariate associative test are used, the results show that the organizational variables (bank size, functional divisions, technical staff, technical infrastructure, perceived risks, decision makers` international experience and mastery of innovation) are variables which exert significant impact on the adoption of e-banking, among the structural characteristics, the result reveal that internal technological environment of the bank is a very important factor in determining the adoption of e-banking, also the result show that banks which are developing in the international scale are more likely to adopt e-banking innovations. Finally the result of the study indicate that extent of penetration of "e-banking" in the growth phase of an emerging market has an important correlation with the improvement of commercial performance.

1.8.3 The study of Khalfan, and others (2006) titled "Factors influencing the adoption of internet banking in Oman: a descriptive case study analysis"

This research has been focused on identifying and highlighting the main potential factors or impediments that are currently inhibiting the incorporation or adoption of electronic commerce (EC) applications expansion in the Omani Banking sector. Data, obtained for the first time, were collected using semi-structured interviews and survey questionnaire as well as reviewing some bank documents.

The study explores the slow uptake of EC applications in the banking industry. The objective of this study, therefore, is to examine a number of

factors, both internal (i.e. organizational) and external (i.e. industrial), that are responsible for the slow utilization of EC applications. The results provide a pragmatic picture about the adoption of EC applications in the core financial sector domain of Oman. One of the main findings is that security and data confidentiality issues have been a major barrier. The banking sector was reluctant to use e-commerce applications as they felt that transactions conducted electronically were open to hackers and viruses, which are beyond their control. Lack of top management support was found to be an inhibiting factor in the adoption of electronic commerce applications. In general, banks in the Arab Gulf region have been 'quite slow' to launch e-banking services. While they are convinced that online services reduce overheads significantly, a mixture of customer insecurities, technology investment costs and a lack of market-readiness have all conspired to make e-banking 'unattractive'. These inhibiting factors need to be identified and then addressed, so that the banking sector in Oman can exploit the potential advantages of EC to remain competitive.

1.8.4 The study of Khalid and others (2006) titled "Customer Satisfaction with internet banking web Site: Case study on the Arab Bank"

This research was conducted on the customer satisfaction with internet banking web site for the Arab Bank. The covered factors in this paper were: customer support, security, ease of use, digital products/services, transaction and payment, information content, and innovation. Of the 260 distributed structured questionnaires, 208 were returned with responses. Cronbach Alpha,

Spearman-Broun, Guttmann Coefficients, regression techniques, correlations, T-test and F-test were used to analyze the questionnaire

The results showed that there is a narrow-based satisfaction with internet banking in all factors through a multi-regression; the researchers found out that all factors have an impact on the customer satisfaction, and they have found that the relation was positive. A positive relation exists for all factors except for information content; they recommend that the organization must improve the customer satisfaction through improving all factors or other means as considering customer behavior, being careful with customer relation management, online market research and business intelligence.

Finally, there is no relation between all demographics data and customer satisfaction because there is a high computer literacy among customers

1.8.5 The study of Shah, and others (2005) titled: "A Survey of Critical Success Factors in e-Banking". A research conducted in U.K

This study aims to determine the critical issues related to financial sector organizations when they establish businesses online. The survey targeted the financial sector in the UK. A 510 of medium and large size organizations from the financial industry listed in "the euro money bank" register in U.K were invited to participate, out of 510 questionnaires sent, a total of 114 were returned giving a 22.4% response rate. The focus was mainly on senior IT managers.

The study indicates that Understanding the CSFs in e-banking is important for senior management of banking related organizations, because it would potentially help them improve their strategic planning process.

The analysis of the study indicates two major types of statistical analyses were conducted, descriptive statistical analyses and factor analysis. In descriptive analyses, the factors (or variables) were ranked in order of their mean score, the highest score being the most important and so on. The top six factors in order of importance were: user-friendly website, systems security, support from top management, fast responsive customer service (better that usual), promotion of electronic commerce within organization, and all time availability of services and rapid delivery of services.

Factor analysis, which was done to group together, related variables to uncover 'factors' (in terms of factor analyses), found the following factors to be critical for the success in e-banking. Issues related to organizational flexibility and speed of services delivery were found to be at the top of the importance list.

Issues related to organizational flexibility and speed of services delivery were found to be at the top of the importance list. Business processes and systems integration and enhanced customer services were next in the list of importance.

1.8.6 The study of Kassim (2005) titled "E-banking service quality: gaps in the Qatari banking industry"

This study investigates the discrepancy between customer's expectation and perception towards the e-banking services in Qatar. The sample in this study consisted of respondents who are users of the e-banking services. A data set to test the proposed model came from self-administered survey of a convenience sample of retail banking customers. A questionnaire

was distributed to 100 retail-banking customers in Doha. Out of a total of 100 questionnaires, only 62 were useable. A cross-sectional survey design was adopted which questioned respondents on e-banking services

Investigating the expectation and perception of the quality of service, customer gave the highest score of 3.26 for the functionality of the ATM machines. Meanwhile, the lowest score of 2.83 was for the e-banking services. Compared to the perception of the quality of service, the customers collectively gave the highest score of 3.18 for the availability of the ATM machines. The lowest score of 2.70 was given to the role of bank personnel in assisting the customers with the e-banking services. SERVQUAL method developed by Parasuraman et. al. (1985) was used to calculate the difference in the score between the five items. The negative score indicated the existence of service quality gap, where customers were not having their expectations met by actual service performance. The findings showed that there were some differences in magnitude of gap score among the five items of the e-banking services: Internet/Telephone/SMS, personnel assistance, instructions, ATM machines and functionality of the ATM machines. The result also showed that one item of e-banking services had positive gap score, that is, the quality of the Internet/Telephone/SMS banking services (0.05). All the other four items indicated that the quality of service fell short of the customer's expectation; the customers were generally not satisfied with the service providers. Nevertheless, each item of quality of the e-banking services showed differences with respect to the size and gap score. The list of the five items could be ranked from the biggest score to the smallest score. After that, a simple t test was conducted in order to gain deeper and more comprehensive

insights into the mean differences between perception and expectation levels of the e-banking service quality. The results showed that customers' perception of the e-banking service quality did not meet their expectations. Moreover, the priority or rank ordering showed that "instructions" as being the most important item, followed in turn by "personnel assistance", "functionality of ATM machine", "ATM machines" and "Internet/Telephone/SMS". The findings of this study provide initial direction in determining the optimum service quality attributes pertaining to e-banking services. The largest discrepancies between what were expected by the customers and what were delivered by the bank were found in the availability of the instructions and personnel assistance on how to use the e-banking services and the functionality of the ATM machines. Indeed, bank managers should invest resources to enhance overall service quality. Management and employees should strive to find out what customers expect (in terms procedure handling, efficiency, accessibility and updated information about products and services) when designing strategies to enhance overall service quality. This implies an extensive and continuous training program a bank needs to carry out for its employees.

1.8.7 The study of Leelapongprasut and others (2005) titled: “A Quality Study of Internet Banking in Thailand”

The research aim to study a level of Internet Banking services quality in Thailand and for comparing the overall services quality of Internet Banking and factor of Internet Banking service between each bank and each dimension of quality by David A. Garvin.

The sampling groups in this research are customer who use the banking service via Internet system and the customer of D-Computer Co., Ltd. who usually use Internet Banking services such as inquiry about outstanding balance, fund transfer between accounts, and transfer payment for public utility. The sampling group specification of this research must use Internet Banking services at least once a month. The research tools are questionnaires in the Web page form. Questionnaires are adapted from the tools that are used to evaluate the service quality called "The dimension of quality by David A. Garvin" by evaluating the quality of eight dimensional services: Performance, Features, Reliability, Conformance, Durability, Aesthetics, Serviceability and Perceived quality. During the sampling survey, 300 questionnaires were received that were answered completely. For information analysis, the researches use the fundamental statistics to analyze the characteristics of sampling group and test the relative variable factor by means of Chi-square and obtain the result to build a variance factor linear prototype.

The results of the study were as follows:

1. The quality level of internet banking service of commercial banks in Thailand in the perspective of performance was different in each bank.
2. By weighting the importance of criteria used to evaluate the Internet Banking service quality in Thailand, the most important was the dimension of reliability, serviceability and durability. The less important was in dimension of perceived quality.

1.8.8 The study of Kerem (2003) titled "Adoption of electronic banking: underlying consumer behavior and critical success factors. Case of Estonia"

The primary aim of the study is to further the understanding how do consumers perceive electronic banking in the heyday of interactive channels in Estonia, as Estonia is internationally renowned for being a pioneer in the acceptance of new technologies.

The study tries to answer the following questions:

1. Which factors influence the customers' propensity to use electronic banking as a primary banking channel.
2. What are the main characteristics of the heavy users of electronic banking and what are the main obstacles for further adoption of electronic banking.
3. What are the critical success factors of the Estonian Internet banking?

The necessary data will be gathered through a survey conducted among the bank customers and interviews conducted with the leading banking professionals and industry experts. Firstly A series of in depth interviews was conducted with leading industry experts in Estonia. The selection criterion for the respondents was mainly their involvement with the development of Internet banking systems from the early days of its emergence. Most of the respondents are still working in the leading banks. The number of respondents was 5 which are sufficient considering that in the Estonian market there are two leading banks whose decisions in the field of electronic banking are step by step followed by the smaller players. To gain deeper understanding of the developments of internet banking also a number of short e-mail interviews were conducted with specialists from companies that have established cooperative internet based services together with the banks.

The second part of the research is an extensive bank customer survey conducted employing the customer database of Eesti Ühispank, the second largest bank of Estonia. The survey was conducted via Internet and also via traditional mail. Only the data collected via electronic channel is available for analysis. The response rate for the survey was 23.85%, 954 respondents out of 4000 customers.

The survey conducted for this research addressed six different issues influencing the adoption of Internet banking (Better prices, Recommendations, Better service, Marketing efforts, Better access and higher privacy). The most important factors in starting to use Internet banking are first and foremost better access to the services (convenience), better prices and higher privacy. Better service (i.e. preferring self service over office service) was also of above the average importance. Two factors that the respondents did not consider relevant to their adoption decision were banks' marketing activities and personal recommendations from friends and colleagues.

Also the survey conducted six main obstacles (computers are difficult, no access to internet, internet banking is expensive, low security, have had no chance to try and I prefer personal contact) in adopting Internet banking (results of a preliminary study, 100 respondents), the most important factors discouraging the use of Internet banking are lack of Internet access and not having a chance to try out Internet banking in a safe environment

Finally the research indicates that banks activities alone may not be sufficient in achieving growth if general infrastructure, economic environment and government initiatives are not supportive. Although the usage levels of Estonian internet banks are remarkably high compared to the other East

European countries and comparable to the adoption rates in the Scandinavian countries it is clear that still a potential for further growth exists.

1.8.9 The study of Hoppe and others (2001) titled "Factors Affecting the Adoption of Internet Banking in South Africa: a Comparative Study"

This research was conducted on identifying the attitudinal, social and perceived behavioral control factors that might influence the adoption of Internet banking. The research framework based on the theory of planned behavior and the diffusion of innovations theory developed by a previous research on Singapore.

The results were largely in agreement with those obtained in the Singapore study. It was confirmed that attitudinal and perceived behavioral control factors, rather than social influence play a significant role in influencing the intention to adopt Internet Banking services. The aim of the study was to collect South African data in order to test out the hypotheses regarding the factors, which affect adoption of Internet banking and compare these results with those collected in other countries.

An online questionnaire was used to collect empirical data for this study. This was considered to be most appropriate, because the questions are only relevant to Internet users and the hypotheses are best tested using a sample of this group rather than the general South African population. A few hardcopies of the questionnaire were also prepared

The results show that intention to adopt Internet banking can be predicted by attitudinal factors, perceived behavioral control factors to a lesser degree, and not by subjective norms. All attitudinal factors except banking needs are found to be significant, with complexity and risk showing a negative relationship.

Possible reasons why banking needs are not related include the design of the measuring instrument. Possibly not enough was done to localize the list of banking products provided for respondents to choose from.

The opinions of friends, family and other consumer-relevant groups are found to have no significant relationship with the intention to adopt Internet banking. This is in agreement with the results obtained in Singapore, and suggests that the opinions of peers are not important with an innovation such as Internet banking. Availability of information about Internet banking online may reduce the need for potential adopters to seek out the opinions of peer groups.

Of the three perceived behavioral control factors, technology support could not be included as a factor do to inadequate factor loading, and so could not be tested. Self efficacy was found to be an influential factor, and government support was not. Support for self-efficacy is in agreement with the results obtained in Singapore, whereas rejection of government support is in contrast with them. Possible reasons for this would include differences in how government is viewed in the two countries and may also include differences in how government policy relates to online security and e-commerce in the two countries.

1.8.10 The study of Yang (1997) titled: "The security of electronic banking"

This study aims to identify the challenges that oppose electronic banking which are the concerns of security and privacy of information.

The study indicates that the solutions to the security issues require the use of software-based systems or hardware-based systems or a hybrid of the two. These software-based solutions involve the use of encryption algorithms,

private and public keys, and digital signatures to form software packets known as Secure Electronic Transaction used by MasterCard and Pretty Good Privacy. Hardware-based solutions such as the Smartcard and the MeChip provide better protection for the confidentiality of personal information.
Software-based solutions have the advantage over hardware-based solutions in that they are easy to distribute and are generally less expensive.

1.8.11 SUMMARY OF THE RELATED STUDIES:

Review of previous studies shows that understanding the critical success factors (CSFs) in e-banking is important for senior management of banking related organizations, because it would potentially help them improve their strategic planning process.

Success factors can differ according to the organization strategies, also some studies adopt the factors from a tool called “the dimension of quality by David .Garvin“, also the factors can be internal (organizational) or external (industrial)

The main obstacles and barriers that oppose e-banking adoption are the concerns of security, privacy of information and technology investment cost.

Also the literature review indicates that according to the customers there are different factors that influencing the adoption of e-banking such as demographics, advantages perception, and other factors related to the services itself & how to be accepted and used by the customers, which differ from country to another country reflecting the economical and technological development in each country.

In this research we will identify different number of success and obstacles factors that affect the adoption process in the Palestinian banks by using a structured questionnaire contains many questions regarding these factors.

1.9 RESEARCH LIMITATIONS AND DIFFICULTIES:

Electronic banking is a new and broad subject, so it has many dimensions that can be covered so there are no one research could cover all its aspects.

There are some difficulties the researcher has faced such as the difficulty to get any reference from abroad because of the political situation, a also some banks refused to cooperate in answering the questionnaire

1.10 STRUCTURE OF THE RESEARCH:

This thesis consist of six chapters, as shown in figure 1.1, chapter 1 contains an introduction to the research, the statement of the problem, research questions, objectives and limitations. The second and third chapters are one block and represent a review of literature that provides detailed background and summarize relevant research. The next chapter presents General overview of the electronic banking system. The third chapter presents electronic banking innovation, the regularity environment and the risks of e-banking. The fourth chapter presents the research methodology. The fifth chapter presents research results, discussed where possible in the light of previous researches, and the results of the hypotheses testing. Finally the sixth chapter presents conclusion and recommendations drawn from the findings, and recommendations for further researches.

CHAPTER TWO

GENERAL OVERVIEW OF THE ELECTRONIC BANKING SYSTEM

2.1 INTRODUCTION

2.2 ELECTRONIC BANKING DEFENTIONS

2.3 TYPES OF ELECTRONIC BANKING

2.4 ELECTRONIC BANKING SERVIES

2.5 ELECTRONIC BANKING FROMS AND TECHNOLOGIES

2.6 EELCTRONIC BANKNIG SERVICES UTLIZED BY BANKS IN GAZA STRIPS

2.7 FACTROS AFFECTING THE E-BANKING TECHNOLOGIES

2.8 FACTORS INFLUNICNG ABSORBING OF E-BANKING TEVHNOLOGIES

2.9 ADVANTAGES OF E-BANKING

2.10 DISADVANTAGES OF E-BANKING

2.11 **SUMMARY**

2.1 INTRODUCTION :

This chapter discusses the electronic banking definition in general, identifies the basic e-banking services and types, provides a general summary on e-banking forms and technologies, and finally shows advantages and disadvantages of providing e-banking systems.

2.2 ELECTRONIC BANKING DEFENTIONS:

E-banking has a variety of definitions all refer to the same meaning, the following section show some of these definitions

Electronic banking, also known as electronic funds transfer (EFT), is simply the use of electronic means to transfer funds directly from one account to another, rather than by check or cash.

The term electronic banking often refers to online banking/Internet banking which is the use of the Internet as a remote delivery channel for banking services (Furst, Lang, & Nolle, 2002 pp.5). 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 per day, seven days a week.

Another definition of electronic banking "Electronic banking is the use of a computer to retrieve and process banking data (statements, transaction details, etc.) and to initiate transactions (payments, transfers, requests for services, etc.) directly with a bank or other financial services provider remotely via a telecommunications network" (Yang, 1997 pp.2). It should be noted that electronic banking is a bigger platform than just banking via the internet. Electronic banking can be also be defined as a variety of platforms such as internet banking or (online banking), TV-based banking,

mobile phone banking, and PC banking (or offline banking) whereby customers access these services using an intelligent electronic device, like a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), point of sale (POS), kiosk, or touch tone telephone (Alagheband, 2006 pp.11).

Banks offer Internet banking in two main ways. An existing bank with physical offices can establish a Web site and offer Internet banking to its customers as an addition to its traditional delivery channels. A second alternative is to establish a "virtual," "branchless," or "Internet-only" bank almost without physical offices. Virtual banks may offer their customers the ability to make deposits and withdraw funds via ATMs or other remote delivery channels owned by other institutions. (Furst, Lang, & Nolle, 2002 pp.5).

2.3 TYPES OF ELECTRONIC BANKING:

According to the office of Comptroller of the Currency there are three types of e-banking classified by degree of functionality, they are as follow:

- First type-informational (**information-only systems)**: is the basic level of e-banking. Typically, the bank has marketing information about the bank's products and services such as (advertisements or promotional material) on a stand-alone server. The informational systems typically have no path between the server and the bank's internal network. Appropriate controls therefore must be in place to prevent unauthorized alterations to the bank's server or web site. (Federal deposit insurance corporation, 1998) In these systems, the publisher (generally, the bank) defines the information to be made available. In this sense, the publisher is simply communicating

electronically what has traditionally been made available in print and through other media. The electronic format provides a more cost efficient channel that offers greater flexibility in terms of audience, content, and geography. Although these sites are generally marketing oriented, each can contain as little or as much information as the publisher desires, and can be linked to other sites that provide additional information.

- Second type-communicative (**electronic information transfer Systems)**: This type of e-banking system allows some interaction between the bank's systems and the customer. The interaction may be limited to electronic mail; account inquiry, loan applications, or static file updates (name and address changes). Because these servers may have a path to the bank's internal networks, appropriate controls need to be in place to prevent, monitor, and alert management of any unauthorized attempt to access the bank's internal networks and computer systems.

