# Factors Affecting the Adoption of Internet Banking in Libya

## **Ehab Shuaieb**

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	Prof. Dr. Elvan Yılmaz Director
I certify that this thesis satisfies the require of Science in Banking and Finance.	ements as a thesis for the degree of Master
	Prof. Dr. Salih Katırcıoğlu Chair, Department of Banking and finance
	d that in our opinion it is fully adequate in ree of Master of Science in Banking and
	Assoc. Prof. Dr. Nesrin Özataç Supervisor
	Examining Committee
1.Prof. Dr. Salih Katırcıoğlu	
2. Assoc. Prof. Dr. Eralp Bektaş	
3. Assoc. Prof. Dr. Nesrin Özataç	

**ABSTRACT** 

Internet banking has become an important channel to diversify the pull of banking

services and products. Many banks have started offering such services and willing to

offer themonline, therefore making the services available at any time. The purpose of

this study was toinvestigatethe affecting factors of adopting internet banking in

Libya. For this purpose three hypothesesweredeveloped as a part of the research

model. A questionnaire was prepared and distributed in order to collect the empirical

data. A sample size of 235 respondents was analyzed in this study. Acquired data

were analyzed with SPSS 20.0. The findings and the results of the research were

based on T-test and correlation coefficient. In accordance with the statistical analysis

results; it was determined that there was a relationship between the importance of

providing electronic banking from the perspective of senior managers and its success

in attracting customers and the provision of services. Even more, there was a

relationship between the importance of the availability of electronic banking and the

advantages that come in the case of the provision of online services. Above all, there

was a relationship between the difficulties faced by electronic banking and its

succession in providing services.

**Keywords**: Internet banking, Libya, electronic banking, online services.

iii

## ÖZET

Internet bankacılığı, bankacılık hizmetleri ve ürün çeşitliliği açısından önemli bir kanal görevi görür. Birçok banka bu hizmeti vermeye başlamış ve bunu çevrimiçi olarak vermektedirler, böylelikle bu hizmetler her an mevcut durumdadır. Bu çalışmanın amacı Libya'daki internet bankacılığının benimsenmesini etkileyen faktörleri araştırmaktır. Bu amaçla araştırma modelinin parçası olarak üç hipotez geliştirilmiştir. Deneysel bilgi toplayabilmek amacıyla bir anket hazırlanmış ve dağıtılmıştır. Çalışmada 235 katılımcının analiz edilmiştir. Toplana bilgi SPSS 20,0 ile analiz edilmiştir. Araştırmanın bulgu ve sonuçları t test ve ilgileşim katsayısına dayalıdır. Statik analiz sonuçları bağlamında, elektronik bankacılık sunmanın, üst düzey yöneticileri bakış açısı tarafından ve müşterileri çekme ve hizmetlerin sağlanması başarısı açısından arasında önemli bir ilişki olduğu tespit edilmiştir. Ayrıca, elektronik bankacılığın varlığı ile çevrimiçi hizmetlerin sağladığı avantajlar arasında önemli bir ilişki vardır. Üstelik elektronik bankacılığın karşılaştığı sorunlar ve bu hizmetlerin sunulması arasında yine öneli bir ilişki vardır.

Anahtar kelimeler: Internet Bankacılığı, Libya, Elektronik Bankacılık, Çevrimiçi Hizmetler.

To My Beloved Family

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# TABLE OF CONTENTS

ABSTRACT	iii
ÖZ	iv
ACKNOWLEDGMENTS	vi
LIST OFTABLES	x
1 INTRODUCTION	1
1.1 Background	1
1.2 Aim of the Study	2
1.3 Importance of the Study	2
1.4 Structure of the Thesis.	2
2 LITERATURE REVIEW	4
3 THE CONCEPT OF INTERNET BANKING	10
3.1 Definition of the Internet Banking	10
3.2 History of the Internet Banking	10
3.3 Benefits of the Internet Banking	11
3.3.1 Benefits for the Banks	11
3.3.2 Benefits for the Customers	12
3.4 Disadvantages of the Internet Banking	13
3.5 Potential Drawbacks of the Adopting Internet Banking	13
3.6 Patterns of Internet Banking.	16
3.7 Internet Banking Services.	16
3.7.1 Electronic Payment	17

3.7.2 Electronic Money	18
3.7.3 Electronic Checks.	18
3.7.4 Smart Cards.	18
3.8 Barriers Affecting the Adoption of Internet Banking	18
3.9 Objectives of the Electronic Banking System	19
4 THE HISTORY OF THE LIBYAN BANKS	20
4.1 The History of the Banks since the Ottoman Empire until 1951	20
4.1.1 Banking System until the Year of 1940.	20
4.1.2 Banking Activity during the Period of 1940-1951	22
4.2 Banking Services during the Period of 1951-1956	25
4.3 Banking Sector during the Period of 1956-1963	26
4.4 Banking System during the Period of 1963-1968	28
4.5 Different Structured Banks in Libyan Banking System	30
4.5.1 The Libyan Central Bank	30
4.5.2 The Gumhouria Bank	31
4.5.3 The Wahda Bank	32
4.5.4 The Sahara Bank	32
4.5.5 The Commerce and Development Bank	33
4.5.6 The North Africa Bank.	33
5 THE INTERNET BANKING IN LIBYA	34
5.1 Real Time Gross Settlement	34
5.2 Automated Cleaning House	35
5.3 Management System Card & ATM/POS	36

5.4 Automated Checks Processing.	36
5.5 Core Banking System.	36
5.6 Factors Affecting the Success of Electronic Banking System	37
6 METHODOLOGY OF THE STUDY	38
6.1 Introduction.	38
6.2 Data	39
6.3 Sample of the Study	39
6.4 Response Rate	39
6.5 Research Hypothesis	39
6.6 Questionnaire Design	40
7.RESULTS AND FINDINGS	41
7.1 Frequencies	41
7.2 Validity and Reliability	41
7.2.1 Validity	
7.2.2 Reliability	43
7.3 Test of Hypothesis.	47
7.3.1 First Hypothesis.	47
7.3.2 Second Hypothesis	49
7.3.3 Third Hypothesis.	50
8. CONCLUSION AND RECOMMENDATIONS	53
8.1 Results of the Study	53
8.2 Recommendation of the Study	55
REFERENCES	57
APPENDIX	60

# LIST OF TABLES

Table 7.1: Frequencies.	42
Table 7.2: Correlation Coefficients for H1	44
Table 7.3: Correlation Coefficients for H2.	45
Table 7.4: Correlation Coefficients for H3.	46
Table 7.5: Reliability Test for Dimensions.	47
Table 7.6: Mean Scores and T-test for First Dimension.	49
Table 7.7: Mean Scores and T-test for Second Dimension	50
Table 7.8: Mean Scores and T-test for Third Dimension.	52

## Chapter 1

## INTRODUCTION

## 1.1 Background

The recent period has witnessed a rapid transition of the traditional form of trading towards the electronic format where the Internet plays a key role as an intermediary in trade in its contemporary form. This prompted many enterprises and banks to create their sites on the internet as to direct the regular e-commerce and banking process electronically (Tawfeek, 2003). Banking has as a result witnessed a great development in allowing the customers to conduct buying and selling through the Internet by using the electronic means of payment offered by these banks (Alshafey, 2004).

The technological advance of the banking sector has resulted in a dramatic reduction of paper based transactions and a considerable growth of the financial services now offered by internet banking. As a result of the stunning development in the world of communication and technology, banks moved away from the traditional banking methods and new patterns appeared in the light of the growth of new markets, economic blocks, and global banks.

Despite the growing interest in the development of internet banking all over the world, there is a paucity of research on the introduction and implementation of internet banking in Libya. Because of the political, economic, and social

development of the last few years, the Libyan experience is very specific in terms of the market conditions, technological capabilities, laws and regulation as well as cultural factors affecting the development of internet banking (Kolthom, 2008).

#### 1.2 Aim of the Study

This research aimed to identify the importance and the advantages of internet banking, as well as the obstacles to its deployment in Libya. One of the main objectives of this study was to recognize how important it is to provide a point of view of senior managers on electronic banking and its success in attracting the customers and commercial offer. Besides, this research tried to identify the extent to which senior managers support for electronic banks in terms of good planning and solving the problems, providing money and equipment could be pivotal to the success of these banks.

#### 1.3 Importance of the Study

The importance of the study is to investigate the need of development of the presence of the Internet and the increasing users and the evolution of computing and communication technologies that have achieved a rapid and comprehensive exchange of information. This shows the importance of the research to identify the reality of the banks and the advantages as other traditional banks.

#### 1.4 Structure of the Thesis

The thesis involves seven chapters starting with an introduction as the first chapter. The second chapter presents the literature review based on the previous studies, while chapter 3 discusses the concept of internet banking. Chapter 4 presents a brief overview of the reality of internet banking in Libya. Chapter 5 presents a history of Libyan banks. Chapter 6 discusses the methodology that is used in order to carry out the research, Chapter 7 describes the results and the analysis of the study. Finally, the

last chapter is the conclusion that indicates the results of the analysis, and the points to further avenues of research.

## Chapter 2

## LITERATURE REVIEW

In recent years internet banking has attracted the attention of the international academic community with the publication of a wealth of studies covering different areas of this global phenomenon. This study followed the studies done in the previous year's such as Ossama A. (2001). The main aim of Ossama's study was to present an overview of the challenges facing an electronic management in the Libyan banking sector. Therefore, the present research focuses on the realities of the Libyan electronic bank and the factors that might have an effect on its success.

Pedroni (1996) aimed at revealing the importance of using the technology in the state banks field of governmental institutions. The study was carried out in an institution in Southern Illinois. The researcher used a modern technology such as the screening style to gather information from the staff. The study showed that modern technology has reduced the role of the managers, while at the same time it helped the staff to collaborate with each other to produce an integrated work. In addition, the advantages of this technology showed that it helped employees to evaluate their own actions. Furthermore, it helped them to save their work and not lose it. Finally, it showed that the use of technology helps in facilitating the process of communication which is needed in order to improve the production.

In a study by Yang (1997), the challenges which were faced in internet bankingwere highlighted. These challenges were represented by the secrecy and the privacy of information. The study determined a solution for the secrecy by using the software systems and special hardware. The software solutions were namely encryption algorithms as well as the general and special keys. In addition, an electronic signature was used to configure the electronic secret movement. This signature could be used as a Master Card which provided a great protection. On the other hand, the hardware solutions represented by Smart Card gave better solutions to the confidentiality of personal information.

Clay's (2000) study attempted to identify the technologically trained employees in state institutions and their suitability to the level of quality that set them apart from other employees with regard to the improvement of the quality of production. The researcher used a questionnaire consisting of 33 technological adequacy training built items according to the standards of the association of the use of technology. The study sample consisted of 146 employees of different institutions in the USA together with 76 directors and sector heads of the information system centers. The result of the study indicated that the employees display a level of efficiency in information technology inferior to the expectations of manager information centers. Responses set managers well below the international standards. The researchers recommended that information technology employee should be recruited within the informational institutions and understand the process of information contact with an appreciation of the importance of information technology in the preparation, the development, and implementation of business strategy.

In a study of Obeian's (2000), the purpose was to detect the most prominent barriers to the application of the system which the managers faced in the electronic information systems. The study was carried out with 500 men and women executives in the city of al-Riyadh. 500 questionnaires were distributed and 420 questionnaires returned back. The in-depth scientific study showed that the most prominent barriers to the application of the electronic system were the density of paperwork and its incompatibility with the rapid development of the programs. In addition, it revealed the lack of infrastructure, low performance readiness in rapid network, as well as very large numbers of the workers in one division. Finally, poor training and retraining were also vital.

ZakariaJodo (2004),investigated the different aspects of internet banking together with the consequences of adopting internet banking, and the assessment of the current position and the future potential of internet banking in the Turkish Republic of Northern Cyprus (TRNC). The conclusion of the study pointed out the advantages of adopting internet banking, as most banks would realize how this would end up with additional revenues, because of a significant reduction of the costs of operations and better customer retention. On the other hand, the study also indicated the disadvantages of adopting the internet banking. According to Jado, bank's ordinary risks would be magnified by the limited knowledge of the new way of making business. Internet banking would be exposed to a system failure and a loss of data, therefore being exposed to a higher operational risk.

Shah et al. (2005) identified the critical considerations related to financial sector organizations when establishing services for instant systems work in the United Kingdom. The study showed that the understanding of the critical success factors in

electronic banking was important for the management of these banks, as it would help them in the future to improve the strategic planning processes. A number of critical factors to the success of electronic banking were analyzed, in particular factors related to the administrative flexibility and the speed of the service delivery since these were viewed as some of the most important factors.

Otaibi's (2005) study stressed the importance of e-feasibility studies, motivating the employees, and training them to use the modern technology in Jordan. The research was carried out by making use of the questionnaires in a number of government institutions that apply the e-system. The study showed a large number of faults on the computer and the internet, the limited number of computers and the internet in the institution, difficulties linking the institution with the internet. Moreover, the absence of internet access in households and slow connection further seemed to hamper the system. Finally, the researcher recommended providing the institution with appropriate processing electronics.

Leelapongprasut et al. (2005) provided an assessment of the quality of services provided through internet banking in Thailand. The results were collected in regard to performance, advantages, reliability, conformity, good service, quality understanding and perception. The study focused on three bank services which were done by D-computer company staff, as they had the knowledge of the financial situation (account movement) and transfer of money between different accounts and transfer of payments for the public services. The results were as follows: firstly, there was a difference between Thai banks in the degree of the quality service. Secondly, when ranking the importance of the criteria used in the evaluation of services provided by internet banking in Thailand, the most important of the criteria was the

reliability, while the least important of the criteria was the degree of understanding and perception of service.

According to Khalfan et al. (2006), the descriptive and analytical study shows the influence of the adoption of internet banking in Oman. The study focused on identifying the key factors that prevent the adoption of e-commerce in Oman banks. Whilst the study showed a slow understanding of e-commerce applications in the banking sector, it pointed to a number of internal and external factors responsible for the slow implementation. Results of the study showed that the confidentiality and the protection of privacy was the most important obstacle, as banks rejected the application of e-commerce for fear of exposure to piracy and the threat of viruses. The results also showed that the weak administrative support is a hampering factor in the adoption of e-commerce applications. In general, the application of e-commerce was slow in the Arabian Gulf despite the conviction that the application of e-commerce reduced the administrative costs. Moreover, the study showed that the failure to protect the customers, the cost of investment in technology, and the lack of readiness of the market made the electronic banking discouraging. These factors impeded the spread of electronic banking in Oman.

Khalid et al (2006) conducted a study on customer satisfaction with internet banking in Jordan. The study focused on a number of factors such as the customer support, security, ease of use, services and electronic products, information content and innovation. The results showed poor customer satisfaction with internet banking in all the previous factors. The researchers recommended the institutions to further customer satisfaction by improving most of the above factors and to pay more

attention to the relationship between the customer and management, market electronic research and market intelligence.

Nana and Odartey (2009) revealed that the level of internet banking in Ghana was largely at the information-downloaded stage, or simple transactional e-banking with no full-transactional services, or cross-buying opportunities. Consequently, online product and service (technical dimension) were not developed much in value added terms when compared to the traditional products and services. The channel attributes (functional dimension) were found to deliver the value in terms of self-service but were beset by slow internet connectivity and website downloading and navigation during the peak hours of internet use-daytime. The slow connectivity also affected the location and time factors (spatial and temporal dimension) which, however, came up strongly as the cost-saving-value.

It also came apparent in the analysis that to bridge the gap between customer value, in one hand, and customer expectation and latent demand on the other, the banks need to step up their products and services by taking the other implications-security, improved connectivity, improved technology, etc.into consideration.

## Chapter 3

## THE CONCEPT OF INTERNET BANKING

## 3.1 Definition of the Internet Banking

Internet banking means that the client can manage his account or complete his work which is related to the bank via internet, whether at home or at office and at any place and any time. Thus, the client can directly connect to the bank via the internet and conduct various transactions without having to be physically presented at the bank.

The real meaning of internet banking is conducting the banking operations in electronics and Internet is one of the most important forms.

According to Sara (2007), internet banking is a set of technological tools that offer a financial institution for its clients to make banking transactions via the computer using an Internet connection.

#### 3.2 History of the Internet Banking

The emergence of the electronic banking to the beginning of the eighties started with the advent of electronic Monetary.

American Express issued the first plastic card to spread widely in 1958. Years later, in 1968, eight banks issued "Bank Americard" which turned to the VISA international network. In the same year six French banks released a "carte bleu".

In1980, banking and financial institutions in Europe and the United States began to embrace "home banking". Furthermore, far more advanced computers and the internet helped customers to contact machines and telephone (Sara, 2007).

However, the first appearance of this service to the customers was in 1981, when the automatic teller machine (ATM) was introduced to the public. In 1986, France Telecom provided public telephones with reader machines for memory cards bearing personal data of its holder that were to become bank cards in 1992.

The middle of the nineties, 1995, saw the first appearance of internet banking "Security Bank" in the USA. Citibank and Wells Fargo established their internet services in 2001.

DBS Bank granted financial services over the internet for the first time in Singapore in 1997. It was followed by UOB, OCBC. Soon after, all the preeminent banks introduced their internet banking one after another (Ossama, 2001).

#### 3.3 Benefits of the Internet Banking

The internet banking has several benefits for both the banks and the customers. Firstly, the advantages for the bankwill be presented, then the customer's advantages will be discussed.

#### 3.3.1 Benefits for the Banks

According to a global survey which was done by Booz Alen and Hamilton (1997), the cost of the founding of specialized internet banking is less than the cost of branch-based banking setup.

The running cost of traditional banks accounts for 50% to 60% of their revenues. Whereas, internet banking running cost was estimated at 15% to 20% of its revenues. According to Robinson (2000), electronic transaction cost is significantly less when done online instead of at a branch.

We can summarize these benefits as below:

- Speed to get the job done by using information technologies.
- Help in decision-making by providing information to the decision makers.
- Reduction the cost of administrative work.
- Overcoming the problem of the time and geographical dimension.
- Treatment of the bureaucracy and bribery.
- Development of a mechanism of action and to keep abreast of developments.
- Planning for future projects.
- Overcoming the problem of day-to-day works.
- Raising the efficiency of workers in the administration,

#### 3.3.2 Benefits for the Customers

The internet banking service provides a high degree of comfort to the customer, where he/she does not have to stand in a long queue, at a less cost. Furthermore, the customer can access his/her account at anytime and anywhere 24/7.

Internet banking is quite convenient as the customer can easily pay his/her bills, transfer funds between accounts, view his/her transactions with no need to keep the receipts of his/her bills.

As a matter of fact, through Internet banking, the customer can keep an eye on his transactions and account balance all the time. This facility also keeps his/her account safe (Sara, 2007).