- Third type-transactional (**fully transactional information systems)**: This level of e-banking allows customers to execute transactions. Since a path typically exists between the server and the bank's or outsourcer's internal network, it must have the strongest controls. Customer transactions can include accessing accounts, paying bills, transferring funds, etc **(**Office of the Comptroller of the Currency, 1999**).**

Table 2.1: Types of e-banking services classified by functions

Function	Level of interactivity		
	Basic	Intermediate	Advanced
Informational	Electronic brochures, Means of Contact, Special events	Search engines, Reports download Economic information	Subscriptions, Interface customization, Advertisements
Transactional	Opening accounts, Check book requests Card request	Balance enquiry, Bill payments, Funds transfer	Electronic cash, Electronic signature, Electronic checks
To improve customer relationship	Electronic mail, Suggestions forms complaints forms Feedback forms`	Advising tools, What-if calculations, Calculators	Service departments

Source: Guru, et al.(2004)

2.4 ELECTRONIC BANKING SERVICES:

E-banking products and services can include wholesale products for corporate customers as well as retail and fiduciary products for consumers' services dependent on used accessible channel.

Some examples of these products and services include: (Binda, 2005)

- Cash management.
- Wire transfer.
- Automated clearinghouse (ACH) transactions.
- Bill presentment and payment.
- Balance inquiry.
- Funds transfer.
- Downloading transaction information.
- Loan applications.

- Investment activity.
- Orders instructions,
- Stocks and shares trade,
- Credits acceptance,
- Accepting credit cards applications,
- Reviewing the calendar of dates and deadlines,
- Reviewing the history of carried out operations,
- Tax accounts,
- Sending orders and messages by means of text message system,
- Aggregation of financial services

as well as associated financial services i.e. insurance, leasing, investment or retirement services.

Table 2.2: Classification of chosen e-banking services

Products improving comfort	- Mobile banking - Mobile payments - SMS alerts
Services for third parties	- Internet payments - Payments of taxes on-line - Payments of bills
Other financial products	- Life insurance - Vehicle insurance
Investment products	- Opening and managing deposit accounts - Purchase sales of investment funds securities - Purchase sales of bonds and other investment instruments
Bank loan products	- Bank loans applications - Credit cards applications
Simple banking products	- Opening, closing, managing an account - Domestic and international money transfers - Standing orders - Direct debits - Debit cards applications

Sources: Binda (2005)

2.5 EELCTRONIC BANKING FORMS AND TECHNOLOGIES

Automated Teller Machines (ATMs) also called 24-hour tellers are electronic terminals which give consumers the opportunity to bank at almost any time. To withdraw cash, make deposits or transfer funds between accounts, a consumer needs an ATM card and a personal identification number.

Direct Deposit and Withdrawal Services allow consumers to authorize specific deposits, such as paychecks or social security checks, to their accounts on a regular basis.

Point-of-Sale Transfer Terminals allow consumers to pay for retail purchase with a **check card**, a new name for debit card. This card looks like a credit card but with a significant difference— the money for the purchase is transferred immediately from your account to the store's account (Deutsche Bundes bank, 2000 pp.44-45).

Personal Computer (PC banking) offer consumers the convenience of conducting many banking transactions electronically using a personal computer. Consumers can view their account balances, request transfers between accounts and pay bills electronically from home or office phone lines (either analog– by modem – or using an ISDN adapter).

Basically, there are two types of PC banking:

The first type is online banking, in which bank transactions are conducted within closed networks. The customer needs specialized software provided by his bank. The second type is Internet banking, unlike closed networks, Internet banking perm it’s the customer to conduct transactions from any terminal with access to the Internet (Deutsche Bundes bank, 2000 pp.44-45).

Smart card is a plastic card containing microchips, which provides the capacity of processing and storing data. It has a complex structure capable of performing multiple functions. The transaction data sorted on the card later is read by computers to update the card's records

Smart cards can be classified into three main categories

1- Smart card as a medium of payment : is used to replace cash for transactions (i.e. stored-value or prepaid card or electronic-purse)
2- Smart cards as information managers: it has a capacity for information storage and processing capability because of embedded computerized memory and processing power.
3- Smart cards as customized delivery systems: this the future of the smart card with the progression in memory and processing power, it will be able to carry screen sets and personal information that will possibly make the smart cards the ultimate in personal and mobile computing.

Home banking services (internet / extranet banking) is an electronic home – banking system using web technology. Bank customers are able to conduct their business transactions with the bank through personal computers, the basic computer-based communication systems in home banking can be divided into three types:

1- The internet which allow any person or corporation to access the bank's web pages through the World Wide Web.
2- The intranet is a private network designed to limit access within given institutions that require web browser technology. Banks use intranets for sharing internal information, work-group collaboration, and communication between a bank and particular clients.
3- The extranet is a system by which banks can provide internet/intranet access to customers and suppliers.

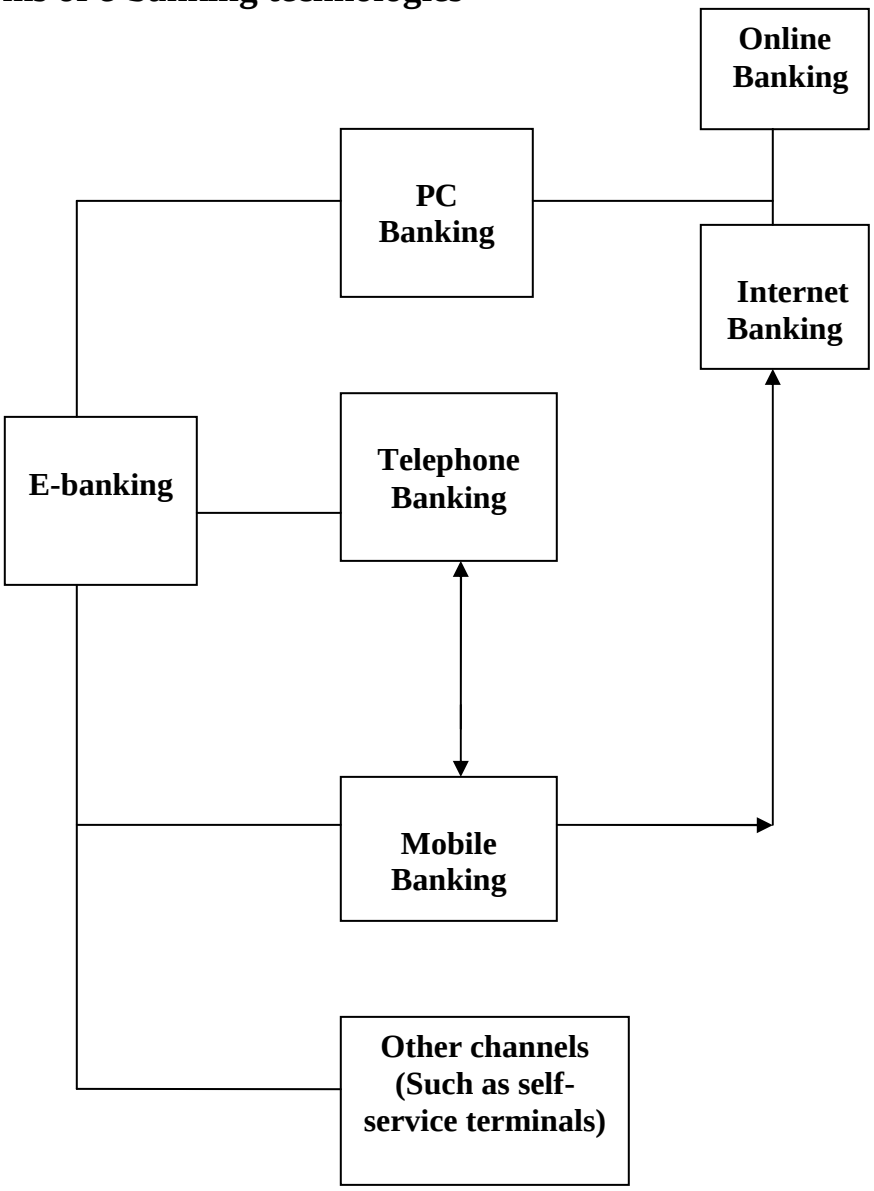
Mobile banking is a service that enables the customers to conduct some banking services such as account inquiry and funds transfer, by means of textual news SMS as well as WAP banking.

Electronic fund transfer at point of sale (EFTPOS) is simply the use of electronic means to transfer funds directly from one account to another usually a retailer's account, authorized at the point of sale using a debit card and personal identification number (intrapairot, 2000; Binda, 2005).

TV banking is one of the newest solutions in the field of communication between client and bank with the usage of satellite TV, cable TV, telenewspaper and telephoning. The client may check his account in the telenewspaper. However, it should be proceed by telephone contact with bank. After giving the account password, the client receives the number of page in the telenewspaper or by sending coded data by digital TV (decoder is necessary in this case. Those who already possess such device are able to contact with bank in this new way (satellite TV and telephone).

also there are many types of e-banking technologies such as: Cash dispensers, Call Centre, Voice-IVR, Mobile banking (SMS banking, make possible to manage the bank account by means of textual news SMS as well as WAP banking, allowing for interactive contact of the client with the bank by means of mobile phone using protocol WAP), and Multimedia kiosk (intrapairot, 2000; Binda, 2005).

Fig 2.1 forms of e-banking technologies



Source: constructed by the researcher

2.6 ELECTRONIC BANKING SERVICES UTILIZED BY BANKS IN GAZA STRIP:

In this section the researcher will identify the various e-banking services and the features of the banks` websites, this information were obtained by surfing the banks` websites.

Table 2.3: Electronic banking services utilized by banks in Gaza strip according to the banks` websites

	Banks	E-Banking services							Bank website							
		website	phone banking	SMS	ATM	Credit cards	Mobile banking	Internet banking	Type of website	Has an index	Has customer feedback	Help function	Has frequently ask question	Online catalogue	keyword search function	Application form
1	**Bank of Palestine**	Y	Y	Y	Y	Y	N	Y	**Info***	Y	N	Y	N	N	N	N
2	**Palestine Islamic bank**	Y	N	N	Y	N	N	N	**Info***	Y	N	N	N	N	Y	N
3	**The Palestine investment bank**	Y	N	N	N	Y	N	N	**Info***	Y	N	N	N	N	N	N
4	**Arab Islamic bank**	Y	N	N	Y	N	N	N	**Info***	Y	N	N	Y	N	Y	N
5	**The commercial bank of Palestine**	Y	Y	N	N	Y	N	N	**Info ***	Y	N	Y	N	N	N	N
6	**Palestine international bank**	Y	N	N	Y	N	N	N	**Info***	N	N	N	N	N	N	N
7	**Al-Quds bank for development & investment**	Y	N	N	N	N	N	N	**Info***	Y	Y	Y	Y	N	N	N
8	**Arab bank**	Y	Y	Y	Y	Y	Y	Y	**Comm****	Y	N	N	Y	N	Y	N
9	**Bank of Jordan**	Y	Y	Y	Y	Y	Y	Y	**Info***	Y	N	Y	Y	N	Y	N
10	**Cairo Amman bank**	Y	N	N	Y	Y	N	N	**Info***	Y	N	N	N	N	N	N
11	**The housing bank of trade and finance**	Y	N	N	Y	Y	N	Y	**Trans*****	Y	Y	N	Y	N	Y	Y
12	**Egyptian Arab land bank**	Y	N	Y	N	N	N	y	**Comm****	Y	Y	N	N	N	N	N
13	**The principle bank of development and agriculture credit**										Has no website					
	The percentage of banks utilize electronic banking services and products and website's features															
	The percentage of banks utilize the service and website's features	**92.30**	**30.76**	**30.76**	**61.53**	**54**	**15.38**	**38.46**	**Info 75 Comm 16.67 Trans 8.33**	**85**	**25**	**25**	**41.66**	**-**	**41.66**	**8.33**

Source: constructed by the researcher from banks` website

*** informational**
**** communicational**
***** transactional**
N=NO
Y=YES

An analysis of the different types of e-banking services and features introduced in the banks website to help the bank customers utilized by banks in Gaza strip is presented in table (2.3) the focus on the analysis is on the seven main e-banking services and a brief analysis on the features introduced in the websites and identify the types of the website according to the main three types identified in literature namely informational, transactional and communicational. The information was basically from the banks` websites.

According to the analysis, all but one bank have website (92.30%) which is "The Principle Bank of Development and Agriculture Credit"

As indicated in table (2.3), it was found that the most popular electronic banking services introduced by banks in Gaza strip are ATMs 61.53% and credit cards 54% followed by internet banking 38.46%, SMS and phone banking by the same percentage 30.76% and the less popular is mobile banking 15.38%.

Also it was found that:-

- 85% of the websites have an index of its contents
- 41.66% of the websites have frequently asked question and keyword search function
- 25% of the websites have customer feedback function and help function.
- 8.33% of the websites have an application forms
- There is no website has an online catalogues.

2.7 FACTORS AFFECTING THE E-BANKING TECHNOLOHIES GROWTH:

The participation in e-banking differs and depends on the access to technology, the infrastructure development, lawful-administrative regulations, banking culture, e-banking culture and the costs of exploitation.

Such factors influence distributive channel groups with a different growth potential (Figure. 2.2). Little growth potential: little functioning, (telephone banking) or high cost of exploitation (TV banking and Home-banking), as well as, high growth potential (internet banking, virtual banking, mobile banking) with low exploitation costs.

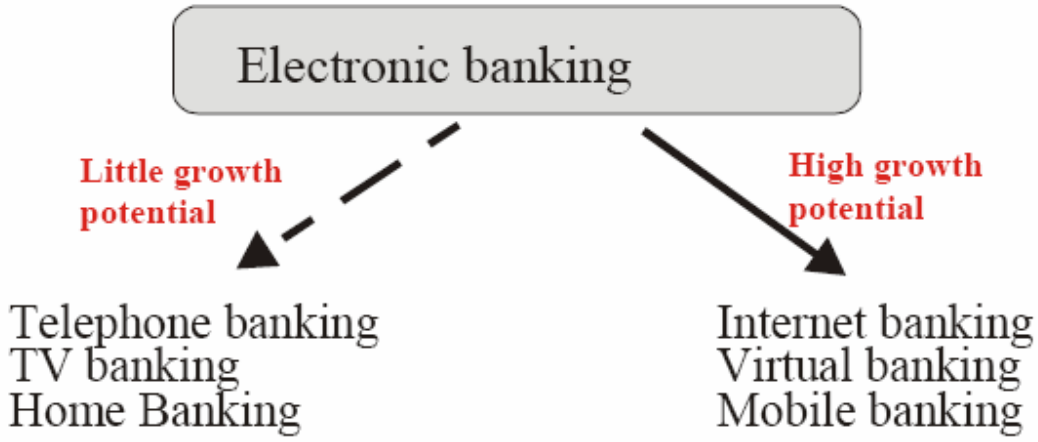


Figure 2.2 e-banking access channels and their growth potential (Binda, 2005)

2. 8 FACTORS INFLUNCING ABSORBING OF E-BANKING TECHNOLOHIES:

E-banking is not developing evenly. The pace differs by countries of the world. It does not entirely depend on the economic development of a

country, it is rather an outcome of many factors influencing absorbing of these services but also of many barriers which arise in the context of new electronic technologies and related risks and illegal activities such as dirty money washing, selling non-existing bonds and hacker activities. Hence, this issue being a very complex one should be analyzed from three points of view (Figure 2.3), taking into consideration such factors as the total number of users of e-banking, level of market penetration as a percentage of all clients of a bank, level of market penetration as a percentage of the population and finally level of market penetration as a percentage of the Internet users (Hoppe, Newman, & Mugera, 2001 pp.8-9; Binda, 2005 pp.1504)

The basic factor influencing absorbing the services is the access to technologies and the level of development of tele-computer infrastructure.

This development is closely connected with the wide availability of personal computers and the internet channels which, in turn, has an impact on technical culture of information society.

The indirect factor of e-banking services absorption are costs related to creating the access to new developments in technology, mainly using the telephone line and wide-wavelength access to the net. Another salient issue is the so called level of saturation of the access to the internet.

Another important issue is the trust customers have in e-banking services.

Another group of factors connected with penetration of Internet banking services are: confidence to financial institutions, electronic banking culture and internal procedures of banks` operations.

The last group includes the following economy factors: service prices, level of clients` affluence, scale and pace of society education.

However, using systems and ICI tools in operations of financial institutions, including banks, are regulated by according law acts and rules.

The second groups of factors that have a restraining effect on development of electronic banking consist of internal banks` procedures that are not tailored to substantial, organizational and time aspects.

In other words, e-banking is not a banking product; rather, it describes the way transactions are conducted (intrapairot, 2000; Binda, 2005).

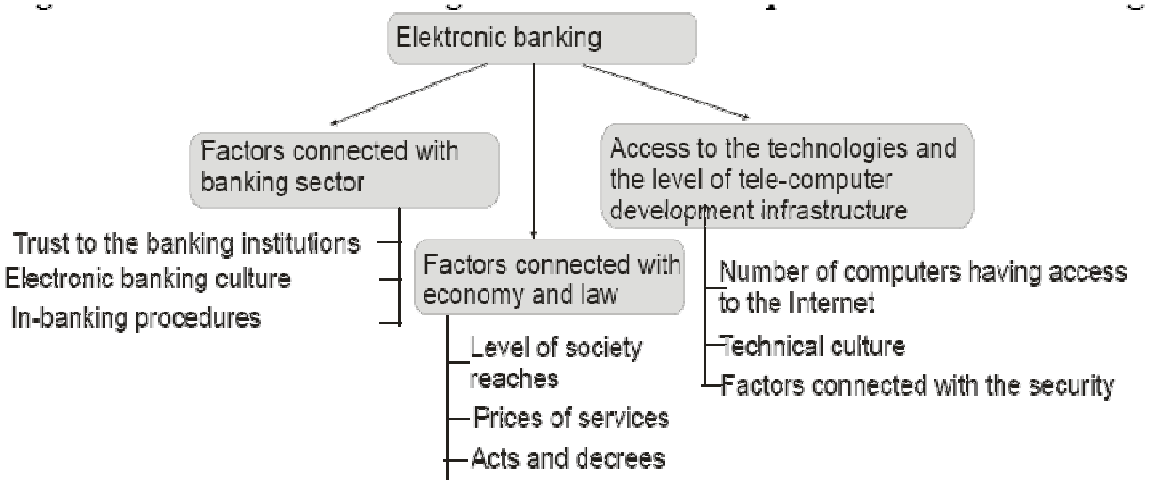


Figure 2.3 factors influencing the level of market penetration in electronic banking (Binda, 2005)

2.9 ADVANTAGES OF E-BANKING:

Despite the e-banking leads to segmentation of the market, products and services (this may derive from the level of service complication, its value and the security of transactions), it offers a certain advantages over the traditional banking methods

Some of these advantages are:

- Time saving: A customer can bank without physically visiting a branch.

- Convenience: Accounts can be paid and funds transferred without queuing or writing out cheqeus.
- Accessibility: Services are available seven days a week, twenty-four hours a day.
- Confirmation: Transactions are executed and confirmed almost immediately.
- Range: Customers can do anything from checking on an account balance to applying for a mortgage.
- Security: Customers can choose their own PIN, preventing unauthorized access to their accounts.
- Safety: Reduces the need to carry large amounts of cash.
- Spreading: bank without borders (borderless bank), which allows to realize the order from different place (without space limit).
- Competitiveness: Enlarging the competitiveness of the bank on the market of bank services and enlarging client satisfaction this can lead to the growth of his loyalty towards the bank (Hoppe, Newman, & Mugera, 2001 pp.8-9; Binda, 2005 pp.1504)

2.10 DISADVANTAGES OF E-BANKING:

Electronic banking also has several disadvantages these include:

- Cost: Internet banking has certain systems requirements such as accessibility to computers, computer type, memory, screen resolution and browsers, which prove to be an additional cost to the customer when compared to traditional banking methods or other online banking services such as ATMs.
- Cash availability: Currently, a customer cannot make deposits or withdrawals when using Internet banking.

- Security: This can also be a disadvantage as there is the threat from computer hackers and fraudsters (Hoppe, Newman, & Mugera, 2001 pp.8-9; Binda, 2005 pp.1504)

2.11 SUMMARY

Electronic banking is a system basically depends on the using of the internet with any electronic mean to do any banking transaction.

All forms and kinds of electronic banking are classified in to three types (Informational, communicational and transactional).

In Palestine, the indications are that the electronic banking services/features have not fully been utilized and most of the services are informational.

Finally, there are many factors affecting the growth and the absorbing of the e-banking technologies beginning from the banking culture to the basic infrastructure needs.

CHAPTER THREE

ELECTRONIC BANKING INNOVATION WITH IT`S REGULARTY ENVERMENT AND THE RISKS RELATED TO IT

3.1 INTRODUCTION

3.2 THE HISTORY OF ELECTRONIC BANKING

3.3 THE INNOVATION OF ELECTRONIC BANKING

3.4 ELECTRONIC PAYMENT SYSTEMS

3.5 CREATING AN ENABLING REGULARTY ENVIROMENT

3.6 RISKS OF ELECTRONIC BANKING SYSTEMS

3.1 INTRODUCTION

This chapter is divided virtually into two parts the first part represent a board review of the innovation of electronic banking and the various types of electronic payments systems.

The second part represents the risks associated with e-banking activities and the risk management of those risks that the bank must consider to avoid them.

3.2 THE HISTORY OF ELECTRONIC BANKING:

Electronic innovation in banking can be traced back to 1970s when the computerization of financial institutions gained momentum. However, a visible presence of this was evident to the customers since 1980, with the introduction of the automated teller machine (ATM). Innovative banking has grown since then, aided by technological developments in the telecommunications and information technology industry. The early decade of the 1990s witnessed the emergence of automated voice response (AVR) technology. By using the AVR technology, banks could offer telephone banking facilities for financial services. With further advancements in technology, banks were able to offer services, through personal computers owned and operated by costumers at their convenience, through the use of intranet propriety software. The users of these services were, however, mainly corporate customers rather than retail ones (sohail and shanmugham, 2003). The security first network bank was the first internet banking in the world that was built in 1995, USA. After that some famous banks introduced their internet banking one after another, such as Citibank and bank of America.

3.3 THE INNOVATION OF ELECTRONIC BANKING:

The mainstream economic theory treats electronic banking as a financial innovation that is effectuated by a vision of bank as a profit-generating facility. It follows then, that "…A change in the financial environment will stimulate a search by financial institutions for innovations that are likely to be profitable." (Mishkin 2000, p. 239).

'Starting in the 1960s, individuals and financial institutions operating in financial markets were confronted with drastic changes in the economic environment: Inflation and interest rates climbed sharply and became harder to predict, a situation that changed demand conditions in financial markets. The rapid advance in computer technology changed supply conditions. In addition, financial regulations became more burdensome. Financial institutions found that many old ways of doing business were no longer profitable; the financial services and products they had been offering to the public were no longer selling. Many financial intermediaries found that they were no longer able to acquire funds with their traditional financial instruments, and without these funds they would soon be out of business. To survive in the new economic environment, financial institutions had to research and develop new products and services that would meet customer needs and prove profitable, a process referred to as financial engineering. In their case, necessity was the mother of innovation" (Mishkin 2000, p. 239)

Another view of innovations identifies the driving forces for the transition to e-banking technology: First, innovations have responded to market demands for risk-sharing, risk pooling, hedging and spatial transfers of resources that are not currently available. Second, innovations have satisfied continuing

needs for lower transactions costs or increased liquidity. Third, innovations have reduced asymmetric information between trading parties and improved the monitoring of the performance of principals by agents. Fourth, innovations have facilitated the avoidance of taxes, regulatory and accounting constraints" (Andriy, 2001 pp. 4-6).

3.2.1 Transition from traditional banking systems to branchless banking systems:

The transition to the virtual banks can be traced in four phases (by the Indian institute of management Bangalore):

Phase 1

Automated telling machines (ATMs) and telephones

– Once a revolutionary way of banking – are now widely accepted. The customer benefited mainly from convenience of access. The 24-hour availability of these services met the latent needs of the customers, while the emergence of satellite technology has ensured that ATMs can be set up and operated even in remote locations.

Phase 2

This stage witnessed the emergence of personal computers and online services. Here, the customers (mostly corporate) are linked to the bank through dedicated lines and transactions are carried out. The latter part of this stage saw the emergence of the Internet as a medium for carrying out banking transactions. The Internet broke the barrier of proprietary networks and was instrumental in taking banking services to the individual customer.

Phase 3

This stage is witnessing the concept of e-cash. Customers are able to store cash in electronic forms in their accounts and use these to perform transactions. E-Cash is rendering geographic spread obsolete and some banks are offering access to two-way interactive video.

Phase 4

The three-wave methodology is integral in mapping the movement of banking from simple ATMs and telephone banking to the Internet stage. Thus, further services have become technologically enabled, in that one can offer advanced services due to the popularity of the Internet and the technology contained therein (Ganesh, 2004 pp.24).

3.4 ELECTRONIC PAYMENT SYSTEMS

Electronic payment systems resemble traditional systems because both are derived from a common monetary model. In this sense, electronic systems are simply alternative means to deliver traditional banking and related products and services. Both must complete the same general steps within the payment cycle to reach finality: payment entry, settlement, and distribution.

Electronic payment systems can be broadly categorized according to system components, process methodology, and system structure (Federal Deposit Insurance Corporation, 1998).

The following table details various electronic payment system characteristics.

Table 3.1: characteristics of electronic payment systems

Characteristics of electronic payment systems	
System components	- **System hardware (i.e PC, card reader, ATM, etc.)** - **Chip versus magnetic strip technology** - **Card versus computer-based systems**
Process methodology	- **batch versus real-time processing** - **online versus offline access**
System structure	- **legal currency versus branded (proprietary) value** - **singles versus multiple currency** - **debit versus stored value based systems** - **open versus closed systems** - **reloadable versus single use systems** - **controlled versus secured access** - **single versus multiple purpose** - **integrated versus stand alone systems** - **user anonymity** - **payment mechanics (buyer and seller interaction)** - **payment system settlement (processing)** - **transaction size (micro or large-dollar payments)** - **geographic reach**

Sources: Federal Deposit Insurance Corporation (1998)

3.4.1 Conventional Payment Process

A conventional process of payment and settlement involves a buyer-to-seller transfer of cash or payment information (e.g. credit card or check). The actual settlement of payment takes place in the financial processing network. A cash payment requires a buyer's withdrawal from his bank account, a transfer of cash to the seller, and the seller's deposit of the payment to his account. Non-cash payment mechanisms are settled by adjusting, i.e. crediting and debiting, the appropriate accounts between the banks based on payment information conveyed via check or credit card.

Figure 3.1 is a simplified diagram for both cash and non-cash transactions. Cash moves from the buyer's bank to the seller's bank through face-to-face exchanges in the market. If a buyer uses a non-cash method of payment, payment information instead of cash flows from the buyer to the seller, and ultimately payments are settled between affected banks who notationally adjust accounts based on the payment information. In real markets, this clearing process involves some type of intermediaries such as credit card services or check clearing companies. Schematically then most payment systems are based on similar processes.

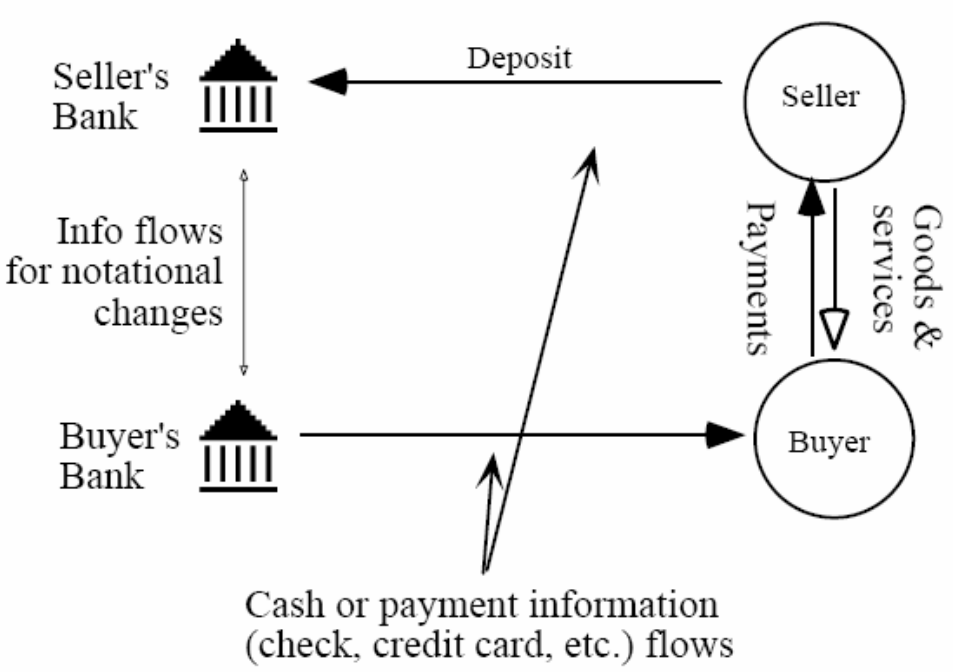


Figure 3.1 a simplified model of transaction

The 'information' conveyed to settle payments can be one of the following:

A- Information about the identities of the seller and the buyer and some instruction to settle payments without revealing financial information

B- Financial information such as credit card or bank accounts numbers (including checks and debit cards)

C- Actual values represented by digital currency

There have been over two dozens proposed Internet payment standards or protocols. These range from Anonymous Internet Mercantile Protocols by AT&T Bell Labs (http://www.bell-labscom) to Conditional Access for Europe (CAFE) for the European community, to Secure Electronic Transaction (SET)

promoted by MasterCard (http://www.mastercard.com) and Visa (http://www.visa.com).

Many software and hardware products based on these open standards are being offered, including CyberCash, Digicash, Mondex, NetBill and NetCheque. While the diversity of these products is an indication of healthy competition, it does make it confusing for ordinary Internet users and merchants to choose an appropriate payment mechanism. Despite of these various standards and protocols electronic payment systems can be broadly classified into three groups: payment through an intermediary, payment based on EFT and payment based on electronic currency.

Type 1: Payment through an Intermediary—Payment Clearing Services

When face-to-face purchase is replaced with on-line commerce, many aspects of a transaction occur instantly, under which various processes of a normal business interaction are subsumed. For example, a typical purchase involves stages of locating a seller, selecting a product, asking a price quote, making an offer, agreeing over payment means, checking the identity and validity of the payment mechanism, transferring of goods and receipts. In order to be used as a substitute for face-to-face payments, online payment systems must incorporate all or some of these stages within their payment functions.

Figure 3.2 shows a stylized transaction for online commerce using an intermediary. In this model, the intermediary not only settles payments, it also takes care of such needs as confirming seller and buyer identities, authenticating and verifying ordering and payment information and other transactional requirements lacking in virtual interactions. In the figure (3.2), two boxes delineate online purchasing and secure or off-line payment clearing

processes. Payment settlement in this figure follows the example of the traditional electronic funds transfer model which uses secured private value networks.

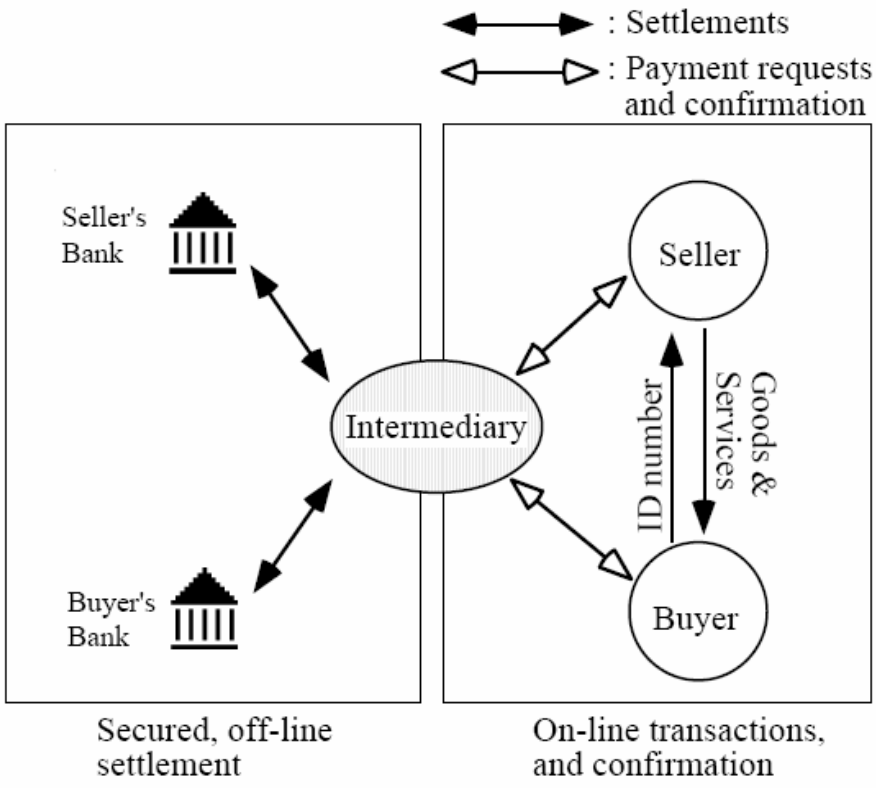


Figure 3.2: transactions with an intermediary

The payment information transmitted by the buyer may be one of three types. First, it may contain only customer order information such as the identity of the buyer and seller, name of the product, amount of payment, and other sale conditions but no payment information such as credit card numbers or checking account numbers. In this case, the intermediary acts as a centralized

commerce enabler maintaining membership and payment information for both sellers and buyers. A buyer need only send the seller his identification number assigned by the intermediary. Upon receiving the purchase order, the intermediary verifies it with both the buyer and seller and handles all sensitive payment information on behalf of both.

Type 2: Payment Based on EFT—Traditional Funds Transfer

The second type of payment systems does not depend on a central processing intermediary. Instead, sensitive payment information (such as credit card or bank account number) is transmitted along with orders, which is in effect an open Internet implementation of financial electronic data interchange (EDI) (see figure 3.3). An electronic funds transfer (EFT) is a financial application of EDI, which sends credit card numbers or electronic checks via secured private networks between banks and major corporations. To use EFTs to clear payments and settle accounts, an online payment service will need to add capabilities to process orders, accounts and receipts. In its simplest form, payment systems may use digital checks —simply an image of a check— and rely on existing payment clearing networks. The Secure Electronic Transaction (SET) protocol—a credit card based system supported by Visa and MasterCard—uses digital certificates, which are digital credit cards. We call this type of payment system as notational funds transfer system since it resembles traditional electronic fund transfers and wire transfers which settle notational accounts of buyers and sellers.

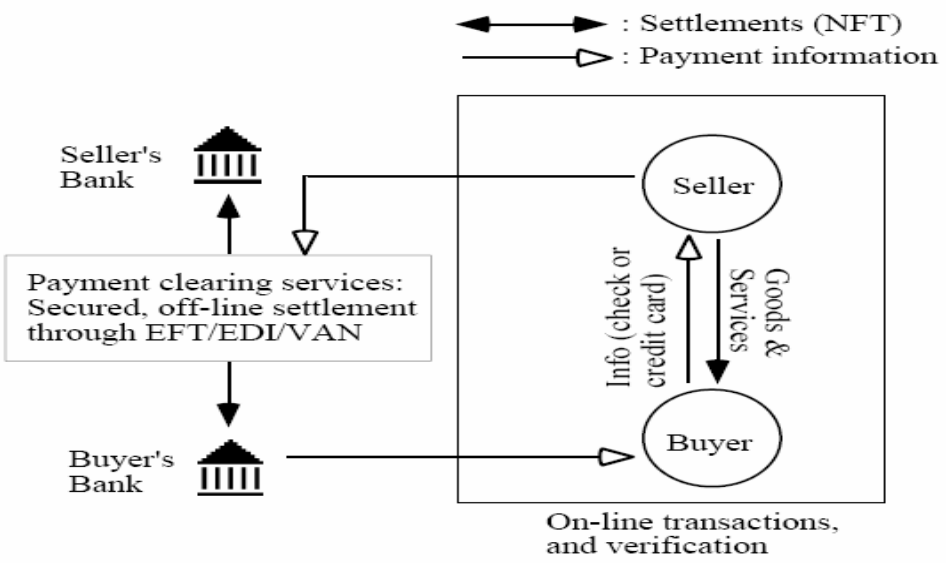


Figure 3.3: traditional funds transfer system

Traditional funds transfer systems differ from payment clearing services in that the 'payment information' transferred online contains sensitive financial information. Thus, if it is intercepted by a third party, it may be abused like stolen credit cards or debit cards. A majority of proposed electronic payment systems fall into this second type of payment systems.

Type 3: Payment Based on Electronic Currency

The third type of payment systems transmits not payment information but a digital product representing values: electronic currency. The nature of digital currency mirrors that of paper money as a means of payment. As such, digital currency payment systems have the same advantages as paper currency payment, namely anonymity and convenience. As in other electronic payment systems.

Figure 3.4 shows a digital currency payment scheme.