## 3.4 Disadvantages of the Internet Banking

Although there are many advantages, internet banking also has some disadvantages which must be taken care of. According to Rushdy (2007), the main disadvantages of internet banking can be given as below:

- Even though there are many sites offering a demo on how to use the internet banking, not all offer this facility. So, a customer who is a new user of internet banking might face some difficulties.
- Availability of access to the internet.
- Security of transactions is a big issue. Hackers might get hold of customer's information from unauthorized people over the internet.
- Password security is a must. After getting a net banking password, customer should change and memorize it, otherwise their account may be misused by someone who gets to know their password inadvertently.
- If the bank's server is down, internet banking cannot be used.
- A slow connection or loss of internet connectivity in between, may cause a
  difficulty to note whether a transaction was successful or not.

#### 3.5 Potential Drawbacks of Adopting the Internet Banking

Some might think that all the difficulties will disappearwiththe application of electronic banking, such as the administrative and technical problems. However, the reality on the ground points to a rather different picture, namely that the application of electronic banking will require a continuous scrutiny and sustained surveillance to

ensure the continuous provision of services in the best shape possible in order to maximize the use of time, money and effort. Furthermore, it must be considered that the existence of alternative plans or contingency plans in the event of default electronic banking remains paramount.

The difficulty of providing an appropriate infrastructure for electronic banks, as well as the obstacles in updating the data to enable the customers to see the latest offers, are just two of the many challenges faced by internet banking.

Heavy reliance on credit cards in the field of payment is a major obstacle for the customers. As a matter of fact, studies have shown that 60% of web users do not trust the conduit through which the payment is made (Mosawe, 2002).

Moreover, the spread of commercial fraud and poor communications security across the internet has proved to be seriously detrimental to a successful application of internet banking. The emergence of online fraud and theft from credit card accounts are two serious drawbacks in internet banking (Sowaify, 2001).

Not confirming the identity of the client leads to a large number of complaints from the customers denying the completion of the deals and transactions. Thus, it results in in losses for the banks. Besides, the other impacts of internet banking appear to cause a fear of dealing with electronic banking because of the distrust and the threat to the security and protection of customers' information, or as a result of the lack of cultural awareness (Kolthom, 2008).

There are many complex transactions which cannot be sorted out unless there is a face to face discussion with the manager which is not possible through internet banking. As a matter of fact, solving specific issues and complaints require a physical visit to the bank and cannot be achieved through the internet. Moreover, online communication is neither clear nor pin pointed to help to resolve many complex service issues. In fact, certain services such as the notarization and bank signature guarantee cannot be accomplished online (Rushdy, 2007).

Security is the biggest pitfall of the internet banking scheme which needs to be guarded against by the common customer. Despite the host of sophisticated encryption software is designed to protect one's account, there is always a scope of hacking by the smart elements in the cyber world. Hacker attacks, malware and other unauthorized activity are not uncommon on the net. Identity theft is yet another area of grave concern for those who rely exclusively on internet banking. Most banks have made it mandatory to display scanned copies of cleared checks online to prevent the identity theft. It is essential to check bank's security policies and protections while opening an account and commencing the usage of online banking facilities (Kolthom, 2008).

Online banking is definitely a significant move in the right direction as far as the convenience for the customer as well as the banker is concerned. However, it must be applied with adequate precaution to avoid falling prey to unscrupulous elements poaching the internet (Kolthom, 2008).

## 3.6 Patterns of the Internet Banking

There are 3 basic images of electronic banks on the internet (Rushdy, 2007):

- Information Website: It is theminimum level of electronic banking activity, through which the bank provides information about its programs and products and its banking services.
- Communicative Website: The website allows a type of communication exchange between the bank and its customers, packaging applications or on-line forms and modifies accounts data.
- 3. Transactional Website: The level at which the Bank exercised its services and activities in the electronic environment. It allows the customer to access and manage his/her accounts, make cash payments, paying bills, hold all the informative services, and make transfers between his/her accounts within the bank or with outsources.

## 3.7 Internet Banking Services

Internet banking provides some important services such as:

- Cash dispenser: They play an important role in the distribution of banking products which are represented as follows:
  - (D.A.B) DistributeurAutomatique De Billes.
  - (G.A.B) GuichetAutomatiqueBancaire.
  - (T.P.V) Terminal Pointe De Vente.
- 2. Electronic banking services via phone telephone banking.
- 3. Electronic banking payment and electronic clearing services.
- 4. Home phone.
- 5. Direct banking system with the customer.

#### 3.7.1 Electronic Payment

According to Ossama A. (2001), several modalities of payment are made available through internet banking:

Plastic cards, which is a magnetic card, whose holder can use to buy most of his/her needs, are divided into three types, which are:

- Payment Cards: issued by banks or international finance companies
  based on the existence of actual balances for the customer in the form of
  current accounts corresponding to the expected amounts to his
  withdrawals.
- 2. Credit Cards: cards issued by banks within certain amounts that enable the holder to purchase goods paying for the sake of their value, taking into account the credit benefit on the balance sheet value that exceeded the client at the end of each month.
- 3. Bankcards issued by a group of international organizations as well as financial and trade institutions, including:
- 4. Visa: the largest international company in the issuance of credit cards. It was established in 1958.
- 5. MasterCard: Worldwide credit card Corporation that works with financial institutions to issue credit cards. The credit cards distributed by the company are done so under the MasterCard brand. The credit provided to card holders is controlled by the financial institution that issues the card not MasterCard. MasterCard converted from a privately held company to a public company on May 25, 2006.

6. American Express: One of the major financial institutions that issue credit cards directly without a license issued to any bank.

#### 3.7.2 Electronic Money

After the emergence of bank cards or "Digital Money" which is intangible money, a picture of electronic units is stored in a safe place on the hard disk of the computer belonging to the customer, it is known as the electronic portfolio, and the client can use this portfolio in sales, purchase or transfer.

#### 3.7.3 Electronic Checks

It is similar to the traditional cheque. The idea of the electronic chequebased upon the existence of an intermediary to complete the disposal process.

#### 3.7.4 Smart Cards

Parallel to technological developments, a smart card which is a plastic card containing an electronic cell, appeared on which all the special data of its bearer are collected and stored such as the name, address, and the bank (Ossama, 2001).

## 3.8 Barriers Affecting the Adoption of Internet Banking

There are many obstacles and problems that have an impact on the application of an electronic banking project. Officials must develop a plan for the implementation of such a project and hold a comprehensive approach to the different environment variables that can arise and hinder the work plan in order to either to avoid them or to find solutions. According to (Rushdy, 2007)some of these barriers are:

- The local shortage of the capacity at the level of the information technology sector and telecommunications.
- Lack of resources to fund e-banking projects in the event of low financial returns.

- Delays in the development of the legal and regulatory framework which forms the basis for the electronic banking project.
- National disasters caused by regional conflict that can disrupt the infrastructure for a period of time, which hinders the electronic banking project.
- Resistance to change by employees fearing for their jobs, after streamlining the procedures and the operations.

## 3.9 Objectives of the Electronic Banking System

Among the many objectives of electronic banking system the following are the most important:

First of all, managing and following-up of various branches of a bank as a central unit are the main scopes of internet banking. Another important objective is the remove of intermediaries in the decision-making process. Collecting data from their original sources is one of the main goals of internet banking. Besides, reducing obstacles to decision-making by providing data and linking is also an important aim of internet banking.

Employing information technology to support and create a positive culture among all employees is certainly influential in internet banking and as such remains a central objective. Furthermore, providing an on-going data and information to the customer while promoting the awareness, remains a top priority in internet banking.

Finally, fostering good relationship among the employees and senior management is another relevant objective (Kolthom, 2008).

## Chapter 4

#### HISTORY OF LIBYAN BANKS

## 4.1 The History of the Banks sincethe Ottoman Empire until 1951

The study and analysis of this subject historically can be divided into several periods. Each period can be characterized by the appearance of a particular manifestation of the development of the activity.

#### 4.1.1 Banking Systems until the Year of 1940

The banking activity is part of the large economic activity of a country as it appears in every community to support various economic sectors to serve and help its growth. The emergence of banking must be preceded by several factors, including the availability of the capital, the increase of the individual incomes, the existence of the opportunities for investment, improving levels of education and the necessary elements which are required to manage such devices in addition to political stability and orthodoxy in the administration of society.

It is difficult to assess the presence of these factors in the community which faced the historical circumstances experienced by Libya during the Ottoman rule or years under the Italian occupation. However, the last years of the Ottoman regime were naturally characterized by a general improvement of the economy in the country. The agricultural Bank opened in Benghazi in 1868, and then in Tripoli several branches spread across the statein 1901. Also the Ottoman Bank had opened two branches in Libya, the first branch began its work in Tripoli in 1906 and lasted until 1913 and the

second branch continued to be active in Benghazi until the Italian occupation in 1911.

The Italian occupation was not just a military campaign or adventure carried out by military officers - but it was a deliberate measure to ease the economic hardship faced by Italy; as a result of increasing demographic pressure, low income throughout large sectors of Italian society.

The Bank of Rome entered Libya through an Italian who was living in the country as its agent. In May 27, 1907, three officials of the bank (Bank of Rome), one of them was Ernesto Batchelli – issued a power of attorney to a man called OnrikurChiana as a Commissioner Agent to the Bank of Rome.

This document is recorded in the public records in Rome, Volume 275 dated June 1907 and ratified by the Italian Ministry of Justice and the Italian Ministry of Foreign Affairs and then the Ottoman Empire's consul in Rome. Under the terms of this agency the aforesaid agent was authorized in the following:

- 1. Purchase the plot of agricultural lands to the bank in both Tripoli and Benghazi, and to pay any suitable price, and to accept the ownership bonds and documents that prove the absence of any real estate obligation, or mortgage, or division, or rent.
- 2. Set the interest rate and the development of the necessary conditions for mortgage possessions.