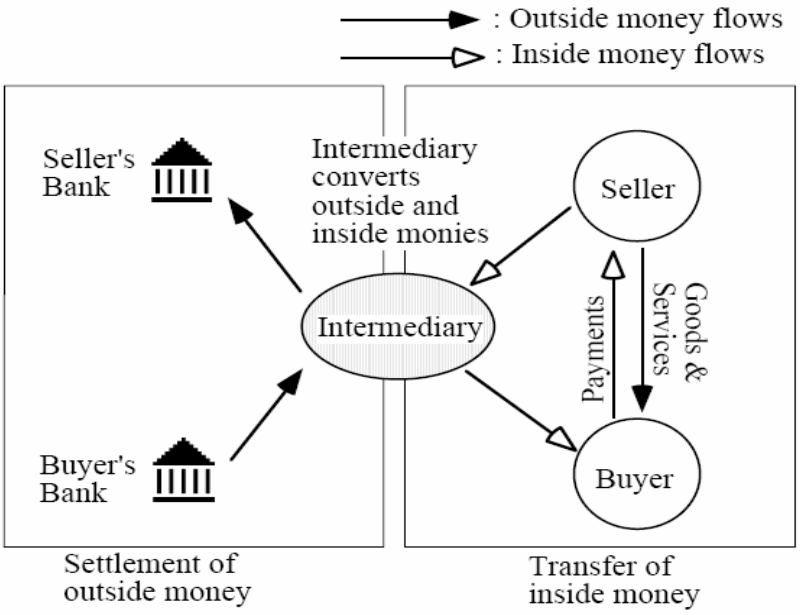


Figure 3.4: digital currency payment system

The only difference from figure is that the intermediary in figure 3.4 acts as an electronic bank which converts outside money (e.g. U.S. currency), into inside money (e.g. tokens or e-cash) which is circulated within online markets (Choi, Stahl & Whinston, 2003 pp.3-7).

3.5 CREATING AN ENABLING REGULARTY ENVIROMENT

The environment for electronic banking is influenced by the:

A- An evolution of the financial and retail sectors: The nature of the financial and retail market in which the solution is being launched is a key determinant

of product features, interoperability, potential volume drivers and basic financial literacy.

B-Level of financial literacy: The level of financial literacy influences communication of the product, the nature of the distribution channel and the nature of transactions made.

C-Regulatory and policy environment: The regulatory and policy environment should be supportive of electronic banking. This includes appropriate banking regulations and communications, security, and information policies (Cracknell, 2004 pp.2).

Also the most important areas of the regulatory framework for e-banking are telecommunications, security and related public and private key infrastructure, information and privacy, and contract enforcement.

Telecommunications

Regulation of telecommunication must privatize post and telegraph administrations, improve licensing of competitive operators, enhance mandatory interconnections and unbundled public switched telephone networks, implement independent regulatory bodies, and implement proper pricing regulations. Improving access to telecommunications for a larger portion of the population is especially important in emerging markets.

Electronic security and infrastructure

Both providers and consumers of e-banking view security as a constraint and a concern. Serious operational risks and potential liabilities are associated with security breaches in the transfer of funds or instructions and the actual theft of identification information over the Internet. In response, encryption techniques

and various protocols (secure socket layer, Financial Interchange Extended language) have been developed. Actual penetrations into banks are understated because of the damaging implications for banks reputations.

For the whole set of security arrangements that is, the so-called public key infrastructure to work, four functions must be present: authentication (knowing the parties when exchanging information), integrity (messages cannot be changed during transmission), no repudiation (agreements cannot be later denied), and confidentiality (messages cannot be read or copied by unauthorized users) (Furst, Glaessner & Kellerman, 2001).

One approach to improving authentication that is being employed is the use of public and private keys. Authorities will have to address three main issues in designing a country's public key infrastructure. First, adequate penalties are needed for unauthorized access to or tampering with computer systems and Websites penalties akin to those for other crimes. Second, a proper certification process is needed for public and private keys, as are secure systems for storing such keys and adequate cross-certification for private key providers. Third, government may need to set minimum authentication or certification standards while preserving incentives for private solutions. Regulations should be flexible enough to allow for creative use of new technologies (such as biometrics) in improving authentication processes (Claessens, Glaessner & Klingebiel, 2002 pp.24-29).

Information and privacy

E-banking makes it easier to manage customers and to customize products. For example, a financial institution linked with an Internet service provider can use information culled from a customer's Web use to offer the customer

new financial products. But such efforts must respect people's desire for privacy and confidentiality. Information about a person or business can increasingly be seen as a property right that people can voluntarily share with others. That property right must be clearly defined through information and privacy standards. Such standards should address four issues: notice, choice, access, and security. Individuals must be given notice of what information is being collected and how it is being used. They need to be given a choice of whether to allow such collection. Once the information has been collected, the provider of such information must have access to it, and the collector must ensure its security. Privacy standards will mainly require private sector actions, but these need to be backed by government privacy frameworks within and across countries. Moreover, privacy and secrecy laws should not become barriers to the development of e-banking. Thus general secrecy laws, along with other statutes such as bank secrecy laws, need to permit the sharing of not only negative but also positive credit information. As the Internet expands, standards for information and privacy will increasingly need to be global. (Goldberg, Dages, & Kinney 1999).

Contract enforcement

Poor contract enforcement hinders finance and commerce regardless of the delivery channel. But new technology can lower the costs of contract verification and enforcement. The Internet increases the amount and speed of available information and can easily link disparate sources of information. It can assist, for example, in the automation and efficiency of registries. With digital signatures, credit risk assessments can be made much faster and more efficient. In addition, the Internet and global financial service provision allow

for collateralized loans extended from remote locations. E-banking will thus make cross-border dispute resolution and contract enforcement more important (Furst, Glaessner & Kellerman, 2001).

Technology can help enforce contracts directly. When foreclosing because of late payments, for example, a lender can use remote devices to shut off and track down a leased car. Technology also allows for better methods of ensuring perfection of a security interest in collateral in a dematerialized environment, because databases can be linked directly. Finally, smart cards and other multipurpose cards use technology to bypass many standard contract enforcement mechanisms. (Claessens, Glaessner & Klingebiel, 2002).

Financial and market infrastructure

Laws and systems are a crucial element of financial infrastructure. As noted, e-banking will allow for a more functional, rather than institutional, approach to financial sector development. This implies that the laws governing financial contracts will become more important than the laws governing institutions that operate in the financial sector.

Laws on secured transactions and capital market dealings, for example, will become more important than laws on commercial banks and insurance companies. To date the impact of new technologies has been most pronounced in wholesale and securities markets, but gains are also becoming evident in retail markets. In Estonia and Finland, for example, many retail financial transactions are done electronically. A good technology infrastructure thus becomes key. Finally, linking financial service providers Nor more broadly, entire financial systems in emerging markets to countries with more sophisticated technology will allow them to benefit without having to invest in

expensive systems and demanding oversight structures. Stock markets in smaller emerging markets, for example, could be linked to and integrated with those in larger markets (Claessens, Glaessner & Klingebiel, 2002).

Consumer protection

E-banking and related innovations have made it possible to stratify customers through electronic customer relationship management and to customize financial services. These developments can create risks for consumers. For example, information from an online bank account could be misused in others parts of a financial institution or elsewhere. At the same time, technological developments make it easier for authorities to enforce existing regulations protecting customers because electronic audit trails are assured and Internet service providers can be required to provide information to authorities (Furst, Glaessner & Kellerman, 2001).

Policy decisions must reflect the choices of consumers and the incentives of financial service providers and Internet service or application software providers. The key policy step will be to require increased disclosure and greater transparency on the terms of financial services offered over the Internet. Better privacy and security standards will also help consumers.

Rules are also needed that limit the scope for conflicts of interest within financial institutions and between financial institutions and Internet-related firms. For example, limits may be needed on cross selling products within financial institutions. Governments may also need to clarify the liability of financial service providers for services contracted out, such as Internet banking software, as recommended by the Electronic Banking Group of the Basel Committee on Banking Supervision. E-banking can more easily involve

outright fraud, theft, and other abuses hurting small consumers and impinging on the confidence in and use of e-banking. Actions such as the development of a cyber-force (as is becoming common among securities regulators) can help weed out the worst offenders and send clear signals. But there will remain severe limits on government's ability to prevent misuse, making disclosure more necessary. These risks also highlight the need for more extensive consumer education, which could be provided through creative private-public partnerships (Claessens, Glaessner & Klingebiel, 2002).

3.6 RISKS OF ELECTRONIC BANKING SYSTEMS

The use of an electronic channel to deliver products and services introduces unique risks due to the increased speed at which systems operate and the broad access in terms of geography, user group, applications, databases, and peripheral systems. For instance, an information-only web site used for advertising purposes may be inappropriately altered by unauthorized parties. Electronic mail containing confidential or proprietary information may be distributed in error. Networked systems that are directly connected to a bank's central operating system or main database might be accessed by unauthorized parties, revealing sensitive data or applications. System failures have also occurred due to power outages and system defects.

3.6.1 Specific Risks to Electronic Systems

But the threat of failure or compromise in any system is significantly more pronounced in an environment of interconnected computer systems. As such, it is deserving of particular attention. Potential causes of a system compromise

include natural disasters, participant failure, or system attacks which are described more fully in table (3.2) below:

Table 3.2: specific risks to electronic systems

	Risk	Description
1	**Natural disasters**:	**The risks presented by natural disasters grow as the geographic reach of a network expands. For instance, the server equipment for a particular system might be distantly located, requiring public telecommunications networks for access. An interruption at any point along the connection might impact service.**
2	**System attacks**:	**Internal or external attacks may be undertaken to deny service to others, access databases, manipulate applications, or alter financial outcomes. Beyond financial gain, motives can range from simply trying to overcome system security (the challenge) to commercial espionage. Many perpetrators attempt to hide evidence of the attack, making it more difficult to identify the source or methods employed.**
3	**Participant failure**	**The failure of one or more participants in a payment system can have a significant financial impact on all participants. For instance, membership contracts may require that all participants share in the financial loss from an individual failure. In a worst-case scenario, a significant individual failure might cause other participants, and the entire system, to fail. Because trust and confidence are critical, public reaction to a minor failure could jeopardize an entire system**

Sources: Federal Deposit Insurance Corporation (1998)

3.6.2 Risks associated with e-banking activities

Electronic banking creates new risk management challenges for banks. Typically, all risks associated with traditional banking and products may be impacted with the introduction of e-banking services. However, there are six major categories of risk specifically associated with e-banking for bank supervision purposes.

The risks are strategic, operational/transaction, technology, business, reputation and legal.

(1) Strategic Risk is the current and prospective impact on earnings or capital arising from adverse business decisions, improper implementation of decisions, or lack of responsiveness to industry changes. Ideally, an e-banking service should be consistent with the bank's overall financial strategy. The planning and decision making process should focus on how specific business needs are met or enhanced by the e-banking product, rather than focusing on the product as an independent business objective. Strategic vision should determine how the e-banking product is designed, implemented, and monitored. The overall strategic vision of the licensee should influence how the e-banking product is designed and implemented

(2) Operational/Transaction Risk arises from fraud, processing errors, system disruptions, and the inability to deliver products or services, maintain a competitive position, and manage information. In the provision of e-banking services, banks often rely on outsourced software companies. They require the proper management of information systems and the right capacity to service their customers. Contingency and business resumption planning is necessary

for banks to be sure that they can deliver products and services in the event of adverse circumstances (Deutsche Bundesbank, 2000)

(3) Technology Risks are risks related to any adverse outcome, damage, loss, disruption, violation, irregularity or failure arising from the use of or reliance on computer hardware, software, electronic devices, online networks, and telecommunications systems. These risks can also be associated with systems failures, processing errors, software defects, operating mistakes, hardware breakdowns, capacity inadequacies, network vulnerabilities, control weaknesses, security shortcomings, malicious attacks, hacking incidents, fraudulent actions and inadequate recovery capabilities.

(4) Business Risk In some circumstances, due to the more savvy nature of the e-banking consumer, traditional banking risk, such as credit risks, interest rate risk, liquidity risk, and foreign exchange risk are elevated (The Central Bank of The Bahamas, 2006 pp.3-5).

(5) Reputation Risk arises from negative public opinion. A licensee's reputation can be damaged by e-banking services that are poorly executed or otherwise alienate customers and the public. It is important that customers understand what they can reasonably expect from a product or service and what special risks and benefits they incur when using the system. Customer education along with formal incident response and management procedures can help lessen reputation risk.

(6) Legal Risk is the risk to earnings or capital arising from violations of, or nonconformance with, laws, rules, regulations, or ethical standards. The need to ensure consistency between paper and electronic advertisements, disclosures, and notices increases the potential for legal violations. Regular monitoring of the licensee's websites will help ensure compliance with applicable laws, rules, and regulations (The Central Bank of The Bahamas, 2006 pp.3-5).

3.6.3 Risk management

Risk management is the ongoing process of identifying, measuring, monitoring, and managing potential risk exposure. With respect to electronic delivery and payment systems, the process should encompass all significant operational, legal, and reputation risk areas (Federal Deposit Insurance Corporation, 1998 pp.9).

In order to mitigate the risks associated with all e-banking businesses, banks should have in place a comprehensive risk management process that assesses risks, controls risk exposure, and monitors risks. This comprehensive risk management framework should be integrated into the bank's overall risk management framework. The risk management process should be supported by appropriate oversight by the board of Directors and senior management and carried out by staff with the necessary knowledge and skills to deal with the technical complexities of new e-banking developments (Central Bank of Nigeria, 2003 pp.10-11)

3.6.4 Principles for managing risk in electronic banking

Therefore the Electronic Banking Group of the Basel Committee on Banking Supervision identifies 14 key risk management principles for e-banking table (3.3). Banks and their supervisors should consider these principles when formulating risk management policies and processes for electronic activities

Table 3.3: Principles for managing risks in online banking

	Principle For Managing Risks	Description
1	**Management oversight:**	**Effective management oversight of the risks associated with e-banking needs to be in place, and e-banking risk management should be integrated with overall risk management.**
2	**Management of outsourcing and third party dependencies:**	**Comprehensive, well-defined, ongoing oversight is needed for managing outsourced relationships and third party dependencies supporting e-banking, including adequate prior due diligence.**
3	**Segregation of duties:**	**Appropriate measures are needed to ensure proper segregation of duties in e-banking systems, databases, and applications.**
4	**Proper authorization measures and controls in systems, databases, and applications:**	**Appropriate authorization measures and proper controls need to be in place for e-banking systems, databases, and applications.**
5	**Clear audit trail for e-banking transactions:**	**A clear audit trail is needed for all e-banking transactions.**
6	**Authentication of all entities,**	**Banks should authenticate the identity**

	counterparts, and data:	**and origin of all entities, counterparts, and data transmitted over the Internet.**
7	**Non-repudiation (accountability) for e-banking transactions:**	**Non-repudiation should be ensured to hold users accountable for e-banking transactions and information.**
8	**Comprehensive security control:**	**Banks should ensure the appropriate use of activities and properly safeguard the security of e-banking assets and information.**
9	**Integrity of transactions, records, and information:**	**Banks should prevent unauthorized changes to and ensure the reliability, accuracy, and completeness of e-banking transactions, records, and information.**
10	**Appropriate disclosure:**	**To avoid legal and reputation risks, including for cross-border activities, banks should have adequate disclosure for e-banking services.**
11	**Confidentiality and privacy of customer information:**	**The confidentiality of customer information and adherence to customer privacy requirements should be ensured.**
12	**Business continuity and contingency plans to ensure the availability of systems and services:**	**Plans should ensure that e-banking systems and services are available to customers, internal users, and outsourced service providers when needed.**
13	**Incident response planning:**	**Incident response plans should be in place to manage and minimize problems arising from unexpected events including internal and external attacks that hamper the provision of e-banking systems and services.**

14	**Role of supervisors:**	**Bank supervisors should assess banks management structures, practices, internal controls, and contingency plans for e-banking**

Source: Electronic Banking Group of the Basel Committee on Banking Supervision

3.6.5 Customer security and education

An important aspect of customer security and risk management is customer education. Therefore, banks should pay special attention to the provision of easy-to-understand and prominent advice to their customers on e-banking security precautions. Bank suggests the use of multiple channels, such as websites, messages printed on customer statements, promotional leaflets, or even direct staff communication with customers, to reinforce certain key precautionary measures.

Security precautionary advice for customers should cover, at a minimum, the following issues:-

• Password and user ID selection and protection;

• Customers should be reminded not to disclose their personal information to unauthorized persons or to any doubtful websites; and

• Reminders not to access e-banking services through public or shared computers (Claessens, Glaessner & Klingebiel, 2002).

3.6.6 Cross boarder electronic banking activities

Before engaging in cross-border e-banking transactions, banks should ensure that adequate information is disclosed on their websites to allow potential customers to make a determination of the bank's identity, home country, and

whether it has the relevant regulatory license(s) before they establish the business relationship. This information will improve transparency and minimize legal and reputation risk associated with cross border e-banking activities (The Central Bank of The Bahamas, 2006 pp.9-10).

3.6.7 Legal Issues

A. Banks are obliged not only to establish the identity of their Customers but also enquire about their integrity and reputation. To this end, accounts should be opened only after proper introduction and physical verification of the identity of the customer.

B. Digital signature should not be relied on solely as evidence in e-banking transactions.

C. There is an obligation on banks to maintain secrecy and confidentiality of customer's accounts. In e-banking scenario, there is the risk of banks not meeting the above obligation. Banks may be exposed to enhanced risk of liability to customers on account of breach of secrecy, denial of service etc because of hacking /other technological failures. Banks should, therefore, institute adequate risk control measures to manage such risks.

D. Banks should protect the privacy of the customer's data by ensuring:

i. that customer's personal data are used for the purpose for which they are compiled.

ii. Consent of the customer must be sought before the Data is used

iii. Data user may request, free of cost for blocking or rectification of inaccurate data or enforce remedy against breach of confidentiality

iv. Strict criminal and pecuniary sanctions are imposed in the event of default.

E. In e-banking, there is very little scope for the banks to act on stop payment instructions from the customers. Hence, banks should clearly notify the customers the time frame and the circumstances in which any stop-payment instructions could be accepted.

F. While recognizing the rights of consumers under, banks engaged in e-banking should endeavor to insure themselves against risks of unauthorized transfers from customers account's, through hacking, denial of services on account of technological failure etc, to adequately insulate themselves from liability to the customers.

G. Agreements reached between providers and users of e-banking products and services should clearly state the responsibilities and liabilities of all parties involved in the transactions (Central Bank of Nigeria, 2003 pp.10)

3.7 SUMMARY

Technological developments in the telecommunication and information technology industry have lead to the electronic innovation in banking with the introduction of the ATM in 1970s.

The transition to the virtual banks is divided into four stages:

1- ATM and Telephone banking
2- The emergence of PC and online services
3- E-Cash
4- Internet

The electronic payment systems like the traditional system must complete the same general steps within the payment cycle to reach finality.

The electronic payment systems can be classified into three groups:

- payment through an intermediary
- payment based on EFT
- payment based on electronic currency

The environment for electronic banking is influenced by many factors:

- evolution of the financial and retail sectors
- level of financial literacy
- regulatory and policy environment
- telecommunication
- electronic security and privacy
- contract enforcement
- financial and market infrastructure
- consumer protection

The use of electronic channels to deliver products and services introduces many risks that can affect the success of the system. Therefore the electronic banking group of Basel committee on banking supervision identifies 14 key risk management principles for e-banking

CHAPTER FOUR
RESEARCH METHODOLOGY

4.1 INTRODUCTION

4.2 RESEARCH PUPROSE

4.3 RESEARCH APPROCH

4.4 RESEARCH STRATEGY

4.5 TARGET POPULATION

4.6 DATA COLLECTION

4.7 DATA ANALYSIS

4.8 DATA MEASURMENT

4.9 EVALUATION OF THE RESEARCH

4.10 SUMMARY

4.1 INTRODUCTION:

The following chapter in methodology will define different research method used in this study and explain the chosen methods. It will further describe the research purpose, research strategy and data collection method and analysis approach. Furthermore, this chapter describes the way the data for the study has been collected and techniques used to analyze the data. In addition, the issue of the reliability and validity of the presented study is discussed

4.2 RESEARCH TECHNIQUES:

There are several techniques which could be used to carry out the research based on research problem area. When dealing with research problem, one can choose any of the three classification of research (Yin, 1994)

- Exploratory
- Explanatory
- Descriptive

Exploratory: is often conducted when problem is not well known or it has not been clear defined as yet, or its real scope is as yet unclear (Yin, 1994).

Descriptive approach: is used to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a situation (Yin, 1994).

My research purpose and research question reveal that this study is mainly exploratory because the data has been collected through questionnaires and conducted case study to explore the success and obstacles factors that affect the readiness for e-banking adoption in the Palestinians` banks.

Explanatory: this is a research type in which the primary goal is to understand the nature or mechanisms of the relationships between the independent and dependant variables. This approach used when it's necessary to show that one variable causes or determines the values of other variable (zikmund, 1994).

4.3 RESEARCH APPROACH:

There are two basic types of research approaches, qualitative and quantitative. In the quantitative approach, results are based on numbers and statistics that are presented in figures, whereas in the qualitative approach where focus lies on describing an event with the use of words.

In this thesis, different factors which have been emerged from literature review are tested in an empirical way in order to see that how much they have been effective in the adoption process. Since all the results presented in numbers and statistical analysis has been done, quantitative approach is seen as being appropriate for this study.

4.4 RESEARCH STRATEGY:

Research strategy is a general plan which shows that how this research will go and how researcher will answer the questions that has been set by the researcher. It will contain clear objectives, derived from research question specify the source from which researcher intend to collect data and consider the constraints that researchers will inevitably have such as access to data, time, location and money (saunders al et., 2000).

Table 4.1 relevant situations for different research strategy

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)

Since this thesis aims to find out the factors that influence the adoption of electronic banking services, the strategy, which suits for this study, is a

survey. Survey is a technique in which information is collected from a sample of people through a questionnaire (zikmund, 1994).

4.5 TARGET POPULATION:

The aim of this research is to investigate the readiness of the Palestinians` banking systems to adopt the e-banking system by study the effective success and obstacle factors which took places at the technology and information system departments in the thirteen banks operate in Gaza are targeted, and due to the small size of the target population the census method will be used to collect the data from the thirteen bank operate in Gaza strip.

4.6 DATA COLLECTION:

This thesis is based on both secondary and primary data.

4.6.1 Secondary Data In The Research:

Most of the secondary data that have been used in the theoretical chapters have been obtained from different resources such as: books, journals, articles published free on the internet, thesis and dissertation available at the university library or from online libraries of other universities, papers from online database resources and surfing the banks` website for obtaining information about the different features of the services and products introduces

4.6.2 Primary Data In The Research:

The questionnaire survey was chosen as the main method for primary data collection.

4.6.2.1 Pilot Study:

It is customary practice that the survey instrument should be piloted to measure its validity and reliability and test the collected data. The pilot study was conducted by distributing the prepared questionnaire to panels of experts having experience in the same field of the research to have their remarks on the questionnaire.

Eight expert representing two panels were contacted to assess the questionnaire validity. The first panel, which consisted of six experts from the faculty of commerce in the Islamic university, was asked to verify the validity of the questionnaire topics and its relevance to the research objective. The second panel, which consisted of two experts in statistics, was asked to identify that the instrument used was valid statistically and that the questionnaire was designed well enough to provide relations and tests among variables.

Expert comments and suggestions were collected and evaluated carefully. All the suggested comments and modifications were discussed with the study's supervisor before taking them into consideration. At the end of this process, some minor changes, modifications and additions were introduced to the questions and the final questionnaire was constructed.

4.6.2.2 Questionnaire Design and Content

According to the review of literature and after interviewing experts who were dealing with the subject at different levels, all the information that could help in achieving the study objectives were collected, reviewed and formalized to be suitable for the study survey and after many stages of brain storming, and reviewing executed by the researcher with the supervisor, a questionnaire was developed with closed and open-ended questions.

The questionnaire was designed in the Arabic language as most members of the target population were unfamiliar with the English language and to be more understandable. An English version was attached in (Appendix B). Unnecessary personal data, complex and duplicated questions were avoided. The questionnaire was provided with a covering letter which explained the purpose of the study, the way of responding, the aim of the research and the security of the information in order to encourage high response.

The questionnaire design was composed of three sections to accomplish the aim of the research, as follows

1. The first section contained two parts, A. Background Information
2. The Candidate and the bank and B. the Bank's website.
3. The second section is about Success Factors For E-Banking Adoption included six fields as follows:

- The first field contained information about Security Availability.
- The second field contained information about Customer Support.
- The third field contained information about Ease of Use.
- The fourth field contained information about Convenience.

- The fifth field contained information about Advertisement.
- The sixth field contained information about Usefulness.

The third section is about Obstacles Factors In E-Banking Adoption included three fields as follows

- The seventh field contained information about Expensive Cost.
- The eighth field contained information about Acceptance from Customers.
- The ninth field contained information about Lack of Security.
- The tenth field contained information about Appropriate Environment.

4.7 DATA ANALYSIS:

To achieve the research goal, researcher used the statistical package for the social science (SPSS) for manipulating and analyzing the data. The research utilizes the following statistical tools:

1- Frequencies and Percentile

2- Alpha-Cronbach Test for measuring reliability of the items of the questionnaires

3- Spearman correlation coefficients for measuring validity of the items of the questionnaires.

4- Spearman–Brown Coefficient

5- Sign test

4.8 DATA MEASURMENT

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 and not others. In this research, ordinal scales were used. Ordinal scale is a ranking or a rating data that normally uses integers in ascending or descending order. The numbers assigned to the agreement or degree of influence (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 (Naoum, 1998). Based on Likert scale we have the following:

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

2	Item	No	Low	Medium	Always	Very always
	Scale	1	2	3	4	5

4.9 EVALUATION OF THE RESEARCH:

Selection of a research instrument affects the validity and reliability of the research, in the following two sections the research will be evaluated based on the validity and reliability of the questionnaire that used as a research instrument.

4.9.1 Validity of the Questionnaire:

Validity refers to the degree to which an instrument measures what it is supposed to be measuring (Pilot and Hungler, 1985). Validity has a number of different aspects and assessment approaches. There area two ways to evaluate instrument validity: content validity and statistical validity, which include criterion-related validity and construct validity.

4.9.1.1 Content Validity of the Questionnaire:

Content validity test was conducted by consulting two groups of experts. The first was requested to evaluate and identify whether the questions agreed with the scope of the items and the extent to which these items reflect the concept of the research problem. The other was requested to evaluate that the instrument used is valid statistically and that the questionnaire was designed well enough to provide relations and tests between variables. The two groups of experts did agree that the questionnaire was valid and suitable enough to measure the concept of interest with some amendments.

4.9.1.2 Statistical Validity of the Questionnaire

To insure the validity of the questionnaire, two statistical tests should be applied. The first test is Criterion-related validity test (spearman test) which measures the correlation coefficient between each item in the field and the whole field. The second test is structure validity test (spearman test) that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one filed and all the fields of the questionnaire that have the same level of similar scale.

4.9.1.2.1 Criterion Related Validity:

Internal consistency of the questionnaire is measured by finding the correlation coefficients between each paragraph in one field and the whole filed. Tables (4.2-4.11) (Appendix A) shows the correlation coefficient and the p-value for each field items. As show in the table the p-Values are less than 0.05 or 0.01, so the correlation coefficients of this field are significant at $\alpha = 0.01$ or $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

4.9.1.2.1 Structure Validity of the Questionnaire

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one filed and all the fields of the questionnaire that have the same level of liker scale.

As shown in table 4-12 (Appendix A) , the significance values are less than 0.05 or 0.01, so the correlation coefficients of all the fields are significant at $\alpha = 0.01$ or $\alpha = 0.05$, so it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the study

4.9.2 Reliability of the Research

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

4.9.2.1 Half Split Method

This method depends on finding Pearson correlation coefficient between the means of odd rank questions and even rank 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 corrected correlation coefficient (consistency coefficient) is computed according to the following equation:

Consistency coefficient = 2r/(r+1), where r is the Pearson correlation coefficient.

The normal range of corrected correlation coefficient (2r/ r+1) is between 0.0 and + 1.0 As shown in Table 4-13 (Appendix A), all the corrected correlation coefficients values are between 0.7843 and 0.8780 and the significant (α) is less than 0.05 so all the corrected correlation coefficients are significance at α = 0.05. It can be said that according to the Half Split method, the dispute causes group are reliable.

4.9.2.2 Cronbach's Coefficient Alpha

This method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire. The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. As shown in Table 4.14 (Appendix A) the Cronbach's coefficient alpha was calculated for the first field of the causes of claims, the second field of common procedures and the third field of the Particular claims. The results were in the range from 0.8127 and 0.9245. This range is considered high; the result ensures the reliability of the questionnaire.

4.10 SUMMARY:

Several data collection and analysis methodologies that can be used for research was examined, among them questionnaire survey was selected an appropriate tool for satisfying this research objectives. The questionnaire was designed, tested and distributed on technology and information departments in the 13 banks operate in Gaza strip 30 questionnaire were retrieved giving a net response rate of (86%).

The validity and reliability of the research were discussed at the end of this chapter while result and their interpretations will be discussed in the next chapter.

CHAPTER FIVE

DATA ANALYSIS OF RESEARCH RESULTS

5.1 INTRODUCTION

5.2 ANALYSIS AND INTERPRETATION OF THE DATA

5.3 TEST OF HYPOTHSES

5.1 INTRODUCTION:

In this chapter the analysis and the interpretations of the data collected by the questionnaire will be presented first, while the hypotheses testing will be represented at the end of the chapter

5.2 ANALYSIS AND INTERPRETATION OF THE DATA:

This section represents the outcome of the analysis and the interpretation of the data collected by the questionnaire along with other related surveys. As described in the previous chapter the questionnaire has been structured in three parts: a) characteristics of the respondents, their banks and Bank's website; b) the success factors for e-banking adoption; c) the obstacles factors for e-banking adoption.

5.2.1 Characteristics of The Respondents and Their Banks

5.2.1.1 Respondent Characteristics and their banks

1 - Position/Title:

Table 5-1 shows that 13.3% of the respondents` works as a manager, and 16.7% works as assistance managers, and 33.3% works as a post department, and 36.7% works as other positions

Table 5.1: Position/Title

Position/Title	Frequency	Percent
Manager	4	13.3
Assistant manager	5	16.7
Post of department	10	33.3
Others	11	36.7
Total	30	100.0

2-Highest educational degree held:

Table 5-2 shows that 26.7% of the respondents` highest educations are masters' degree, and 70.0% holds bachelors degree, and 3.3% are diploma or less.

Table 5.2: Highest educational degree held

Highest educational degree held	Frequency	Percent
Doctorate	0	0
Masters degree	8	26.7
Bachelors degree	21	70.0
Diploma or less	1	3.3
Total	30	100.0

3-Total year of experience in this field

Table 5-3 shows that 43.3% of the respondents` total year of experience are less than 5 years, and 26.7% of them have a total year of experience between 5-10 years, and 30.0% of the respondents` total years of experience are more than 10 years.

Table 5.3: Total year of experience in this field

Total year of experience in this field	Frequency	Percent
Less than 5 years	13	43.3
5-10 years	8	26.7
More than 10 years	9	30.0
Total	30	100.0

4-Your bank's total assets are

Table 5-4 shows that 56.7% of the total assets are Less than $200 million and 16.7% of the total assets are between $200 million to $500 million, and 26.7% of the total assets are More than $500 million

Table 5.4: Your bank's total assets are

Your bank's total assets are	Frequency	Percent
Less than $200 million	17	56.7
Between $200 million to $500 million	5	16.7
More than $500 million	8	26.7
Total	30	100.0

5-Your bank's total deposits

Table 5-5 shows that 53.3% of bank's total deposits are Less than $200 million and 16.7% of bank's total deposits are between $200 million to $500 million, and 30.0% of bank's total deposits are more than $500 million

Table 5.5: Your bank's total deposits

Your bank's total deposits are	Frequency	Percent
Less than $ 200 million	16	53.3
Between $ 200 million to $ 500 million	5	16.7
more than $ 500 million	9	30.0
Total	30	100.0

6- Your bank's credit facilitations and loans

Table 5-6 shows that 63.3% of the bank's credit facilitations and loans are less than $100 million, and 16.7% of the bank's credit facilitations and loans are between $100 million to $250 million, and 20% of the bank's credit facilitations and loans are more than $250 millions

Table 5.6: **Your bank's credit facilitations and loans**

Your bank's credit facilitations and loans are	Frequency	Percent
Less than $ 100 million	19	63.3
Between $ 100million to $ 250 million	5	16.7
More than $ 250 million	6	20.0
Total	30	100.0

7- Your bank's capital used in financing the e-banking services and products from the bank's total capital

Table 5-7 shows that 80.0% of the bank's capital used in financing the e-banking services and products from the bank's total capital are less than 10%, and 13.3% of the bank's capital used in financing the e-banking services and products from the bank's total capital are from 10% - 30 %, and 6.7% of the bank's capital used in financing the e-banking services and products from the bank's total capital are from 30% - 70 %.

Table 5.7:
Bank's capital used in financing the e-banking services and products from the bank's total capital

bank's capital used in financing the e-banking services and products from the bank's total capital	Frequency	Percent
less10 %	24	80.0
10% - 30 %	4	13.3
30% - 70 %	2	6.7
More than 70%	0	0.0
Total	30	100.0

5.2.1.2 General information about the Bank's website

8- Does the bank have a website? If the answer is yes answer the following questions

Table 5-8 shows that 67.7% of the respondents agree that their banks have a website, and 23.3% agrees that their banks have no website

Table 5.8:
The availability of web site for the bank

Does the bank have a website? If the answer is yes answer the following questions	Frequency	Percent
Yes	23	76.7
No	7	23.3
Total	30	100.0

9- How many times the website visited daily

Table 5-9 shows that 13.3% of the respondents agree that the website visited daily from 1-3 times, and 56.7% agree that the website visited daily from 4-7 times, and 3.3% agree that the website visited daily from 8-10 times.

Table 5.9:
Number of times the website visited daily

How many times the website visited daily	Frequency	Percent
1-3 times	4	13.3
4-7 times	17	56.7
8-10 times	1	3.3
More than 10 times	0	0.0
Total	22	73.3

10- To which age do most of the e-banking customers belong?

Table 5-10 shows that 13.3% of the respondents agree that most of the e-banking customers belong 18-25 years, and 56.7% agrees that most of the e-banking customers belong 26-40 years, and 3.3% agrees that most of the e-banking customers belong 40-65 years

Table 5.10:
Ages of most of the e-banking customers

To which age does most of the e-banking customers belong	Frequency	Percent
18-25 years	4	13.3
26-40 years	17	56.7
40-65 years	1	3.3
More than 65 years	0	0.0
Total	22	73.3

11-Which service and product is the most accepted by the bank's customers

Table 5-11 shows that 46.7% of the respondents agrees that the most service and product accepted by the bank's customers are ATM, and 3.3% agrees that the most service and product accepted by the bank's customers are SMS, and 3.3% agrees that the most accepted service and product by the bank's customers are Mobile phone, and 16.7% agree that the most service and product by the bank's customers are electronic cards, and 3.3% agree that the most accepted service and product by the bank's customers are internet and 3.3% agree that the most accepted service and product by the bank's customers are other things such as website**.**

Table 5.11:
Most accepted service and product by the bank's customers

11-Which service and product is the most accepted by the bank's customers	Frequency	Percent
ATM	14	46.7
SMS	1	3.3
Mobile phone	1	3.3
electronic cards (visa, credit …etc)	5	16.7
Internet	1	3.3
Other	1	3.3
Total	23	76.7

12. When did the bank's website become active?

Table 5-12 shows that 33.3% of the respondents agrees that the bank's website become active from less than 5 years, and 36.7% agrees that the bank's website become active since 5-10 years, and 3.3% agrees that the bank's website become active from more than 10 years

Table 5.12:
First time the web site become active

When did the bank's website become active	Frequency	Percent
Less than 5 years	10	33.3
5-10 years	11	36.7
More than 10 years	1	3.3
Total	22	73.3

5.2.2 Success Factors for E-Banking Adoption

This section represents the outcome of the analysis for the success factors for the data colleted by the questionnaire.

A. Security Availability

Table 5-13 shows the findings of this section which investigated the security availability in the banks` e-banking services.

Table 5.13:
The sign test to the items of the field of (Security Availability)

Security Availability	Negative sign (Disagree and Highly Disagree)	Neutral	Positive sign Agree and Highly Agree	mean	Weight Mean	sig	Rank
13- The bank provide maintenance (updating and/or changing information) to the e-banking services	4	4	22	3.87	77.33	0.001	5
14- Is the banks` website reviewed internally	5	6	19	3.67	73.33	0.007	6
15- Is the banks` ATM had been audited internally	1	1	28	4.50	90.00	0.000	2
16- Does the bank provide a virus protection software on it's server and workstation	0	0	30	4.53	90.67	0.000	1
17- Does the management keep up-to-date on addressing newly disclosed security to the computer operating system and application software	0	0	30	4.47	89.33	0.000	3
18- Does the bank warn users to avoid using an easy password that can be sensitive	1	7	22	4.00	80.00	0.000	4

19- Does the bank introduce the feature of (access restricted) after limited times of unsuccessful password entry attempt	1	1	28	4.47	89.33	0.000	3
20- Which of the following process the bank use to identify it's customers:							
- Finger print	9	18	3	3.83	76.67	0.146	1
- ID #	5	7	18	3.67	73.33	0.011	2
- Digital signature	6	17	7	3.03	60.67	1.000	3
All items	3	0	27	4.00	80.07	0.000	

In general the results for all statements of the field shows that the average mean equal 4.00 and the weighted mean equal 80.07% which is greater than "60%" and the number of positive signs are greater than the negative signs and the p-value equal 0.000 which is less than 0.05, which means the respondents of the sample agrees that the Security Availability is an important factor in adopting e-banking and they agree about the average of security availability in their banks. This finding was consistent with the findings of Khalfan and others (2006) who found security is the one of the most important factors influencing the adoption of internet banking in Oman with a mean of 4.04. Security is perhaps the most feared problem on the internet. Banks and customers take a very high risk by dealing electronically.

Also the findings of kerem (2003) rank higher privacy as the second important factor that affect the decision to adopt internet banking by customers with a percentage of 21.4% extremely important factor chosen by (952 respondents).