- Make agreement with mortgagers in placing himself instead of them, and has the right to set the conditions and estimated amounts paid for the mortgagers.
- 4. Organize all the official papers within the limits of the law, as required to conduct the mentioned transactions.
- 5. In addition to all the above mentioned authorities, the principal gave the agent unlimited authority.

Bank of Rome opened the first branch in Libya in April 1907 and opened its branch in Benghazi on September 15 of the same year. Thenit opened another branches at Derna in July 1912. This was followed by the opening of Bank of Naples, a branch in Tripoli in 1913, as well as one of the Banks of Sicily.

There was also a bank named Tripoli's Popular Bank to provide loans to handicrafts, shopkeepers and crafts. Then Libyan Savings Fund was there to provide long-term loans for a period of 25 years against an interest rate 2 percent annually, but these loans are limited only to the Italians without any exception (Abd-Alraheam, M. 2010).

#### 4.1.2 Banking Activity during the Period of 1940 - 1951

When World War II ended, Libya was governed by three military departments; the formation of a British military administration in Tripoli, and another British military administration in Cyrenaica, and a third military French administration in Fezzan. Due to the separation and independence of each of these military managements, each management followed an independent policy. Each state had its own currency for domestic trading, to replace the currency which was in circulation during the period prior to the formation of these departments. In this way, the Italian currency which

was in circulation in Libya until the end of World War II with other different currencies depending on the limits and the influence of all the military administration in the three regions of Libya. Henceforth, the Egyptian currency slowly spread in Cyrenaica. It was introduced by the advanced British forces from Egypt during the last world war, and in Fezzan, the Algerian Franc currency started its campaign with the French forces which marched to Fezzan. The British administration also issued the military lira as Military Authority Lire (MAL).

After the war, the works of the Italian Banks which existed in the country were disrupted. Till early 1951 Bank Barclays was the only bank to operate in Cyrenaica and Tripoli, where it came with the British troops advanced from Egypt in 1943. The first branch operated on April 15, 1943, and its second branch in Benghazi on July 15<sup>th</sup> in the same year. It began its activity in a narrow range.

On November 15, the president of the military administration in Tripoli issued the Proclamation No. 211 entitled Business banks for the year 1950, which cancelled the Italian Decree No 1400 dated July 17, 1937 as Italian laws remained in place until the abolition of the new legislation.

This announcement tried to organize the banking operations, asked for practicing these transactions. The need to obtain a license issued by the head of the administration, and the text should provide the required capital in the previous case, including at least \$ 200,000Military Lira.

The subjects of this new advertising revenue were some of the definitions of the functions and characteristics of the bank. Therefore it was not involved. Indeed, on

any amendment or cancellation of the content of the legislation and the provisions of the Civil Code ratified by Decree No. 262, dated March 16, 1943. Since late 1951, it became legal for other banks to engage in banking.

Three branches of the former Italian banks: Bank of Rome, Bank of Naples and Bank of Sicily, had got new licenses to practice their Banking operations in the state of Tripoli, where the Italian community from farmers, traders and businessmen centered and lived there. This community was almost controlled by other foreign elements on external and internal trade of this state with its control and monopoly upon the most important industrial projects.

These banks directly based their works and activities on the foreign sector, which helped to fund the development of the trade between Libya and Italy.

In Fezzan, the only banking facilities that were available during that period were restricted to the facilities were provided by the postal savings system (Abd-Alraheam, M. 2010).

## 4.2 Banking Service during the Period of 1951-1956

Until 1951, there were only two foreign banks carrying out banking services. They used to issue the currency before the independence, and in the first few years of this period, six other branches of foreign banks began to exercise their banking in the country, and thus the banking system until 1956 consisted of eight foreign banks.

But the Bank of Italy which was the central bank of the Italian government did not resume its operations in Libya after the war, because there was no opportunity to work again, especially since the convention between Libya and Italy which was signed in Rome by the two governments on October 2, 1956, which became operational on December 7, 1957. Article III of the Declaration stated that Libya replaces the state of Italy in the rights of the inalienable public property.

Barclays Bank continued its work in both of the states of Tripoli and Cyrenaica as it enjoyed the status of a strong monopoly, which adopt and maintain the accounts and funds of the government and quasi-governmental organizations.

Also it funded some of the business processes, and provided loans and credit facilities to finance some projects, such as the agricultural and construction projects in major cities. It had eight branches scattered in different parts of the country, especially in areas which were inhabited by teams of British troops stationed in Libya.

The advent of Arab Banks to Libya came in recent history unlike the rest of the non-Arab foreign banks. For this reason, the possibility of competition against the foreign banks in Libya was not easy.

With nearly 90% of the foreign Libyan trade was a result of import and export to foreign countries. Non-Arab banks had effective control over the movement of trade in Libya with the outside world. Thus, on the field of banking activity, which used to finance the foreign trade, was the weakness of Arab Banks competition.

Not surprisingly, the Arab banks in general, from the very beginning of its inception, faced a lot of obstacles and difficulties, and were always vulnerable to the competition with foreign banks operating in the same Arab countries. Besides, it was that the Arabs lagged behind technically as well as the administrative banking work, and that the Arabic language lacked the banking terminology (Abd-Alraheam, M. 2010).

## 4.3 Banking Sector during the Period of 1956-1963

This period, was characterized as a positive development in the history of the banking system in the country, as in April 1955, the Law No. 30 was issued. It concerned the establishment of The National Bank of Libya, which appeared as the Central Bank of Libya; issuing the currency in Libya, providing banking services to the government and at the same time performing the commercial banking business carried out by the commercial banks normally in the country.

On October 29, 1958 the Banking Act was issued which addressed the issue of control over the commercial banks, and selected the competent authority to issue the license for the banks to practice their activity, and stipulated that the bank 's capital would not beless than fifty thousand Libyan pounds when it was headquartered in Libya. Regarding the foreign banks which headquartered abroad and had branches in

Libya, the capital would not be less than five hundred thousand pounds without requiring the branches of these banks to bring any part of their capital to Libya.

The law also stipulated that each bank must permanently retain a reserve of money, capital and cash instruments payable within ten days. The law granted the Minister of Finance authorities for determining the amount of the cash reserve, which was imperative for each bank from the commercial banks to keep, according to the explanatory note to provide this law.

The National Bank of Libya, also issued a statement in December 1960 to raise the discount rate in order to influence the inflation in the national economy, and the impact on the credit policy of commercial banks. Such a decision was in those circumstances had an effective impact to ease those banks in the need of money of getting it from the main centers abroad.

The Libyan National Bank tried to prove the existence of itself as a central bank for the state, and found the Banking Act of 1958. The Law of the Libyan National Bank referred to itself as a central bank.

With the growth of the banking system, other aspects became obvious: the monopoly of foreign elements in the country, the links between the local branches and their head office abroad, the growing requests from foreign institutions to get permission to exercise banking activity in Libya, as well as the countries newly acquired prosperity.

All these factors lead to a conclusion that it was not reasonable to leave the banking sector without the proper attention apart from the importance to the national economy. This new awareness conveyed the need to modify and reform the banking legislation in force at the time, while at the same time invest the banking authorities in the country with the powers to influence directly and control the banking activity in Libya(Abd-Alraheam, M. 2010).

#### 4.4 Banking System during the Period of 1963-1968

The banking activity until the beginning of this period was characterized by:

- The Public commercial banks remained in the country, branches of foreign banks whose main centers were abroad, worked according to orders from their major centers.
- 2. The country was free from private Libyan banks.
- 3. Libyan weakness of the banking legislation which did not give the country's banking authority, represented then by the central bank, any actual authority to exercise oversight of serious and effective control over the banking activity.
- 4. The Flourishing of commercial activity and the increase in the areas of investment and profit opportunities in various fields of industrial, agricultural and service sector.
- 5. Increasing requests to the competent authorities from the foreign banks to open branches in Libya to carry out banking operations.

The follow-up of these phenomena highlighted the need to work on changing the methods of the banking system in the country, and to adapt it in real needs of the national economy.

The authorities agreed on the need for an appropriate adjustment to the banking legislation that was existing at the time, and technical committee that included representatives from the Ministry of Finance and the National Bank of Libya were to prepare a draft of the new legislation based on the comparative study of a number of banking legislation in the Arab countries and other developed and developing countries in Asia and Africa.

New legislation was issued in the form of the Banking Act No. 4 in 1963 after many years of delay and hesitation of the managers. According to the Central Bank, this new law acquired the main powers that were recognized naturally to the central banks. That is, controlling all the banking systems and activity, as all foreign bank branches became subject to Libyan legislation in their actions, policies and trends were dictated by the competent banking Libyan authorities, which now has the right to intervene in the coordination and monitoring of the operations of these banking systems (Abd-Alraheam, M. 2010).

# 4.5 The Banks in Libyan Banking System

#### 4.5.1 The Libyan Central Bank

Beside six other members, the Board of Directors consists of the governor as a president and deputy governor as vice-president.

Central Bank of Libya began its activity on April 4, 1956 and replaced the Libyan Monetary Committee which was established in 1951. Among its functionswas to maintain the coverage of the exporting currency assets in Sterling. In the beginning of its work, it did not have any role in the control of money supply and bank credit, or in the control of the banks.

The functions of the Central Bank of Libya are given below:

- Organizing and issuing currency notes and coins, and maintaining the stability of the Libyan cash inside and outside Libya.
- Managing the reserves of gold and foreign currencies, and organizing
  Banking credit in terms of size, type and price to ensure the real needs
  of the economic growth and monetary stability in Libya.
- Taking the required steps and the necessary measures to address the
  economic or financial disturbances whether they are international or
  local, and working as a bank to the commercial banks.
- Controlling of commercial banks and ensuring the safety of their financial situation and monitoring their efficiency and guaranteeing the rights of its customers.
- Work as a bank and a financial agent for the state and its public institutions.

- Provide the advice to the State regarding the draw and evaluate the economic and fiscal policy, and controlling foreign exchange.
- Performing the tasks or processes which were usually carried out by
  any other central bank and may be entrusted with the tasks under the
  Banking Act and cash, credit or any international agreements of which
  the state is a part. Issuance and management of loans are held by the
  state.

#### 4.5.2 The Gumhouria Bank

Gumhouria Bank is one of the banks operating in Libya. The bank was established primarily as a branch of British Barclays bank in Libya. It took its current name on December 22, 1970. It was after a decision taken to nationalize it and all its branches inside Libya to carry the name of Gumhouria Bank.

In 2007, it merged with the Omma Bank. Central Bank of Libya decided to integrate the Omma Bank and GumhouriaBankunder one framework asGumhouria Bank. The budget of the new bank after the merger was 8 billion Libyan Dinars, and thus it became the second largest Libyan bank after the Libyan Foreign Bank, with a number of employees reached during the merge of more than 5,800 employees, in addition to 146 branches. It was also based on asset size to replace among the list of the top ten banks in North Africa.

#### 4.5.3 The Wahda Bank

Wahda Bank is one of the banks operating in Libya with its headquarters in Benghazi, northeast of Libya. It was considered the Libyan joint stock company after being established under Law No. 153 issued on December 22, 1970.

With a capital of 108 million L.D., the socio-economic development fund possesses 54.1 % of its shares while the private sector possesses 26.90 %, and The Arab Bank 19%. The Bank provides all types of banking services through 76 branches deployed in all towns and villages in Libya and fitted with the latest equipment necessary for the banking business.

With respect to international banking transaction, the Bank deals with a network of 247 correspondents in various continents of the world.

#### 4.5.4 The Sahara Bank

Sahara Bank is a Libyan commercial bank founded in 1964. It employs 1,500 people. On December 22, 1970, a law on "nationalization" was passed by the Revolutionary Command Council, which meant that the shares were nationalized as all the banks operating in the country became wholly owned by Libya.

On 25 July 2007 a strategic partnership agreement was signed between the Sahara Bank and the BNP Paribas French Bank Group, under which the French group acquired 19% of the shares of the bank's capital.

#### **4.5.5** Commerce and Development Bank

Trade and Development Bank is a banking company supporting Libyan business. It was founded in 2005 upon the decision of the Secretary of the General People's Committee for Planning and Finance No. (243/1423).

#### 4.5.6 North Africa Bank

Bank of North Africa was established under the decision of the Board of Directors Central Bank of Libya No. 1 in 2006, as a commercial Bank in various business activities and in accordance with the provisions of the Banking Act. The capital of the bank is 350 million, with the participation of the Central Bank of Libya, which became the largest contributor in the paid amount.

The General Administration of Bank is located in Tripoli, and it is managed by a board of directors chosen by the General Assembly of the Bank-executive administration which are managed by banking expert depolarized from the domestic banking market.

# Chapter 5

# THE INTERNET BANKING IN LIBYA

Bank payment systems in recent years are seen as significant developments. They rely on advanced applications by allowing the development of electronic smart means of payment. They contribute to the diversity and the speed as well as the accuracy of the banking and financial services of all kinds. Besides, they have opened new investment prospects.

These factors enabled the Central Bank of Libya to take steps towards the development of its banking sector and made it able to keep pace with global developments. The Central Bank of Libya adopted practical plans for this purpose including an initiative project for the national payments system that involves the technical studies and strategic plans. Moreover, it developed a partnership with a group of specialized international companies to implement the project components of the payments system. According to Ossama A. (2001), this system includes the implementation of the following systems:

#### **5.1 Real Time Gross Settlement**

Within the forwarding frame of the Central Bank of Libya towards activating the advantage of developments in information technology and improving the structure of the banking business, both the Central Bank and Commercial Bank aspire to develop a system of remittances, and the settlement accounts among the banks and the public bodies in the CBL electronically. This system works towards the simultaneous

transfer between banks of high-value funds with the CBL, setting the minimum value of such transfers at more than 10,000 Libyan Dinar, while providing signature services and electronic data encryption so as to enable the participation of banks to manage the liquidity and control transfers since 2008.

Implementing such a system offers several benefits:it reduces the costs and time by using developed electronic services. Also it limits the proportion of risk in commercial activities by facilitating the means of grants loans. It speeds up the disbursement of pensions, the grants, allowances and loans. It facilitates the preparation of budgets for the national sectors and it enables the Central Bank to monitor services and accounts empowering individuals, companies and public bodies to collect the service feesautomatically.

Participating banks are 17 Banks: Central Bank of Libya, Wahda Bank, Sahara Bank, Gumhouria Bank, National Commercial Bank, Bank of North Africa, Waha Bank, Al-Aman Bank, First Gulf Libyan Bank, Agricultural Bank, Savings and Real Estate Investment Bank, Bank of Commerce and Development, Company Banking and Financial Services, SaraiBank, Wafa Bank, United and Investment Bank, Libyan Foreign Bank.

# **5.2** Automated Clearing system

The electronic payment system is used for the implementation and processing of low value transfers less than 10,000 LD. This system which was launched on August 17, 2008 performs a series of repeated transfers such assalaries, bills, and electricity, etc. The net transactions are transferred to the immediate settlement system during two

periods of exchange, the first at 11 am and the second at 1:30 pm, at the completion of the final settlement between banks which takes place.

#### 5.3 Management System Card & ATM/POS

This system provides an essential frame for the national withdrawal cash dispenser, which offers access to all the customer accounts in any of the operating banks. It allows cash withdrawals nationwide, and enables merchants as well as companies to provide services and operate electronically as well as international level of financial transaction.

# 5.4 Automated Checks Processing

This system works electronically settling the checks among banks by adopting a scanning method of digital files and relay, through an automated clearing system, smoothly and safely.

# 5.5 Core Banking System

Based upon the strategy of Central Bank of Libya, which aims to deploy a centralized environment to purify the information, it selected integrated banking system application (Flex Cube Universal Banking), which basically depends on the provider of the service applications that operate the system and covers the banking operations for individuals and companies together in Electronic Banking.

The main feature of this system is to support multiple branches, i.e. the possibility of implementing financial transactions through any branch without reference to the branch which holds a customer account, as well as to support account transactions in different currencies. It endorses multiple channels of payment and back up centralized databases of customers and accounts.

# 5.6 Factors Affecting the Success of the Electronic Banking System

There are several factors that affect the success of the Electronic Banking. The first step for a successful implementation for Electronic Banking is providing plans to the introduction of electronic banking services, beginning with a strategy at the level of the central bank and then moving from the domestic to international. Secondly, the development of standard regulations which allow the linking between the various agencies on a global scale is of the utmost importance.

Thirdly, preparing a plan for the training of human resources is bound to yield a major impact on the outcome internet banking, working on the establishment of administrative organization structure that promotes coordination between the contracting parties. It is also relevant to the success of internet banking. Finally, the existence of a broad network that includes all the relevant actors, and connected to the Internet in accordance with the international standard basis, is obviously one of the prerequisites to the successof internet banking (Ossama, 2001).

# Chapter 6

# METHODOLOGY OF THE STUDY

#### 6.1 Introduction

In this research, the descriptive analytical method is used to describe and evaluate the views of the staff at the Libyan banks about the obstacles for the spread of electronic banking in Libya. The research framework of the present study is based on the study carried out by Ossama A. (2001) on the application of internet banking in Libya. However, his study did not employ a survey or a questionnaire, as it based solely on the official data. Rushdy (2007)carriedouta study which based on Palestine's internet banking system. The questionnaire employed by the study appears to be an accurate empirical tool of research, providing a useful insight to the system. Therefore, a similar questionnaire was designed to serve the purpose of the present study. However, in order to fit the specific aspect of the Libyan case, few modificationswere made.

It is aimed to emphasize the importance of this research, as it is the first comprehensive analysis of Internet Banking in Libya. This research intends to contribute to a deeper understanding of the banking sector in a country that went through political turmoil and is now trying to position itself on the global scene also through its banking sector.

#### **6.2 Data**

The data were collected from a survey which has three dimensions. First dimension contains 5 questionnaires, and the second involves 9 questionnaires, the third dimension contains 9 questionnaires. These questionnaires were distributed to the bank's staff of Libya and the results were analyzed by SPSS version 20.0.

# **6.3** Sample of the Study

According to Kregcie and Morgan (1979), if the population under investigation is around 700, 248 questionnaires should be distributed in order to provide data for a reliable survey. Therefore, a random sample method is used, with a survey distributed to 248 employees from the higher administrative levels operating in Libyan banks. It includes 13 branches and offices in the city of Benghazi.

# **6.4 Response Rate**

Out of 248 questionnaires that were distributed in Libya, 237 were collected. Two of the questionnaires were cancelled due to the lack of seriousness in their answers.

#### **6.5 Research Hypothesis**

Three research hypotheses are the core of this study. These hypotheses are thoroughly investigated and the following chapter presents the most important finding of the investigation.

H1-There is no relationship between the importance of providing electronic banking from the perspective of senior managers and its success in attracting customers and the provision of services.

H<sub>2</sub>-There is no relationship between the importance of the availability of electronic banking and the advantages that come in the case of the provision of online services.