B. Customer Support

Table 5-14 shows the findings of this section which investigated the customer support as a success adoption factor

Table 5.14

The sign test to the items of the field of (Customer Support)

Customer Support	Negative sign (Disagree and Highly Disagree0	Neutral	Positive sign Agree and Highly Agree	Mean	Weight Mean	Sig	Rank
21- The management of the bank provide training courses in how to use the system for their customers	18	10	2	2.13	42.67	0.000	6
22- Banks` customers can have more than one account for the same service	18	4	8	2.27	45.33	0.078	5
23- Banks` customers can use the same account for more than one services	4	6	20	3.87	77.33	0.002	2
24- The bank introduce a brochures or instruction manual in how to use the service helping their customers	4	4	22	3.87	77.33	0.001	2
25- The bank provide the possibility to recover passwords rather than create a new account if it lost	15	8	7	2.43	48.67	0.134	4
26- Does the ability for change any personal information are accessible easily for customers without going through the registration process	12	3	15	2.97	59.33	0.700	3
27- Are customers given a complete and transparent review of the cost associated with the use of the payment system	6	6	18	3.70	74.00	0.023	1
All items	15	0	15	3.03	60.67	0.990	

According to the analysis the most common way used in providing customer support is by giving customers a complete and transparent review of the cost

associated with the use of the chosen payment systems, secondly providing the feature of using the same account for more than one service and introducing a brochures or instruction manual in how to use the service to help customers have the same important percentage, the least common ways in providing customer support are: provide training courses in how to use the system for the banks` customers, banks` customers can have more than one account for the same service, providing the possibility to recover passwords rather than create a new one if it lost and finally provide the ability to change any personal information are accessible easily for customers without going through the registration process.

In general the results for all statements of the field show that the average mean equal 3.03 and the weighted mean equal 60.67 % and the sig equal 0.990 which is greater than 0.05, which means the respondents of the sample agrees that Customer Support provided by banks are not good enough to adopt e-banking services. This finding was consistent with the findings of Khalid and others (2006) with a mean equal to 2.6623 the difference in the mean was because of the 208 respondent used in Khalid research.

C- Ease of Use

Table 5-15 shows the findings of this section which investigated the ease of use as another success factor

Table 5.15:
The sign test to the items of the field of (Ease of Use)

Ease Of Use	Negative sign (Disagree and Highly Disagree)	Neutral	Positive sign Agree and Highly Agree	mean	Weight Mean	Sig	Rank
28- The management of the bank provide training courses for it's stuff when introducing new services	1	8	21	4.10	82.00	0.000	2
29- The difficulty in new technology decrease the acceptance from customers	10	12	8	2.87	57.33	0.815	7
30- The user interface is easily used	1	9	20	3.83	76.67	0.000	5
31- the user interface is of a familiar payment application	1	13	16	3.63	72.67	0.000	6
32- Does the bank determine the amount of money customer can (withdraw/pay) when using e-banking services	1	5	24	4.30	86.00	0.000	1
33- Has management established a program and/or procedure for customer support and supply	4	6	20	3.83	76.67	0.002	4
34-Has management established a program and/or procedure for customer demand and complaints	4	2	24	3.90	78.00	0.000	3
All items	2	0	28	3.78	75.62	0.000	

According to the table banks provide different ways in making the use of e-banking services easy and acceptable ranked from 1 as the most common way used to 6 as the least common way.

For general the results for all statements of the field show that the average mean equal 3.78 and the weighted mean equal 75.62% which is greater than "60%" and the number of positive signs are greater than the negative signs and the p-value equal 0.000 which is less than 0.05, which means that the respondents of the sample agrees that Ease

Of Use is a good factor in measuring the ability to adopt e-banking and banks in Palestine provide the best ways to make the e-banking services and products easily used by their customers also the study of Khalid and others (2006) support the finding of our study by having a mean equal to 3.1923 which show that there is a clear agreement about the importance of making the e-service easily used, also the support for this result is in line with the result found by Hoppe and others (2001) that suggest that the more complex a new technology is perceived to be, the less likely it is that it will be adopted and in this research suggest that the more ease of use the e-banking service the more likely to be adopted.

D- Convenience

Table 5-16 shows the findings of this section which investigated the convenience as another success factor

Table 5.16;
The sign test to the items of the field of (Convenience)

Convenience	Negative sign (Disagree and Highly Disagree)	Neutral	Positive sign Agree and Highly Agree	mean	Weight Mean	Sig	Rank
35- Are links checked for accuracy and functionality	1	5	24	4.23	84.67	0.000	3
36- Are interactive programs checked for accuracy and functionality	0	4	26	4.30	86.00	0.000	2
37- When using an electronic form of payment does the bank provide the function of attach invoices, bills , etc..	7	7	16	3.33	66.67	0.093	6
38- Is the function of multiple (batch) payments (executing several payments at once) available	7	5	18	3.50	70.00	0.043	5

39- Does bank provide the ability to cancel a payment any time before committing to it	2	6	22	4.07	81.33	0.000	4
40- Banks` customers have the ability to find out at any moment how much money they have	2	2	26	4.37	87.33	0.000	1
41- Banks` customers can access any time to the service which have an account on it	3	4	23	4.07	81.33	0.000	4
All items	4	0	26	3.98	79.62	0.000	

In general the results for all statements of the fields showed that the average mean equal 3.98 and the weighted mean equal 79.62% which is greater than "60%" and the number of positive signs are greater than the negative signs and the sig equal 0.000 which is less than 0.05, which means that the respondents of the sample agrees that the Convenience is a good indicator as a good adoption factor used by banks, these finding are supported a line with the result found by kerem (2003) which imply that the most important factors in starting to use Internet banking are first and foremost better access to the services (convenience), with a percentage of 29.9% chosen by (952 respondents).

Table 5-16 also illustrate the different items used to test the convenience factor by rank them according to the most used way from 1 to 6

E- Advertisement

Table 5-17 shows the findings of this section which investigated advertisement as another success factor

Table 5.17:
The sign test to the items of the field of (Advertisement)

Advertisement	Negative sign (Disagree and Highly Disagree)	Neutral	Positive sign Agree and Highly Agree	Mean	Weight Mean	Sig
42- How important are the following factors bank use to advertise for it's new products and service						
- Advertising on the net	7	10	13	3.43	68.67	0.263
- Conventional news media	3	3	24	4.17	83.33	0.000
- Banks publications	1	7	22	4.17	83.33	0.000
-Others (specify)	0	19	11	3.53	70.67	0.001
43- Using of different advertisement styles increases the acceptance of e-banking service by customers	0	10	20	4.03	80.67	0.000
44- How important are the following factors bank use to prompt customers to use it's e-banking products and services						
- Not having to carry and handle cash	1	12	17	3.83	76.67	0.000
- Easy and safe payment	2	8	20	3.87	77.33	0.263
- Protect from theft or losing	2	4	24	4.17	83.33	0.000
All items	4	0	26	3.90	78.00	0.000

In general the results for all statements of the fields showed that the average mean equal 3.90 and the weighted mean equal 78.00% which is greater than "60%" and the number of positive signs are greater than the negative signs and the sig equal 0.000 which is less than 0.05, which means the respondents of the sample agrees that the Advertisement is an important success factor that affect the adoption and were agreed about its importance with a mean of 3.90 this result is agreed with the findings of Khalfan, and others (2006) the result

indicate that using of traditional way of marketing when adopting the e-banking may considered as a potential barriers

F- Usefulness

Table 5-18 shows the findings of this section which investigated usefulness as another success factor

Table 5.18:

The sign test to the items of the field of (Usefulness)

Usefulness	Negative sign Disagree and Highly Disagree	Neutral	Positive sign Agree and Highly Agree	Mean	Weight Mean	Sig
45- Reasons behind introduction of e-banking services where						
- Because of competition	0	4	26	4.27	85.33	0.000
- Retain customers	0	3	27	4.33	86.67	0.000
- Customers` request	1	9	20	3.77	75.33	0.000
- Time saving	0	4	26	4.27	85.33	0.000
- Convenience	1	6	23	3.97	79.33	0.000
- Profit	3	10	17	3.57	71.33	0.003
- Improve bank image	1	1	28	4.67	93.33	0.000
- Connecting with global banks	0	2	28	4.47	89.33	0.000
- Eliminate geographical barriers	1	2	27	4.27	85.33	0.000
- Quality services	0	3	27	4.43	88.67	0.000
- Other (explain)	0	21	9	3.43	68.67	0.004
46- E-banking services eliminate the burden of paper usage	2	0	28	4.23	84.67	0.000
47- The productivity of your bank has increased since you introduce e-banking	0	4	26	3.90	78.00	0.000
48- Testing done with employees before offering the service to the public	0	3	27	4.17	83.33	0.000
49- E-banking training provided to other officers and employees of the bank	1	9	20	3.87	77.33	0.000
All items	4	0	26	4.11	82.13	0.000

In general the results for all statements of the fields showed that the average mean equal 4.11 and the weighted mean equal 82.13% which is greater than " 60%" and the number of positive signs are greater than the negative signs and the sig equal 0.000 which is less than 0.05, which means the respondents of the sample agrees that Usefulness is a good factor to measure the success of e-banking adoption, the support of this factor is in line with the result found by Hoppe and others (2001) This shows quiet conclusively that across different populations, perceived relative advantage has a positive influence on the adoption of Internet Banking and that Internet users who feel that Internet banking is compatible with their values are more inclined to adopt.

Note : the Technology Acceptance Model defined perceive advantage as the perceived usefulness.

Finally Table 5-19 shows the result of the importance of the success factors

Table 5-19:
Success factors in e-banking adoption

Factor	Mean	Rank
Security availability	4.00	2
Customer support	3.03	6
Ease of use	3.78	5
Convenience	3.98	3
Advertisement	3.90	4
Usefulness	4.11	1

Usefulness is considered to be the first and most important factor with a mean equal “4.11” the second factor is security availability with a mean equal “4.00”, convenience ranked as the third important success factor with a mean equal to “3.98”, fourth important factors is advertisement with a mean equal to “3.90”, the fifth factor according to the importance is ease of use with a mean equal to “3.78” and finally the sixth and latest important factor is customer support with a mean equal to “3.03”.

5.2.3 Obstacles Factors In E-Banking Adoption

This section represents the outcome of the analysis for the obstacles factors for the data colleted by the questionnaire.

G- Expensive Cost

Table 5-20 shows the findings of this section which investigated the expensive cost as the first obstacle factor

Table 5.20:

The sign test to the items of the field of (Expensive Cost)

Expensive Cost	Negative sign Disagree and Highly Disagree	Neutral	Positive sign Agree and Highly Agree	Mean	Weight Mean	Sig
50- Does the bank conduct a formal risk assessment of e-banking products and services prior to it’s actual implementation	0	4	26	4.00	80.00	0.000
51- The high infrastructure cost decrease the ability to adopt e-banking	4	12	14	3.33	66.67	0.031
52- E-banking can help the bank offer more complex products of an equivalent	0	8	22	4.00	80.00	0.000

quality with lower costs to more potential customers						
53- The banks` operating and maintenance cost has been reduced since introducing e-banking	3	13	14	3.47	69.33	0.013
54- Return on investment justifications increase the ability to adopt e-banking	2	14	14	4.80	96.00	0.004
All items	**4**	**0**	**26**	**3.92**	**78.40**	**0.000**

In general the results for all statements of the field show that the average mean equal 3.92 and the weighted mean equal 78.40% which is greater than "60%" and the number of positive signs are greater than the negative signs and the sig equal 0.000 which is less than 0.05, which means the respondents of the sample agrees that Expensive Cost is an obstacle of adoption this finding is agreed with the result of Khalfan, and others (2006) that there is a High transaction fee for using e-commerce with a mean equal to 3.20, also the findings of daghfous and toufaily (2007) indicate that if the bank has the total capacity to recover the e-banking adoption cost the adopting will succeed.

H- Acceptance from Customers

Table 5-21 show the findings of this section which investigated acceptance from customers as an obstacle factor

Table 5.21:
The sign test to the items of the field of (Acceptance From Customers)

Acceptance From Customers	Negative sign Disagree and Highly Disagree	Neutral	Positive sign Agree and Highly Agree	mean	Weight Mean	Sig
55- The bank make efforts to understand customers` requirements on a regular basis	2	5	23	3.80	76.00	0.000
56- Does the bank create awareness of customers` products and services	0	5	25	4.13	82.67	0.000
57- The bank make a survey on the acceptance on it's e-banking products and services among it's customers	5	8	17	3.60	72.00	0.017
58- The trust of personal contact decrease the acceptance of e-banking	3	11	16	3.37	67.33	0.004
59- The lack of e-banking knowledge decrease the acceptance of it	3	12	15	3.60	72.00	0.008
All items	**5**	**0**	**25**	**3.70**	**74.00**	**0.001**

In general the results for all statements of the fields shows that the average mean equal 3.70 and the weighted mean equal 74.00% which is greater than "60%" and the number of positive signs are greater than the negative signs and the sig equal 0.001 which is less than 0.05, which means the respondents of the sample agrees that the Acceptance From Customers is good indicator for the success, this factor is supported by the findings of daghfous and toufaily (2007) which showed that the impact of the adoption of e-banking had a positive and significant correlation with the relation established with the customers and such an adoption shows that the bank is innovating and following the technological development and thereafter increasing the satisfaction of its customers and of its competitive advantages, this result is also agreed

with the findings of kerem (2003) which showed that better service (i.e. preferring self service over office service) was of above the average importance, in the same research the lack of personal contact considered as one of the main obstacles that can affect the adoption of e-banking

I- Lack of Security

Table 5-22 shows the findings of this section which investigated lack of security as an obstacle factor

Table 5.22:

The sign test to the items of the field of (Lack of Security)

Lack Of Security	Negative sign Disagree and Highly Disagree	Neutral	Positive sign Agree and Highly Agree	mean	Weight Mean	p-value
60- Is bank identified his responsibilities in the event of unauthorized access to their customers` account	1	9	20	3.83	76.67	0.000
61- The lack of e-commerce legislation decrease the ability to adopt e-banking	1	11	18	3.77	75.33	0.000
62- Privacy policy on the customers information are identified by the bank	1	5	24	4.17	83.33	0.000
63- Employees have to access to customers` passwords and information	21	7	2	1.83	36.67	0.000
All items	**9**	**0**	**21**	**3.40**	**68.00**	**0.045**

In general the results for all statements of the fields shows that the average mean equal 3.40 and the weighted mean equal 68.00% which is greater than "60%" and the number of positive signs are greater than the negative signs and the sig equal 0.045 which is less than 0.05, which means that the respondents of the sample agrees that there is Lack Of

Security which may affect the adoption of e-banking and be an important obstacle, this result is in a line with the findings of Khalfan, and others (2006) which indicate that the Security issues–(illegal use of computers) with a mean of 3.72 is an important e-banking adoption barrier, also the findings of Hoppe and others (2001) consider the need for secure transactions are critical to the success of e-banking.

J- Appropriate Environment

Table 5-23 shows the findings of this section which investigated lack of security as an obstacle factor

Table 5.23;

The sign test to the items of the field of (Appropriate Environment)

Appropriate Environment	Negative sign Disagree and Highly Disagree	Neutral	Positive sign Agree and Highly Agree	mean	Weight Mean	Sig
64- The fast spread of the internet increase the need for e-banking	2	3	25	4.23	84.67	0.000
65- The use of e-banking decreased time spent on banking	2	3	25	4.17	83.33	0.000
66- The number of your clients has increased since you introduced e-banking	1	9	20	3.80	76.00	0.000
67- IT personnel participate in training programs regarding e-banking	0	7	23	4.00	80.00	0.000
68- Management establish adequate procedure for monitoring and addressing customer problems regarding e-banking products and services	1	6	23	3.87	77.33	0.000
69- The monetary authority motivate banks to introduce e-banking through introduce the best requirements	4	8	18	3.47	69.33	0.004
70- Compatibility of IT planning with the bank strategy increase the ability to adopt e-banking	2	7	21	3.80	76.00	0.000
All items	6	0	24	3.90	78.10	0.002

In general the results for all statements of the fields shows that the average mean equal 3.90 and the weighted mean equal 78.10% which is greater than "60%" and the number of positive signs are greater than the negative signs and the sig equal 0.002 which is less than 0.05, which means the respondents of the sample agrees that Appropriate Environment is an important factor the affect the adoption and must measured perfectly, this finding is supported by the findings of Khalfan, and others (2006) which consider government support, as an important and should be emphasized and increased through a number of 'new' measures. Mowery and Rosenberg (1979) suggested that government policies that enhance the ability of organizations to compete in the marketplace have a strong positive influence on the technology developments. In the same research it was found that 'low level of existing software' with a mean value equal 3.44. It is widely believed that the technology is changing very rapidly, including both hardware and software. Also 'limited resources' considered to be another important factor It has been found in this study that the resources offered to the IT people can often be described as 'limited'. Resources can mean many things. For example, it could include, software, hardware, skilled IT manpower, the budget allocated for various educational and training programs, etc, this also agreed with the findings of Hoppe and others (2001) which stated that Facilitating conditions which refers to objective factors in the environment that make an act easy to perform. In terms of Internet usage this would refer to technological resources and infrastructure that are available. The findings of Aghdassi and others (2007) considered Organizational readiness and Infrastructural Readiness, that each of them can be

considered to be influencing in e-banking adoption, also in the research done by daghfous and toufaily (2007) the findings support the argument that a bank with a more developed technical infrastructure, such as a presence of telecommunication infrastructures, multimedia, networks, electronic platforms, a secured network architecture which enables communication with clients, secured partners and privacy, will more likely introduce e-banking services and products.

Finally Table 5-24 shows the obstacles that considered being a barrier in e-banking adoption.

Table 5.24:
Obstacles factor for e-banking adoption

Factor	Mean	Rank
Expensive cost	3.92	1
Acceptance from customers	3.70	3
Lack of security	3.40	4
Appropriate environment	3.90	2

The first one is expensive cost with a mean of "3.92", secondly appropriate environment with a mean equal to "3.90", the third obstacle according to the respondent is acceptance from customers with a mean equal to "3.70", the fourth and final barrier is lack of security with a mean equal to "3.40"

5.3 TEST OF HYPOTHESE

This section represents the outcome of the analysis for the research hypotheses.

5.3.1 The First Hypothesis

H1: There is a significant relation between availability of adoption factors and e-banking success.

This hypothesis can be divided to the following sub-hypotheses:

H1.a: there is a significant relation between security availability and electronic banking success at significant level 0.05.

To test this hypothesis we used a spearman test and the results are shown in table 5-25.

Table 5.25:
Correlation between security availability and electronic banking success

Spearman's rho	Analysis's	security availability
electronic banking success	Correlation Coefficient	0.756
	Sig. (2-tailed)	0.000
	N	30

The critical r value at degrees of freedom “28” and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.756 which is greater than the critical r value which is equal 0.361 at degrees of freedom "28", which mean we fail to reject the hypothesis so there is a significant relation between security availability and electronic banking success at significant level 0.05.

H1.b: there is a significant relation between customer supply and electronic banking success at significant level 0.05.

To test the hypothesis we used a spearman test and the results are shown in table 5-26.