H<sub>3</sub>-There is no relationship between the difficulties faced by electronic banking and its success in providing services.

# 6.6 Questionnaire Design

The questionnaire is composed of two sections.

The first section contains the general data that provides the personal traits and the characteristics of the staff object of the study, and it consists of 6 questionnaires.

The second section contains three dimensions as follows:

The first dimension: shows how important to use the electronic banking is to attract the customers and to identify the services and its expansion, and contains 5 questionnaires.

The second dimension: highlights the advantages for the bank in case of providing the services via the Internet. It contains 9 questionnaires.

The third dimension reveals the difficulties which electronic banks face in the provision of their services through the Internet. It involves 9 questionnaires.

# Chapter 7

# **RESULTS AND DISCUSSION**

# 7.1 Frequencies

42.6% of the respondents hold Diploma, 56.6% bachelor, 8% post graduate. They had specializations on their subject.

The characteristics of the sample can be summarized as follows:

Among the respondents 26.4% were accountants, 35.7% were with Banking and Finance degree, 20% of them studied Management, and 17.9% studied Economy and/or had other specialties. Furthermore, 78.7% were male, and 21.3% were female.

15.7% of the bank's staff was aged less than 25 years, and 21.3% aged 25-30. Moreover, 38.3% were aged 30-35 years, and 24.7% aged over 35 years.

18.7% had experience less than 5 years, 43.8% were experienced between 5-10 years, 27.7% were experienced between 10-20 years, and 9.8% were with more than 20 years of experience, as shown in Table 7.1

# 7.2 Validity and Reliability

Validity and reliability are statistical measures in defining the research quality. The attention needs to be paid to both validity and reliability in order to reduce the possibility of getting incorrect answers (Saunders. et al, 2003).

Table 7.1 Frequency

		Frequency	Percentage (%)
	Diploma	100	42.6
Qualification	Bachelor	133	56.6
Qualification	Post Graduate	2	.8
	Total	235	100.0
	Accounting	62	26.4
F: 11 - C	Banking and Financial Sciences	84	35.7
Field of specialization	Management	47	20.0
specialization	Economy or other specialty	42	17.9
	Total	235	100.0
Gender	Male	185	78.7
Gender	Female	50	21.3
	Total	235	100.0
	Less than 25 years	37	15.7
A	25 years to less than 30 years old	50	21.3
Age	30 years to less than 35 years old	90	38.3
	35 + years	58	24.7
	Total	235	100.0
	Less than 5 years	44	18.7
E-manianaa	5 years to less than 10 years	103	43.8
Experience	From 10 to less than 20 years old	65	27.7
	20 + years	23	9.8
	Total	235	100.0

#### 7.2.1 Validity

It concerned with whether the findings really appear as they are about to be(Yin, 1994). Different sources are highly complementary, and a good case study should use as many sources as possible. The validity of a scientific study increases by using various sources of evidence (Yin, 1994).

The following steps were taken to ensure the validity of this study:

- Required data was collected in the format of a structured questionnaire which based on the literature related to the adoption of internet banking.
- 2. The questionnaire was translated into Arabic language in order to make sure that the measurement scale was adopted appropriately.

- To increase the validity in this research, the researcher selected multiple sources of evidence namely documentation and personal observation.
- 4. Finally, the researcher used well-established literature to construct the frame of references.

#### 7.2.2 Reliability

The reliability can be defined as the degree to which the measurements are free from the error and, therefore, yield consistent results. Operationally, reliability is defined as the internal consistency of a scale, which assesses the degree to which the items are homogeneous.

Reliability can be assessed by the following questions (Easterby-Smith et al. 1991)

- 1. Will the measures yield the same results on other occasions?
- 2. Will similar observation be made by other observers?

In this study, the internal consistency of the questionnaire on a sample consisting of 30 questionnaires by measuring the correlation coefficient between each Correlation coefficients for H1 and its dimension.

Table 7.2 CorrelationCoefficients for H1

	There is no relationship between the importance of providing electronic banking from the perspective of senior management and its success in attracting the customers and the provision of services
Important and proper way	.750**
to attract customers	.000
	235
A proper way to growth	.689**
and the development of	.000
electronic commerce in	235
Libya	
A proper way for dating	.669**
the commodity or the	.000
service	235
A good way to expand the provision	.764**
of services by the Internet	.000
	235
A limited impact on the customers	.666**
who know how to use the Internet	.000
	235

The above table shows that the correlation is significant at alpha (0.01). Therefore, the questionnaire in the first dimension of the survey is valid and reliable.

Table 7.3 shows the correlation coefficient for H2;

Table 7.3 Correlation Coefficients for H2

	There is no relationship between the importance of the availability of
	electronic banking and the advantages that back in the case of the
_ ,	provision of services online
Reduce costs.	.648**
	.000
	235
Increase the volume of	.690**
commercial transactions.	.000
	235
Easy access to local and global	.677**
markets.	.000
	235
Improve customer service.	.683**
	.000
	235
The possibility of providing	.698**
round the clock services.	.000
	235
Saving time and effort.	.698**
	.000
	235
Reduce the opening of new \	.567**
branches.	.000
	235
Offer new banking services.	.592**
	.000
	235
Increase the efficiency of the	.506**
Bank's performance.	.000
-	235

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

The above table shows that the correlation is significant at alpha 0.01. Therefore, the questionnaire in the second dimension of the survey is valid and reliable.

Table 7.4 shows the correlation coefficient for H3.

Table 7.4 Correlation Coefficients for H3

Table 7.4 Correlation Coeff	
	There is no relationship between the difficulties faced by electronic
	banking and its success in providing services.
Lack of understanding of the	.632**
bank's management of the	.000
importance of the Internet in	235
providing services	
Lack of skills among workers	.542**
using this technique.	.000
	235
Failure to allocate the	.622**
necessary budget.	.000
	235
Nonproliferation of Internet for	.719**
users.	.000
	235
He difficulty of dealing with	.598**
the English language with a lot	.000
of Arab users.	235
Lack of infrastructure required	.625**
to set up Web sites	.000
	235
Lack of Internet users in Libya	.713**
because of the high cost.	.000
	235
Slow internet networks	.739**
	.000
	235
Lack of knowledge of the	.619**
Islamic ruling of the electronic	.000
Banks.	235

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

The above table shows that the correlation is significant at alpha 0.01. Therefore, the questionnaire in the third dimension of the survey is valid and reliable.

Furthermore, the researcher used Alpha Cronbach's and the correlation to measure the reliability and validity of the survey. Table 7.5 shows Alpha Cronbach's coefficients and the correlation coefficient to test the reliability for the dimensions.

These coefficients seem to be reliable and statically significant.

Table 7.5 Reliability test for dimensions

	Number of items	Alpha Cronbach's	Correlation	Sig (2tailed)
Importance of providing electronic banking from the perspective of senior managers	5	0.705	0.835**	0.000
Importance of the availability of electronic banking	9	0.748	0.917**	0.000
Difficulties faced by electronic banking	8	0.826	0.863**	0.000

# 7.3 Test of the Hypotheses

The following tables contain the percentage of each questionnaire to the alternatives of each dimension as well as the arithmetic average and the level of significance of each questionnaire.

#### 7.3.1 First Hypothesis

The researcher used T-test for this hypothesis (One Sample t-test)

It is seen from the table that all the items of the dimension are positive whereas the arithmetic average of each questionnaire is bigger than the neutral mean 3. That is, the value of t calculated is bigger than the value of t scheduled at the degree of freedom 234, as well as the level of significance (p value) of each item is less than 0.05.

Therefore, electronic banking is a good and important way to attract the customers, and a proper way to the growth and development of electronic commerce in Libya. It is also a proper way for dating the commodity or the service, and a good way to

expand the provision of services by the Internet, and a limited impact to the customers who deal with the Internet.

The study of Tawfeek (2003) revealed that many banks established websites on the network and settledaccounts reported as confirmed. Also Alshafey (2004) said that the internet banking has been developed dramatically. The witnesses of these developments were the customers who purchase and sell through the internet by using Credit Cards.

Indeed, it becomes clear with Table 7.6 that the arithmetic mean of the all questionnaires is 3.86656 which is greater than the value of the neutral mean which is 3. Besides, the value of t calculated is greater than the t scheduled. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which means that there is a relationship between the importance of providing electronic banking from the perspective of senior management and its success in attracting the customers and the provision of services.

Table 7.6 Mean Scores and t-test Results for the First Dimension

	Т	Df	Sig.(2	Mean
Important and proper way to attract the customers	4.530	234	.000	3.8723
A proper way to growth and the development of electronic commerce in Libya	15.275	234	.000	4.1243
A proper way for dating the commodity or service	1.423	234	.000	3.1362
A proper way to expand the provision of services by the Internet	14.527	234	.000	4.1149
A limited impact on the customers who know how to use the Internet	15.039	234	.000	4.0851

#### 7.3.2 Second Hypothesis

The researcher used t-test for this hypothesis (One Sample t-test).

It is seen from the table that all the questionnaires of the dimension have a positive value whereas the arithmetic average of each questionnaire is bigger than the neutral mean 3. That is, the value of t is bigger than the value of t scheduled at the degree of freedom 234, as well as the level of significance (p value) of each questionnaire is less than 0.05.

Therefore, the benefits that accrue to the bank in case providing online services is to reduce the costs, increase the volume of commercial transactions, facilitate the access to local and international markets, improve customer service, and the ability to provide services round the clock, save time and effort, reduce the opening of new branches, increase the efficiency of the bank's performance, and provide new banking services.