Table 5.26:
Correlation between customer supply **and electronic banking success**

Spearman's rho	analysis's	customer supply
electronic banking success	Correlation Coefficient	0.655
	Sig. (2-tailed)	0.000
	N	30

The critical r value at degrees of freedom "28" and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.655 which is greater than the critical r value which is equal 0.361 at degrees of freedom "28", which mean we fail to reject the hypothesis so there is a significant relation between customer supply and electronic banking success at significant level 0.05.

H1.c: there is a significant relation between ease of use and electronic banking success at significant level 0.05

To test the hypothesis we used a spearman test and the results are shown in table 5-27

Table 5.27:
Correlation between ease of use **and electronic banking success**

Spearman's rho	analysis's	ease of use
electronic banking success	Correlation Coefficient	0.769
	Sig. (2-tailed)	0.000
	N	30

The critical r value at degrees of freedom "28" and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.769 which is greater than the critical r value which is equal 0.361 at degrees of freedom "28", which mean we fail to reject the hypothesis so there is a significant

relation between ease of use and electronic banking success at significant level 0.05.

H1.d: there is a significant relation between convenience and electronic banking success at significant level 0.05.

To test the hypothesis we used a spearman test and the results are shown in table 5-28.

Table 5.28
Correlation between convenience **and electronic banking success**

Spearman's rho	Analysis's	Convenience
electronic banking success	Correlation Coefficient	0.657
	Sig. (2-tailed)	0.000
	N	30

The critical r value at degrees of freedom "28" and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.657 which is greater than the critical r value which is equal 0.361 at degrees of freedom "28", which mean we fail to reject the hypothesis so there is a significant relation between convenience and electronic banking success at significant level 0.05.

H1.e: there is a significant relation between advertisement availability and electronic banking success at significant level 0.05.

To test the hypothesis we used a spearman test and the results are shown in table 5-29.

Table 5.29
Correlation between advertisement availability and electronic banking success

Spearman's rho	analysis's	advertisement availability
electronic banking success	Correlation Coefficient	0.684
	Sig. (2-tailed)	0.000
	N	30

The critical r value at degrees of freedom "28" and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.684 which is greater than the critical r value which is equal 0.361 at degrees of freedom "28", which mean we fail to reject the hypothesis so there is a significant relation between advertisement availability and electronic banking success at significant level 0.05.

H1.f: there is a significant relation between usefulness and electronic banking success at significant level 0.05.

To test the hypothesis we used a spearman test and the results are shown in table 5-30.

Table 5.30:
Correlation between usefulness **and electronic banking success**

Spearman's rho	analysis's	usefulness
electronic banking success	Correlation Coefficient	0.737
	Sig. (2-tailed)	0.000
	N	30

The critical r value at degrees of freedom "28" and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.737which is greater than the critical r value which is equal 0.361 at degrees of freedom"28", which mean we fail to reject the hypothesis so there is a significant relation between usefulness and electronic banking success at significant level 0.05.

5.3.2 The Second hypothesis

H2: There is a significant relation between determining obstacles factors and electronic banking success.

This hypothesis can be divided to the following sub-hypotheses:

H2.a: there is a significant relation between expensive cost and electronic banking success at significant level 0.05

To test the hypothesis we used a spearman test and the results are shown in table 5-31.

Table 5.31:
Correlation between expensive cost **and electronic banking success**

Spearman's rho	analysis's	expensive cost
electronic banking success	Correlation Coefficient	0.730
	Sig. (2-tailed)	0.000
	N	30

The critical r value at degrees of freedom "28" and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.730 which is greater than the critical r value which is equal 0.361 at degrees of freedom "28", which mean we fail to reject the hypothesis so there is a significant relation between expensive cost and electronic banking success at significant level 0.05.

H2.b: there is a significant relation between acceptance from customers and electronic banking success at significant level 0.05.

To test the hypothesis we used a spearman test and the results are shown in table 5-32.

Table 5.32
Correlation between acceptance from customers **and electronic banking success**

Spearman's rho	Analysis's	acceptance from customers
electronic banking success	Correlation Coefficient	0.694
	Sig. (2-tailed)	0.000

The critical r value at degrees of freedom "28" and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.694 which is greater than the critical r value which is equal 0.361 at degrees of freedom"28", which mean we fail to reject the hypothesis so there is a significant relation between acceptance from customers and electronic banking success at significant level 0.05.

H2.c: there is a significant relation between lack of security and electronic banking success at significant level 0.05.

To test the hypothesis we used a spearman test and the results are shown in table 5-33.

Table 5.33:
Correlation between lack of security **and electronic banking success**

Spearman's rho	Analysis's	lack of security
electronic banking success	Correlation Coefficient	0.540
	Sig. (2-tailed)	0.002
	N	30

The critical r value at degrees of freedom “28” and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.540 which is greater than the critical r value which is equal 0.361 at degrees of freedom "28", which mean we fail to reject the hypothesis so there is a significant relation between lack of security and electronic banking success at significant level 0.05.

H2.d: there is a significant relation between the appropriate environment and electronic banking success at significant level 0.05

To test the hypothesis we used a spearman test and the results are shown in table 5-34.

Table 5.34:
Correlation between appropriate environment and electronic banking success

Spearman's rho	Analysis's	appropriate environment
electronic banking success	Correlation Coefficient	0.798
	Sig. (2-tailed)	0.000
	N	30

The critical r value at degrees of freedom “28” and significant level 0.05 is equal 0.361

The result show that the spearman coefficient correlation equal 0.798 which is greater than the critical r value which is equal 0.361 at degrees of freedom "28", which mean we fail to reject the hypothesis so there is a significant relation between the appropriate environment and electronic banking success at significant level 0.05.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLOUSIONS

6.2 RECOMMENDATIONS

6.3 FUTURE RESEARCH

6.1 CONCLOUSIONS:

The main goal of this research is to answer the problem statement question which is: Does the Palestinian banking sector ready to adopt the electronic banking system? In order to answer the research problem we identify different factors that can affect the adoption of e-banking, these factors were extracted from related theories and literature review to adoption of new technology.

The findings of this research indicate that there are different success and obstacles factors which influence the adoption readiness these factors may differ from bank to bank and from place to place. These factors can internal,
(i.e. organizational) and external (i.e. industrial), or from customer, and each bank use different ways and manners to enhance the adoption.

According to our findings 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 and styles used to Persuasion and informing customers about the services and products.
- Ease of use of the services and products even by the banks` employees or the outside customers.
- Finally customer support is the last success factor which mean that how banks support their customers when using the e-banking

services and provide to them different features to encourage them use the e-banking.

so from our findings, the usefulness factor is the most important and best introduced is usefulness, and the least supported factor that need more caring from the bank is customer support.

The obstacles factors according to the findings that influence and may hinder the adoption process are:

- Expensive cost: the high infrastructure cost, the high cost of maintenance and the other different issues that decrease the power on adoption.
- Appropriate environment: availability of the appropriate environment such as the fast spread of the internet and IT personnel affect the adoption process (the more the availability of the appropriate environment the more the success of the adoption will be).
- Acceptance from customers: if the bank didn't make effort to understand what customer need and if there is no trust between the bank and their customer the ability to adopt and accept the e-banking will decrease.
- Lack of security: the e-commerce legislation, privacy policy and authentication is an important issues and must introduced carefully.

Also form the findings we can conclude that banks` customers, the monetary authority legislations and laws play an important role in the success of the adoption.

By surfing the banks` websites we find that none of the banks` websites has an online catalogues.

6.2 RECOMMENDATIOS:

e-banking adoption is a new financial evolution specially in the middle east area, but its an important issue because it has a great impact in the whole banking system, but in the same time it's difficult and need a lot of efforts to be adopted and accepted by the banking system itself and by customers, so it need a lot efforts to succeed. Moreover the researcher recommends the following points:

- The management of the bank must spend more effort in conducting customers about the benefits of using e-banking services and products, by using different ways such as make offers if using any kind of e-services or e-products, develop new ways to advertise about the products.

- The Palestinian Monterey Authority must encourage banks to adopt e-banking by set new laws and legislations and identify the privacy policies when introduce any new services to the customers.

- The managements of the bank should build a strong system security to attract customers and build their trust's.

- Banks should devote sufficient effort and funds to the adoption process.

- Finally, banks should devote sufficient effort and assign enough resources for developing their website.

6.3 FUTURE RESEARCH

Electronic banking is totally a new technology. There are penalty of issues, which influence the adoption of it. In this study I only tried to explore only a small number of factors that influence the readiness of the adoption.

As such there is still room for further investigation of the adoption of e-banking.

Further researches, could

1- Study different factors by using different method and viewpoints.

2- Work in studying the adoption from the customer viewpoints.

3- Focus more in the security and basic infrastructure for the adoption.

4- Study in-depth different technologies in e-banking such as: mobile banking or internet banking

5- Measure the advancement in the adopting in our banks.

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Appendix A
Methodology Tables

Table 4.2:

Spearman correlation between the each item of (Security Availability) and the whole field

Security Availability	Spearman correlation	p-value
13- The bank provide maintenance (updating and/or changing information) to the e-banking services	0.434	0.017
14- Is the banks` website reviewed internally	0.415	0.023
15- Is the banks` ATM had been audited internally	0.689	0.000
16- Does the bank provide a virus protection software on it's server and workstation	0.461	0.010
17- Does the management keep up-to-date on addressing newly disclosed security to the computer operating system and application software	0.621	0.000
18- Does the bank warn users to avoid using an easy password that can be sensitive	0.669	0.000
19- Does the bank introduce the feature of (access restricted) after limited times of unsuccessful password entry attempt	0.381	0.038
20- Which of the following process the bank use to identify it's customers:	0.736	0.000
- Finger print	0.620	0.000
- ID #	0.569	0.001
- Digital signature	0.471	0.009

Table 4.3:
Spearman correlation between the each item of (Customer Support) and the whole field

Customer Support	Spearman correlation	p-value
21- The management of the bank provide training courses in how to use the system for their customers	0.385	0.036
22- Banks` customers can have more than one account for the same service	0.418	0.022
23- Banks` customers can use the same account for more than one services	0.721	0.000
24- The bank introduce a brochures or instruction manual in how to use the service helping their customers	0.482	0.007
25- The bank provide the possibility to recover passwords rather than create a new account if it lost	0.641	0.000
26- Does the ability for change any personal information are accessible easily for customers without going through the registration process	0.682	0.000
27- Are customers given a complete and transparent review of the cost associated with the use of the payment system	0.372	0.043

Table 4.4
Spearman correlation between the each item of (Ease Of Use) and the whole field

Ease Of Use	Spearman correlation	p-value
28- The management of the bank provide training courses for it's stuff when introducing new services	0.753	0.000
29- The difficulty in new technology decrease the acceptance from customers	0.762	0.000
30- The user interface is easily used	0.601	0.000
31- the user interface is of a familiar payment application	0.530	0.003
32- Does the bank determine the amount of money customer can (withdraw/pay) when using e-banking services	0.526	0.003
33- Has management established a program and/or procedure for customer support and supply	0.366	0.047
34-Has management established a program and/or procedure for customer demand and complaints	0.387	0.041

Table 4.5
Spearman correlation between the each item of (Convenience) and the whole field

Convenience	Spearman correlation	p-value
35- Are links checked for accuracy and functionality	0.453	0.012
36- Are interactive programs checked for accuracy and functionality	0.498	0.005
37- When using an electronic form of payment does the bank provide the function of attach invoices, bills , etc..	0.465	0.010
38- Is the function of multiple (batch) payments (executing several payments at once) available	0.648	0.000
39- Does bank provide the ability to cancel a payment any time before committing to it	0.711	0.000
40- Banks` customers have the ability to find out at any moment how much money they have	0.631	0.000
41- Banks` customers can access any time to the service which have an account on it	0.579	0.001

Table 4.6:
Spearman correlation between the each item of (Advertisement) and the whole field

Advertisement	Spearman correlation	p-value
42- How important are the following factors bank use to advertise for it's new products and service	0.528	0.003
- Advertising on the net	0.765	0.000
- Conventional news media	0.724	0.000
- Banks publications	0.666	0.000
-Others (specify)	0.759	0.000
43- Using of different advertisement styles increases the acceptance of e-banking service by customers	0.624	0.000
44- How important are the following factors bank use to prompt customers to use it's e-banking products and services	0.759	0.000
- Not having to carry and handle cash	0.574	0.001
- Easy and safe payment	0.450	0.013
- Protect from theft or losing	0.486	0.006

Table 4.7:
Spearman correlation between the each item of (Usefulness) and the whole field

Usefulness	Spearman correlation	p-value
45- Reasons behind introduction of e-banking services where	0.484	0.007
- Because of competition	0.410	0.024
- Retain customers	0.544	0.002
- Customers` request	0.699	0.000
- Time saving	0.530	0.003
- Convenience	0.614	0.000
- Profit	0.581	0.001
- Improve bank image	0.690	0.000
- Connecting with global banks	0.544	0.002
- Eliminate geographical barriers	0.699	0.000
- Quality services	0.530	0.003
- Other (explain)	0.520	0.003
	0.573	0.001
46- E-banking services eliminate the burden of paper usage	0.585	0.001
47- The productivity of your bank has increased since you introduce e-banking	0.718	0.000
	0.663	0.000
48- Testing done with employees before offering the service to the public	0.399	0.029
49- E-banking training provided to other officers and employees of the bank	0.741	0.000

Part III : Obstacles Factors In E-Banking Adoption

Table 4.8:
Spearman correlation between the each item of (Expensive Cost) and the whole field

Expensive Cost	Spearman correlation	p-value
50- Does the bank conduct a formal risk assessment of e-banking products and services prior to it's actual implementation	0.645	0.000
51- The high infrastructure cost decrease the ability to adopt e-banking	0.000	0.614
52- E-banking can help the bank offer more complex products of an equivalent quality with lower costs to more potential customers	0.030	0.396
53- The banks` operating and maintenance cost has been reduced since introducing e-banking	582.	001.
54- Return on investment justifications increase the ability to adopt e-banking	375.	041.

Table 4.9:
Spearman correlation between the each item of (Acceptance from Customers) and the whole field

Acceptance From Customers	Spearman correlation	p-value
55- The bank make efforts to understand customers` requirements on a regular basis	493.	006.
56- Does the bank create awareness of customers` products and services	665.	000.
57- The bank make a survey on the acceptance on it's e-banking products and services among it's customers	482.	007.
	493.	006.
58- The trust of personal contact decrease the acceptance of e-banking	468.	009.
59- The lack of e-banking knowledge decrease the acceptance of it	480.	007.

Table 4.10:
Spearman correlation between the each item of (Lack Of Security) and the whole field

Lack Of Security	Spearman correlation	p-value
60- Is bank identified his responsibilities in the event of unauthorized access to their customers` account	582.	001.
61- The lack of e-commerce legislation decrease the ability to adopt e-banking	582.	001.
62- Privacy policy on the customers information are identified by the bank	375.	041.
63- Employees have to access to customers` passwords and information	428.	018.

Table 4.11:
Spearman correlation between the each item of (Appropriate Environment) and the whole field

Appropriate Environment	Spearman correlation	001.
64- The fast spread of the internet increase the need for e-banking	590.	001.
65- The use of e-banking decreased time spent on banking	590.	003.
66- The number of your clients has increased since you introduced e-banking	516.	003.
67- IT personnel participate in training programs regarding e-banking	516.	037.
68- Management establish adequate procedure for monitoring and addressing customer problems regarding e-banking products and services	382.	001.
69- The monetary authority motivate banks to introduce e-banking through introduce the best requirements	554.	002.
70- Compatibility of IT planning with the bank strategy increase the ability to adopt e-banking	546.	

Table 4.12:
Structure Validity of the Questionnaire

Number	Section	Spearman correlation coefficient	p-value
1	**Security Availability**	590.	001.
2	**Customer Support**	535.	002.
3	**Ease Of Use**	823.	000.
4	**Convenience**	694.	000.
5	**Advertisement**	613.	000.
6	**Usefulness**	497.	005.
7	**Expensive Cost**	799.	000.
8	**Acceptance From Customers**	570.	001.
9	**Lack Of Security**	575.	001.
10	**Appropriate Environment**	408.	025.

Table 4.13:
Split-Half Coefficient method

Number	Field	Spearman correlation coefficient	Spearman-Brown Coefficient	p-value
1	**Security Availability**	.61600	0.7624	0.000
2	**Customer Support**	.75460	0.8601	0.000
3	**Ease Of Use**	.69810	0.8222	0.000
4	**Convenience**	.82250	0.9026	0.000
5	**Advertisement**	.79580	0.8863	0.000
6	**Usefulness**	.64720	0.7858	0.000
7	**Expensive Cost**	0.6817	0.8107	0.000
8	**Acceptance From Customers**	.66380	0.7979	0.000
9	**Lack Of Security**	.70200	0.8249	0.000
10	**Appropriate Environment**	0.6981	0.8222	0.000
Total		0.7085	0.8293	0.000

Table 4.14:
for Reliability Cronbach's Alpha

Number	Field	Cronbach's Alpha
1	**Security Availability**	0.8016
2	**Customer Support**	.87140
3	**Ease Of Use**	0.7168
4	**Convenience**	.80490
5	**Advertisement**	.68120
6	**Usefulness**	0.6339
7	**Expensive Cost**	0.8591
8	**Acceptance From Customers**	.82870
9	**Lack Of Security**	.85830
10	**Appropriate Environment**	0.8427
	Total	0.8526

Appendix B

Experts who reviewed the questionnaire (faculty of commerce)
Table c.1

#	Name
1	Dr. Essam Al Buhisi
2	Dr. Majed Al Frra
3	Dr. Nafez Barakat
4	Dr. Rushdi Wadi
5	Dr. Salem Helles
6	Dr. Samer Safi
7	Dr. Sami Abu El Rouss
8	Dr.yousif Bahar

Experts who reviewed and edited the thesis language
Table c.2

#	Name
1	Mohammad Mydeen Abdul Sukkur - Quality Assurance Manager Group Internal Audit - Dubai Islamic Bank Group
2	Samer Khalil Awad - Senior Information Systems Auditor Group Internal Audit - Dubai Islamic Bank Group

Appendix C
Questionnaire and cover letters

Readiness of the Palestinian banking sectors in adopting the electronic banking system (exploratory study)

Department of business administration

The Islamic university of Gaza

Survey questionnaire

Dear sir /madam

Thank yon for agreeing to participate in this research study on readiness of the Palestinian banking sectors in adopting the electronic banking system.

This questionnaire aims to study the success and obstacles factors that affect the adaptation of electronic banking in Palestine.