Indeed, 7.7 makes it clear that the arithmetic mean of the all the questionnaires is 3.6231 which is greater than the value of the neutral mean which is 3, and the value of tcalculated is greater than the t scheduled. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. It means that there is a relationship between the importance of the availability of electronic banking and the advantages that come in the case of the provision of online services.

Table 7.7 Mean Scores and t-test Results for the First Dimension

	T	Df	Sig(2	Mean
			tailed)	
Reduce costs.	10.459	234	.000	3.9234
Increase the volume of commercial transactions	9.688	234	.000	3.8043
Easy access to local and global markets.	6.181	234	.000	3.5404
Improve customer service.	2.665	234	.008	3.2340
The possibility of providing round the clock services.	6.809	234	.000	3.5787
Saving time and effort.	13.760	234	.000	4.0766
Reduce the opening of new branches.	.877	234	.038	3.0809
offer new banking services	7.674	234	.000	3.7532
Increase the efficiency of the Bank's performance.	6.764	234	.000	3.6170

#### 7.3.3 Third Hypothesis

It is seen from the table that all the items of the area have positive value whereas the arithmetic average of each questionnaire is bigger than the neutral mean 3, and that the value of t for each paragraph is bigger than the value of t scheduled at degree of

freedom 234, as well as the level of significance (p value) of each questionnaire is less than 0.05.

Therefore, difficulties faced by electronic banking due to the lack and missing of understanding of the Bank's management for the importance of the internet in provision of services are; lack of skills among staff using this technique, failure to allocate the necessary budget, non-proliferation of Internet among users in a satisfactory manner, difficulty of dealing with the English language for a lot of Arab users, lack of infrastructure required to set up the web sites, and the small number of Internet users because of the high cost in Libya, slow Internet networks, and the lack of knowledge with the Islamic ruling of internet banking.

Generally it becomes clear with table 7.8 that the arithmetic mean of the all questionnaires 3.6586 which is greater than the value of the neutral mean, which is 3. The value of totalculated is greater than the t scheduled, and the significant level is 0.000 which is smaller than 0.05. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which means that there is a relationship between the difficulties faced by electronic banking and its succession in providing services.

Table 7.8 Mean Scores and t-test Results for the First Dimension

Table 7.6 Wear Scores and t-test Results	T	Df	Sig(2	Mean
			tailed)	
Lack of understanding of the bank's management of the importance of the Internet in providing services	6.586	234	.000	3.6000
Lack of skills among workers using this technique	15.175	234	.000	4.2085
Failure to allocate the necessary budget.	.598	234	.550	3.3957
Nonproliferation of Internet for users.	4.175	234	.000	3.8979
The difficulty of dealing with the English language with a lot of Arabs users.	10.695	234	.000	4.0298
Lack of infrastructure required to set up Web sites	13.441	234	.000	3.6638
Lack of Internet users in Libya because of the high cost.	7.521	234	.000	3.6638
Slow internet networks	7.878	234	.000	.66383
Lack of knowledge of the Islamic ruling of the electronic Banks.	4.573	234	.000	3.4085

# **Chapter 8**

# CONCLUSION AND RECOMMENDATIONS

Based on the results obtained in the study, this chapter presents the conclusion, and recommendations.

# 8.1 Results of the Study

Throughout the statistical analysis of the respondents' views, and according to the results of the studies which are included in this study, the most important findings of this research can be summarized as follows:

The findings show that the electronic banking is considered as a good and important way to attract the customers, and for the development and growth of trade in Libya and a good way to expand the provision of the services provided by the banks.

Theelectronic banks have a limited impact on customers who are good at dealing with Internet.

The advantages that accrue to the bank in the case of the provision of services via the Internet are to reduce the costs, increase the volume of commercial transactions, enable an easy access to local and global markets, improve customer services together with the possibility of providing services around the clock, reduce the opening of new branches of the bank, increase the efficiency of the bank's performance, and provide new banking services.

Senior managers are interested in supporting the electronic banking via good planning to use the Internet. They pay attention to solve the problems that hinder the use of the Internet, and provide workers with training and the necessary skills, as well as providing funds and equipment necessary for the operations on the Internet.

Difficulties facing the spread of electronic banking in Libya are as following:

- Lack of awareness of some banks as the importance of the benefits arises from the use of the electronic banking system.
- The weakness of security systems that achieved in the field of electroniccommerce inconcluding business deals.
- Lack of human resources that have scientific qualifications and experience on the field, both in using the computer or the language.
- The absence of an appropriate environment for practicing the electroniccommerce such as telecommunications and Internet users that ensure the security and confidentiality.
- The absence of Arabic e-markets, which encourage consumers and business owners to buy goods and services via the Internet.
- Arabic language in Libya and the problems of dealing with the most foreign websites, is one of the main obstacles whichhinders the spread of the electronic banking in Libya.
- The Lack of knowledge of the Islamic rules of internet banking.

# 8.2 Recommendations of the Study

Depending on the analysis and interpretation of the previous results in this research, the study suggests the following recommendations:

Work on training and qualification of the specialists in the field of information technology and systems, as well as in the field of communications and networking.

Protection of the consumer and the user of this service with respect to the privacy and the confidentiality.

The need to provide an appropriate infrastructure in terms of hardware and software and telecommunications services and the Internet.

The creation of a legislative legal environment characterized by transparency and flexibility. In addition, create a clear framework and proper recognition of the electronic signature.

Work to increase the awareness with internet banking. In addition, arrange practical courses on how to protect the Libyan users to their electronic-stores on the Internet.

And work on solving the problems that hinder the use of the Internet.

The bank should improve its processes and works on the Internet, and to be aware of the benefits and advantages arising from such performance. The banks are asked to establish their own sites on the Internet which provides services through it, and it should be easy to customers to get through it and deal with it.

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# **APPENDIX**

# Appendix A: Sample of the Questionnaire

Thank you for participating in this study. The survey should take about 10 minutes to complete. Your responses are kept confidential.

Your answers must fit in the scale of 1(strongly agree) to 5(strongly disagree):

There is no relationship between the importance of providing electronic banking from the perspective of senior management and its success in attracting customers and the provision of services:

Important and proper way to attract customers	1	2	3	4	5
A proper way to Growth and development of electronic commerce in Libya	1	2	3	4	5
A proper way for dating commodity or service	1	2	3	4	5
A good way to expand the provision of services by the Internet	1	2	3	4	5
A limited impact on the customers who know how to use the Internet	1	2	3	4	5

There is no relationship between the importance of the availability of electronic banking and the advantages that back in the case of the provision of services online:

Reduce costs.	1	2	3	4	5
Increase the volume of commercial transactions .	1	2	3	4	5
Easy access to local and global markets.	1	2	3	4	5
Improve customer service.	1	2	3	4	5
The possibility of providing round the clock services.	1	2	3	4	5
Saving time and effort.	1	2	3	4	5
Reduce the opening of new branches.	1	2	3	4	5
Offer new banking services.	1	2	3	4	5
Increase the efficiency of the Bank's performance.	1	2	3	4	5

There is no relationship between the difficulties faced by electronic banking and its success in providing services:

Lack of understanding of the bank's management of the importance	1	2	3	4	5
of the Internet in providing services					
	1	2	3	4	5
Lack of skills among workers using this technique.					
	1	2	3	4	5
Failure to allocate the necessary budget					
Nonproliferation of Internet for users.	1	2	3	4	5
	1	2	3	4	5
The difficulty of dealing with the English language with a lot of Arab					
users.					
	1	2	3	4	5
Lack of infrastructure required to set up Web sites					
	1	2	3	4	5
Lack of Internet users in Libya because of the high cost.					
	1	2	3	4	5
Slow internet networks					
	1	2	3	4	5
Lack of knowledge of the Islamic ruling of the electronic Banks.					

# **Personal Information:**

Age:	less than 25 □
	25-30 □
	30-35 □
	35+□
Qualif	fication:Diploma□
Bache	lor 🗆
Post G	raduate □
Field o	of Specialization: Accounting
Bankiı	ng and Finance □
Manag	gement $\square$
Econo	my or other specialty $\square$
Gende	er: Female 🗆
Male	
Exper	ience: less than 5 years □
5-10 y	ears 🗆
10-20	years 🗆
20+ ye	ears 🗆

# **Appendix B: Output Tables**

**Important and Proper Way to Attract Customers** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	23	9.8	9.8	9.8
	Disagree	37	15.7	15.7	25.5
	Unsure	68	28.9	28.9	54.5
	Agree	40	17.0	17.0	71.5
	Strongly agree	67	28.5	28.5	100.0
	Total	235	100.0	100.0	

A Proper Way to Growth and Development of Electronic Commerce in Libya

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	9	3.8	3.8	3.8
	Disagree	18	7.7	7.7	11.5
	Unsure	28	11.9	11.9	23.4
	Agree	60	25.5	25.5	48.9
	Strongly agree	120	51.1	51.1	100.0
	Total	235	100.0	100.0	

A Proper Way for Dating Commodity or Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	47	20.0	20.0	20.0
	Disagree	36	15.3	15.3	35.3
	Unsure	51	21.7	21.7	57.0
	Agree	40	17.0	17.0	74.0
	Strongly agree	61	26.0	26.0	100.0
	Total	235	100.0	100.0	

A Good Way to Expand the Provision of Services by the Internet

11 0000	sood way to Expand the Frovision of Services by the internet					
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Strongly disagree	12	5.1	5.1	5.1	
	Disagree	15	6.4	6.4	11.5	
	Unsure	33	14.0	14.0	25.5	
	Agree	49	20.9	20.9	46.4	
	Strongly agree	126	53.6	53.6	100.0	
	Total	235	100.0	100.0		

A Limited Impact on the Customers Who Know How to Use the Internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	9	3.8	3.8	3.8
	Disagree	14	6.0	6.0	9.8
	Unsure	38	16.2	16.2	26.0
	Agree	61	26.0	26.0	51.9
	Strongly agree	113	48.1	48.1	100.0
	Total	235	100.0	100.0	

#### **Reduce Costs.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	24	10.2	10.2	10.2
	Disagree	15	6.4	6.4	16.6
	Unsure	35	14.9	14.9	31.5
	Agree	42	17.9	17.9	49.4
	Strongly agree	119	50.6	50.6	100.0
	Total	235	100.0	100.0	

Increase the Volume of Commercial Transactions.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	17	7.2	7.2	7.2
	Disagree	27	11.5	11.5	18.7
	Unsure	34	14.5	14.5	33.2
	Agree	64	27.2	27.2	60.4
	Strongly agree	93	39.6	39.6	100.0
	Total	235	100.0	100.0	

**Easy Access to Local and Global Markets.** 

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	25	10.6	10.6	10.6
	Disagree	31	13.2	13.2	23.8
	Unsure	46	19.6	19.6	43.4
	Agree	58	24.7	24.7	68.1
	Strongly agree	75	31.9	31.9	100.0
	Total	235	100.0	100.0	

Improve Customer Service.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	36	15.3	15.3	15.3
	Disagree	32	13.6	13.6	28.9
	Unsure	59	25.1	25.1	54.0
	Agree	57	24.3	24.3	78.3
	Strongly agree	51	21.7	21.7	100.0
	Total	235	100.0	100.0	

The Possibility of Providing Round the Clock Services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	20	8.5	8.5	8.5
	Disagree	31	13.2	13.2	21.7
	Unsure	56	23.8	23.8	45.5
	Agree	49	20.9	20.9	66.4
	Strongly agree	79	33.6	33.6	100.0
	Total	235	100.0	100.0	

Saving Time and Effort.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	12	5.1	5.1	5.1
	Disagree	21	8.9	8.9	14.0
	Unsure	25	10.6	10.6	24.7
	Agree	56	23.8	23.8	48.5
	Strongly agree	121	51.5	51.5	100.0
	Total	235	100.0	100.0	

Reduce the Opening of New Branches.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	47	20.0	20.0	20.0
	Disagree	34	14.5	14.5	34.5
	Unsure	57	24.3	24.3	58.7
	Agree	47	20.0	20.0	78.7
	Strongly agree	50	21.3	21.3	100.0
	Total	235	100.0	100.0	

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Offer New Banking Services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	35	14.9	14.9	14.9
	Disagree	21	8.9	8.9	23.8
	Unsure	28	11.9	11.9	35.7
	Agree	34	14.5	14.5	50.2
	Strongly agree	117	49.8	49.8	100.0
	Total	235	100.0	100.0	

Increase the Efficiency of the Bank's Performance.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	29	12.3	12.3	12.3
	Disagree	24	10.2	10.2	22.6
	Unsure	45	19.1	19.1	41.7
	Agree	47	20.0	20.0	61.7
	Strongly agree	90	38.3	38.3	100.0
	Total	235	100.0	100.0	

Lack of Understanding of the Bank's Management of the Importance of the Internet in Providing Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	29	12.3	12.3	12.3
	Disagree	25	10.6	10.6	23.0
	Unsure	45	19.1	19.1	42.1
	Agree	48	20.4	20.4	62.6
	Strongly agree	88	37.4	37.4	100.0
	Total	235	100.0	100.0	

Lack of Skills Among Workers Using this Technique.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	15	6.4	6.4	6.4
	Disagree	12	5.1	5.1	11.5
	Unsure	29	12.3	12.3	23.8
	Agree	32	13.6	13.6	37.4
	Strongly agree	147	62.6	62.6	100.0
	Total	235	100.0	100.0	

Failure to Allocate the Necessary Budget.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	60	25.5	25.5	25.5
	Disagree	27	11.5	11.5	37.0
	Unsure	46	19.6	19.6	56.6
	Agree	43	18.3	18.3	74.9
	Strongly agree	59	25.1	25.1	100.0
	Total	235	100.0	100.0	

//

Nonproliferation of Internet for Users.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	40	17.0	17.0	17.0
	Disagree	27	11.5	11.5	28.5
	Unsure	40	17.0	17.0	45.5
	Agree	56	23.8	23.8	69.4
	Strongly agree	72	30.6	30.6	100.0
	Total	235	100.0	100.0	

The Difficulty of Dealing With the English language With a Lot of Arabs Users.

	The Difficulty of Dealing With the English language With a Bot of Mado Osers.				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	18	7.7	7.7	7.7
	Disagree	19	8.1	8.1	15.7
	Unsure	42	17.9	17.9	33.6
	Agree	46	19.6	19.6	53.2
	Strongly agree	110	46.8	46.8	100.0
	Total	235	100.0	100.0	

Lack of Infrastructure Required to Set Up Web Sites

	•	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	12	5.1	5.1	5.1
	Disagree	16	6.8	6.8	11.9
	Unsure	38	16.2	16.2	28.1
	Agree	56	23.8	23.8	51.9
	Strongly agree	113	48.1	48.1	100.0
	Total	235	100.0	100.0	

Lack of Internet Users in Libya Because of the High Cost.

Lack of Internet Osers in Libya Decause of the High Cost.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	26	11.1	11.1	11.1
	Disagree	22	9.4	9.4	20.4
	Unsure	45	19.1	19.1	39.6
	Agree	54	23.0	23.0	62.6
	Strongly agree	88	37.4	37.4	100.0
	Total	235	100.0	100.0	

#### **Slow Internet Networks**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	19	8.1	8.1	8.1
	Disagree	29	12.3	12.3	20.4
	Unsure	47	20.0	20.0	40.4
	Agree	57	24.3	24.3	64.7
	Strongly agree	83	35.3	35.3	100.0
	Total	235	100.0	100.0	

Lack of knowledge of the Islamic Rules of the Electronic Banks.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	33	14.0	14.0	14.0
	Disagree	25	10.6	10.6	24.7
	Unsure	57	24.3	24.3	48.9
	Agree	53	22.6	22.6	71.5
	Strongly agree	67	28.5	28.5	100.0
	Total	235	100.0	100.0	

#### **Correlations Coefficients for H1**

CorrelationsCoef	icients for H1	
		There is a relationship between the importance of the availability
		of electronic banking and the advantages that back in the case of
		the provision of services online
Reduce costs.	Pearson Correlation	.648**
	Sig. (2-tailed)	.000
	N	235
Increase the	Pearson Correlation	.690**
volume of	Sig. (2-tailed)	.000
commercial	N	235
transactions.		
Easy access to	Pearson Correlation	.677**
local and global	Sig. (2-tailed)	.000
markets.	N	235
Improve	Pearson Correlation	.683**
customer	Sig. (2-tailed)	.000
service.	N	235
The possibility	Pearson Correlation	.698**
of providing	Sig. (2-tailed)	.000
round the clock	N	235
services.		
Saving time and	Pearson Correlation	.698**
effort.	Sig. (2-tailed)	.000
	N	235
Reduce the	Pearson Correlation	.567**
opening of new	Sig. (2-tailed)	.000
branches.	N	235
Offer new	Pearson Correlation	.592**
banking	Sig. (2-tailed)	.000
services.	N	235
Increase the	Pearson Correlation	.506**
efficiency of the	Sig. (2-tailed)	.000
Bank's	N	235
performance.	_	

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

Correlations Coefficients for H2		
		There is a relationship between the difficulties faced by electronic banking and its success in providing services.
L'ack of understanding of the	Pearson Correlation	.632**
cbank's management of the	Sig. (2-tailed)	.000
importance of the Internet in	N	235
providing services		
Lack of skills among workers	Pearson Correlation	.542**
using this technique.	Sig. (2-tailed)	.000
	N	235
Failure to allocate the	Pearson Correlation	.622**
necessary budget.	Sig. (2-tailed)	.000
	N	235
Nonproliferation of Internet for	Pearson Correlation	.719**
users.	Sig. (2-tailed)	.000
	N	235
He difficulty of dealing with	Pearson Correlation	.598**
the English language with a lot	Sig. (2-tailed)	.000
of Arab users.	N	235
Lack of infrastructure required	Pearson Correlation	.625**
to set up Web sites	Sig. (2-tailed)	.000
	N	235
Lack of Internet users in Libya	Pearson Correlation	.713**
because of the high cost.	Sig. (2-tailed)	.000
	N	235
Slow internet networks	Pearson Correlation	.739**
	Sig. (2-tailed)	.000
	N	235
Lack of knowledge of the	Pearson Correlation	.619**
Islamic ruling of the electronic	Sig. (2-tailed)	.000
Banks.	N	235

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

st. Correlation is significant at the 0.05 level (2-tailed).

#### **Correlation Coefficients for H3**

Correlation Coefficients for 115	
	Total
There is a relationship between Pearson Correlation	.835**
the importance of providing Sig. (2-tailed)	.000
electronic banking from the N	235
perspective of senior	
management and its success in	
attracting customers and the	
provision of services	
There is a relationship between Pearson Correlation	.917**
the importance of the Sig. (2-tailed)	.000
availability of electronic N	235
banking and the advantages	
that back in the case of the	
provision of services online	
There is a relationship between Pearson Correlation	.863**
the difficulties faced by Sig. (2-tailed)	.000
electronic banking and its N	235
success in providing services.	
Total Pearson Correlation	1
Sig. (2-tailed)	
N	235

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).