Please find attached a brief survey for you to complete. Your participation in this survey is strictly confidential. Your individual responses will be anonymous and will not be made available to other sources. Your responses will provide me a base for greater insight and understanding of studies subject. Your participation is completely voluntary and this survey should on take about 30 minutes to complete

Thanks for helping me completing this project

Sincerely,

Malak Abu Jaber

Part I Background Information

A. Background Information About The Candidate and the bank

1- Position/Title?		
2- Highest educational degree held?		**Doctorate**
		Masters degree
		Bachelors degree
		Diploma or less
3- Total year of experience in this field?		
4- Your bank's total assets are:		**Less than $ 200 million**
		Between $ 200 million to $ 500 million
		More than $ 500 million
5- Your bank's total deposits are:		**Less than $ 200 million**
		Between $ 200 million to $ 500
		million More than $ 500 million
6- Your bank's credit facilitations and loans are:		**Less than $ 100 million**
		Between $ 100 million to $ 250 million
		More than $ 250 million
7- Your bank's capital used in financing the e-banking services and products from the bank's total capital		**Less than 10%**
		Between 10% to 30%
		Between 30% to 70%
		greater than 70%

B. General information about the Bank's website

8- Does the bank have a website? If the answer is yes answer the following questions		**YES**	**NO**
9- How many times the website visited daily		**One time to three times**	
		Between three to seven times	
		Between seven to ten times	
		Greater than ten times	
10- To which age does most of the e-banking customers belong		**Between 18 to 25 years old**	
		Between 25 to 40 years old	
		Between 40 to 65 years old	
		Older than 65 years old	
11-Which service and product is the most accepted by the bank's customers		**ATM**	
		SMS	
		Mobile phone	
		electronic cards (visa, credit …etc)	
		Internet	
		Other ? specify	
12-When did the bank's website become active			

Part II : Success Factors For E-Banking Adoption

A. Security Availability	never	rarely	sometimes	often	always
13- The bank provide maintenance (updating and/or changing information) to the e-banking services					
14- Is the banks` website reviewed internally					
15- Is the banks` ATM had been audited internally					
16- Does the bank provide a virus protection software on it's server and workstation					
17- Does the management keep up-to-date on addressing newly disclosed security to the computer operating system and application software					
18- Does the bank warn users to avoid using an easy password that can be sensitive					
19- Does the bank introduce the feature of (access restricted) after limited times of unsuccessful password entry attempt					
20- Which of the following process the bank use to identify it's customers:					
- Finger print					
- ID #					
- Digital signature					

B. Customer Support

	Always	Often	Sometimes	Rarely	never
21- The management of the bank provide training courses in how to use the system for their customers					
22- Banks` customers can have more than one account for the same service					
23- Banks` customers can use the same account for more than one services					
24- The bank introduce a brochures or instruction manual in how to use the service helping their customers					
25- The bank provide the possibility to recover passwords rather than create a new account if it lost					
26- Does the ability for change any personal information are accessible easily for customers without going through the registration process					
27- Are customers given a complete and transparent review of the cost associated with the use of the payment system					

C- Ease Of Use	always	often	sometimes	rarely	never
28- The management of the bank provide training courses for it's stuff when introducing new services					
29- The difficulty in new technology decrease the acceptance from customers					
30- The user interface is easily used					
31- the user interface is of a familiar payment application					
32- Does the bank determine the amount of money customer can (withdraw/pay) when using e-banking services					
33- Has management established a program and/or procedure for customer support and supply					
34-Has management established a program and/or procedure for customer demand and complaints					

D- Convenience	never	rarely	sometimes	often	always
35- Are links checked for accuracy and functionality					
36- Are interactive programs checked for accuracy and functionality					
37- When using an electronic form of payment does the bank provide the function of attach invoices, bills , etc..					
38- Is the function of multiple (batch) payments (executing several payments at once) available					
39- Does bank provide the ability to cancel a payment any time before committing to it					
40- Banks` customers have the ability to find out at any moment how much money they have					
41- Banks` customers can access any time to the service which have an account on it					

E- Advertisement

42- How important are the following factors bank use to advertise for it's new products and service	Important Low 1	 2	 3	 4	 high 5
42.1- Advertising on the net					
42.2- Conventional news media					
42.3- Banks publications					
42.4-Others (specify)					
43- Using of different advertisement styles increases the acceptance of e-banking service by customers					
44- How important are the following factors bank use to prompt customers to use it's e-banking products and services	Important Low 1	 2	 3	 4	 high 5
44.1- Not having to carry and handle cash					
44.2- Easy and safe payment					
44.3- Protect from theft or losing					

F- Usefulness

45- Reasons behind introduction of e-banking services where	Strongly disagree	disagree	Don't know	agree	strongly agree
45.1- Because of competition					
45.2- Retain customers					
45.3- Customers` request					
45.4- Time saving					
45.5- Convenience					
45.6- Profit					
45.7- Improve bank image					
45.8- Connecting with global banks					
45.9- Eliminate geographical barriers					
45.10- Quality services					
45.11- Other (explain)					
	never	rarely	sometimes	often	always
46- E-banking services eliminate the burden of paper usage					
47- The productivity of your bank has increased since you introduce e-banking					
	never	rarely	sometimes	often	always
48- Testing done with employees before offering the service to the public					
49- E-banking training provided to other officers and employees of the bank					

Part III : Obstacles Factors In E-Banking Adoption

G- Expensive Cost

	Strongly disagree	disagree	Don't know	Agree	Strongly agree
50- Does the bank conduct a formal risk assessment of e-banking products and services prior to it's actual implementation					
51- The high infrastructure cost decrease the ability to adopt e-banking					
52- E-banking can help the bank offer more complex products of an equivalent quality with lower costs to more potential customers					
53- The banks` operating and maintenance cost has been reduced since introducing e-banking					
54- Return on investment justifications increase the ability to adopt e-banking					

H- Acceptance From Customers

	Strongly disagree	disagree	Don't know	agree	Strongly agree
55- The bank make efforts to understand customers` requirements on a regular basis					
56- Does the bank create awareness of customers` products and services					
57- The bank make a survey on the acceptance on it's e-banking products and services among it's customers					
	Strongly disagree	disagree	Don't know	agree	Strongly agree
58- The trust of personal contact decrease the acceptance of e-banking					
59- The lack of e-banking knowledge decrease the acceptance of it					

I- Lack Of Security

	Strongly disagree	disagree	Don't know	agree	Strongly agree
60- Is bank identified his responsibilities in the event of unauthorized access to their customers` account					
61- The lack of e-commerce legislation decrease the ability to adopt e-banking					
62- Privacy policy on the customers information are identified by the bank					
63- Employees have to access to customers` passwords and information					

J- Appropriate Environment

	Strongly disagree	disagree	Don't know	agree	Strongly agree
64- The fast spread of the internet increase the need for e-banking					
65- The use of e-banking decreased time spent on banking					
66- The number of your clients has increased since you introduced e-banking					
67- IT personnel participate in training programs regarding e-banking					
68- Management establish adequate procedure for monitoring and addressing customer problems regarding e-banking products and services					
69- The monetary authority motivate banks to introduce e-banking through introduce the best requirements					
70- Compatibility of IT planning with the bank strategy increase the ability to adopt e-banking					

استبانه حول

مدى جاهزية القطاع المصرفي الفلسطيني لتطبيق نظام البنوك الالكترونية

السيد الفاضل / السيدة الفاضلة

تحية طيبة وبعد ,,,,,,

تسعى الباحثة في هذه الاستبانة إلى التعرف على مدى جاهزية القطاع المصرفي الفلسطيني لتطبيق نظام البنوك الالكترونية من حيث دراسة عوامل النجاح والمعوقات التي من الممكن أن تواجه تطبيق هذا النظام .

وحيث أننا نؤمن بأنكم خير مصدر للوصول إلى المعلومات المطلوبة, كونكم أهل خبرة واختصاص, ونعهد بكم الاهتمام والاستعداد الدائمين لمؤازرة الأبحاث العلمية, التي تخدم مجتمعنا وتطوره . نتوجه إليكم وكلنا أمل أن نجد التعاون المطلق من قبلكم, وذلك من خلال الإجابة على الأسئلة المحتواة في هذه الاستبانة والتي نتعهد لكم بالمحافظة على عدم إظهار هوية المجيب عنها وعدم استخدامها في أي مجال غير مجال البحث العلمي .

ولكم فائق الشكر والعرفان ,,,,

الباحثة

الجزء الأول : معلومات عامة

1- المسمى الوظيفي		مدير
		نائب مدير
		رئيس قسم
		غير ذلك ؟ اذكر
2- المؤهل العلمي		دكتوراه
		ماجستير
		بكالوريوس
		دبلوم أو اقل
3- عدد سنوات الخبرة ي مجال العمل		
4- اجمالى أصول البنك :		اقل من 200 مليون دولار
		من 200 مليون إلى 500 مليون دولار
		أكثر من 500 مليون دولار
5- مجموع حجم الودائع :		اقل من 200 مليون دولار
		من 200 مليون إلى 500 مليون دولار
		أكثر من 500 مليون دولار
6- مجموع التسهيلات الائتمانية والقروض :		اقل من 100 مليون دولار
		من 100 مليون إلى 250 مليون دولار
		أكثر من 250 مليون دولار
7- نسبة رأس المال المستخدمة في تمويل نظام الخدمات والمنتجات الالكترونية من اجمالى رأس مال البنك الكلي		اقل من 10%
		من 10% إلى 30%
		من 30% إلى 70%
		أكثر من 70%

ب- معلومات عامة عن الموقع الالكتروني للبنك :

8- هل يمتلك البنك موقع الكتروني ؟ إذا كانت الإجابة نعم يرجى الإجابة على الأسئلة التالية : (9-12), ماعدا ذلك يرجى الانتقال إلى الجزء الثاني .	نعم	لا
9- كم عدد المرات التي يقوم العملاء بزيارة الموقع يوميا ؟		من مرة واحدة إلى 3 مرات
		من 3 إلى 7 مرات
		من 7 إلى 10 مرات
		أكثر من 10 مرات
10- إلى أي فئة عمرية ينتمي أكثر عملاء البنك الذين يقبلون على استخدام الخدمات البنكية الالكترونية ؟		من 18 إلى 25 سنة
		من 25 إلى 40 سنة
		من 40 إلى 65 سنة
		اكبر من 65 سنة
11- ما هي أكثر الخدمات والمنتجات الالكترونية قبولا لدى العملاء		خدمة الصراف الآلي
		الرسائل القصيرة
		الهاتف الجوال
		البطاقات الالكترونية (فيزا, ائتمان .....الخ)
		الانترنت
		غير ذلك ؟ اذكر
12- متى أصبح موقع البنك الالكتروني فعالا لأول مرة ؟		

الجزء الثاني : عوامل النجاح لتطبيق نظام البنوك الالكترونية

أ- توفر الامن	لا	نادرا	احيانا	غالبا	دائما
13- يقدم البنك خدمة الصيانة (تجديد / أو تغيير معلومات) للخدمات البنكية الالكترونية)					
14- هل موقع البنك الالكتروني مراجع (مستعرض) داخليا					
15-هل يتم تدقيق خدمة الصراف الآلي داخليا					
16- يوفر البنك برامج حماية لكل من أجهزة الحاسوب الرئيسية والفرعية					
17- إدارة البنك تحرص على متابعة والإبقاء على برامج الأمن الأحدث المطبقة على أنظمة التشغيل والبرامج التطبيقية					
18- هل يحذر البنك عملاؤه من تجنب استخدام كلمة سر سهلة من السهل معرفتها					
19- يقدم البنك خدمة (تقييد الدخول) بعد عدد مرات محددة من محاولة الإدخال غير الناجحة لكلمة السر					
20- أي من الطرق التالية يستخدمها البنك لتعريف عملاؤه:					
20.1- بصمة الأصبع					
20.2- رقم التعريف					
20.3- التوقيع الالكتروني					

ب- دعم العملاء	لا	نادرا	أحيانا	غالبا	دائما
21- توفر إدارة البنك دورات تدريبية لعملائها على كيفية استخدام الخدمات والمنتجات الالكترونية الحديثة					
22- يستطيع عميل البنك الحصول على أكثر من حساب لنفس الخدمة الالكترونية					
23- يستطيع عميل البنك استخدام نفس رقم الحساب لأكثر من خدمة الكترونية					
24- يقدم البنك دليل الاستخدام اليدوي لتوضيح كيفية استخدام الخدمة من اجل مساعدة العملاء					
25- يوفر البنك إمكانية استرجاع كلمة المفقودة بدلا من استخراج كلمة جديدة					
26- هل يتمكن العملاء من تغيير معلوماتهم الشخصية بسهولة ودون الحاجة إلى الرجوع إلى عملية التسجيل المعقدة					
27- يعطى العملاء فكرة واضحة وكاملة عن التكاليف المصاحبة لاستخدام النظام الالكتروني					

ج- سهولة الاستخدام	لا	نادرا	أحيانا	غالبا	دائما
28- توفر إدارة البنك دورات تدريبية لموظفيها عند تقديم أي خدمة أو منتج الكتروني جديد					
29- الصعوبة في استخدام التكنولوجيا الجديدة قد تؤدي إلى قلة الإقبال من العملاء					
30- واجهة المستخدم سهلة الاستخدام وتتمتع بالمرونة					
31- واجهة المستخدم مألوفة مثل تطبيقات الدفع المعروفة					
32- هل حدد البنك الحد الأقصى من المبالغ المالية التي يستطيع العميل (سحبها / دفعها) عند استخدام النظام الالكتروني					
33- هل قام البنك بتوفير البرامج اللازمة لخدمات ودعم العملاء					
34- هل قام البنك بتوفير البرامج اللازمة لتلقي طلبات وشكاوي العملاء					

د- الملائمة	لا	نادرا	أحيانا	غالبا	دائما
35- هل يتم التأكد من دقة وعمل الروابط في الموقع الالكتروني والخدمات الالكترونية الأخرى					
36- هل يتم التأكد من دقة وعمل البرامج التفاعلية للخدمات الالكترونية					
37- عند استخدام العميل لطرق الدفع الالكترونية هل يوفر البنك إمكانية إرفاق الفواتير و كشوف الحساب.....الخ					
38- هل إمكانية إجراء أكثر من عملية دفع مرة واحدة متوفرة لدى البنك (دفعات)					
39- هل يستطيع العميل إلغاء أي عملية قبل التأكيد عليها					
40- يستطيع عملاء البنك معرفتهم رصيدهم المالي في أي وقت كان					
41- يستطيع عملاء البنك الدخول إلى الخدمة المشتركين بها في أي وقت يريدون					

ه - الإعلان و الانتشار

42- مامدى أهمية العوامل التالية يستخدمها البنك للإعلان عن خدماته ومنتجاته الالكترونية الجديدة	درجة الأهمية غير مهم 1	2	3	4	مهم جدا 5
42.1- الإعلان على الانترنت					
42.2- الإعلان في وسائل الإعلام التقليدية					
42.3- منشورات البنك					
42.4- غير ذلك ؟ اذكر					
43- استخدام أنماط وأساليب مختلفة في الإعلان زاد من إقبال الزبائن على الخدمات البنكية الالكترونية					
44- ما مدى أهمية العوامل التالية التي يستخدمها البنك ليحث ويشجع عملاؤه على الإقبال على الخدمات والمنتجات الالكترونية	درجة الأهمية غير مهم 1	2	3	4	مهم جدا 5
44.1- عدم الحاجة إلى حمل والتعامل بالنقود					
44.2- طريقة سهلة وآمنه					
44.3- الحماية من السرقة والخسارة					

و- الفائدة المتوقعة

45- الأسباب الكامنة وراء إدخال الخدمات المصرفية الالكترونية:	معارض بشدة	معارض	متردد	موافق	موافق بشدة
45.1- المنافسة					
45.2- الإبقاء على الزبائن					
45.3- الطلب من الزبائن					
45.4- توفير الوقت					
45.5- الراحة ولملائمة					
45.6- زيادة الربح					
45.7- تحسين صورة البنك					
45.8- الاتصال مع البنوك العالمية					
45.9- إزالة الحواجز الجغرافية					
45.10- جودة الخدمات					
45.11- غير ذلك ؟ اذكر					
	لا	نادرا	أحيانا	غالبا	دائما
46- الخدمات المصرفية الالكترونية تقلل من عبء استعمال الورق					
47- إنتاجية البنك زادت منذ تقديم الخدمات المصرفية الالكترونية					
48- يتم تجريب الخدمات داخل البنك مع الموظفين قبل تقديمها للجمهور					
49- يتم توفير التدريب على استخدام الخدمات الالكترونية الجديدة لجميع موظفي البنك					

الجزء الثاني : معوقات تطبيق نظام البنوك الالكترونية

ي- التكاليف الباهظة

	معارض بشدة	معارض	متردد	موافق	موافق بشدة
50- هل قام البنك بإجراء تقييم لمخاطر تطبيق النظام المصرفي الالكتروني قبل التنفيذ الفعلي له					
51- ارتفاع تكاليف البنية الأساسية للنظام الالكتروني يؤدي إلي تخفيض القدرة على تطبيقه					
52- النظام المصرفي الالكتروني يوفر خدمات ومنتجات بنكية ذات جودة أعلى من النظام التقليدي وبتكلفة منخفضة					
53- تكاليف الصيانة والتشغيل انخفضت لدى البنك منذ تقديم النظام الالكتروني					
54- مبررات زيادة العائد على الاستثمار زاد من قابلية تطبيق النظام الالكتروني					

ل- القبول من الجمهور والزبائن

	معارض بشدة	معارض	متردد	موافق	موافق بشدة
55- البنك يبذل مجهود من اجل فهم احتياجات عملاؤه بشكل منتظم ودوري					
56- يعمل البنك على توعية الزبائن بمنتجاته وخدماته					
57- يقوم البنك بإجراء استقصاء عن مدى قبول عملاؤه للخدمات والمنتجات الالكترونية التي يقدمها					
58- ثقة الزبائن بالاتصال والتعامل الشخصي يخفض من الإقبال على النظام الالكتروني					
59- قلة المعرفة بتكنولوجيا البنوك الالكترونية يقلل من تقبلها لدى الزبائن					

م- قلة الأمن

	معارض بشدة	معارض	متردد	موافق	موافق بشدة
60- حدد البنك مسؤولياته في حالة الوصول غير المخول لحسابات زبائنه					
61- نقص تشريعات التجارة الالكترونية أدى إلى قلة القدرة على تطبيق البنوك الالكترونية					
62- الخصوصية والسرية على معلومات العملاء معرفة من قبل البنك					
63- هل يقوم الموظفين بالدخول إلى معلومات الزبائن الشخصية ومعرفة كلمات السر الخاصة بهم					

ن- البيئة الملائمة

	معارض بشدة	معارض	متردد	موافق	موافق بشدة
64- سرعة انتشار الانترنت زاد من الحاجة إلى البنوك الالكترونية					
65- استخدام المصارف الالكترونية قلل من الوقت المستغرق في الأعمال المصرفية					
66- عدد الزبائن في تزايد منذ تقديم الخدمات والمنتجات الالكترونية					
67- موظفين نظم المعلومات يشاركون في الدورات التدريبية المتعلقة بالبنوك الالكترونية					
68- قامت إدارة البنك بإنشاء الطرق والعمليات المناسبة من اجل تحديد ومعرفة المشاكل المتعلقة بالخدمات والمنتجات الالكترونية التي تقدمها للجمهور					
69- تقوم سلطة النقد بتحفيز البنوك لتقديم النظام الالكتروني عن طريق تقديمها لأفضل المتطلبات والشروط					
70- التوافق مابين إستراتيجية البنك والخطة الالكترونية يزيد من القدرة على تطبيق النظام البنوك الالكترونية					