



INTENTION TO USE INTERNET BANKING AMONG
IRANIAN CUSTOMERS: A STRUCTURAL EQUATION
MODELLING APPROACH

BY

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ABSTRACT

The fast growth of information technology (IT) has meant that many tasks can be performed simultaneously and in relative short periods. IT technologies have seen unprecedented advances since the advent of the Internet. From the consumers' perspective, the use of the Internet has facilitated the expedient performance of many daily tasks to the extent that it has started to define the very meaning of daily routines. Such tasks include E-Banking, E-Business, Social Networking, E-Shopping, and so forth. Despite its numerous influences, for the sake of a focused discussion and given its increasing prominence, this thesis concentrates on Internet banking. The statistical population of this study consists of Iranian customers engaged in Internet banking in Mashhad, Iran. The researcher distributed 310 self-administrated questionnaires among the sample population who participated voluntarily. Statistical package for social science (SPSS) and Structural Equation Model were employed to analyse the data and test the research hypotheses. The statistical findings revealed that there is a significant relationship between perceived ease of use and intention to use the internet banking, allowing the researcher to accept H1. Likewise, there is a significant correlation between perceived usefulness and intention to use the internet banking leading to acceptance of H2. The third hypothesis (H3) was not supported by the research results, since surprisingly, no significant relationship was found between website quality/design and intention to use the internet banking. Finally, the fourth hypothesis (H4) was accepted since there is a significant correlation between social influence and intention to use the internet banking.

ملخص البحث

العديد من المهام يمكن القيام بها في وقت عصر تكنولوجيا المعلومات (IT)، وذلك لسبب النمو السريع لتكنولوجيا المعلومات. جميع المهام والتي كانت تعتبر صعبة الإنهاء في وقت قصير، يمكن إنجازها الآن بسهولة عن طريق استخدام الإنترنت. من وجهة نظر مستخدم الإنترنت فإن العديد من المهام يمكن القيام بها على وجه الدقة عند التعامل مع المهام الروتينية اليومية، والتي تشمل مثلا الخدمات المصرفية الإلكترونية، الأعمال الإلكترونية، والشبكات الاجتماعية، التسوق الإلكتروني... وإلخ. وبتاء على ذلك، فإن العنصر الرئيسي الذي سيتم مناقشته في هذه الدراسة هي الخدمات المصرفية عبر الإنترنت. تتكون العينة الإحصائية لهذه الدراسة من العملاء الإيرانيين الذين يستخدمون من الخدمات المصرفية عبر الإنترنت في مدينة مشهد، إيران. لقد قام الباحث بتوزيع حوالي 310 من نسخ الاستبيان على المتعاملين الذين يميلون إلى المشاركة في الدراسة طوعا. هذه الدراسة استخدمت الحزمة الإحصائية للعلوم الاجتماعية (SPSS) والإنشائية لتحليل البيانات واختبار افتراضيات البحث. كشفت النتائج الإحصائية أن هناك علاقة ذات دلالة إحصائية بين عنصر سهولة الاستخدام وعنصر نية استخدام الخدمات المصرفية عبر الإنترنت، مما يتيح للباحث قبول الفرضية الأولى وبالمثل، هناك أيضا وجود علاقة ذات دلالة إحصائية بين عنصر الحصول على فائدة وعنصر نية استخدام الخدمات المصرفية عبر الإنترنت مما يؤدي إلى قبول الفرضية الثانية. لم تؤيد نتائج البحث الفرضية الثالثة، والعجيب في الأمر أنه لم يتم العثور على علاقة ذات دلالة إحصائية بين جودة الموقع / التصميم والدافع نحو استخدام الخدمات المصرفية عبر الإنترنت. وأخيرا، تم قبول الفرضية الرابعة للبحث لأنه ليس هناك ارتباط كبير بين النفوذ الاجتماعي ونية استخدام الخدمات المصرفية عبر الإنترنت.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion it conformed to acceptable standard of scholarly presentation and is fully adequate in scope and quality, as a dissertation for the degree of Master of Science (Marketing).

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DECLARATION

I hereby declare that the findings of this study are the results of my research effort. I also declare that it has not been previously or concurrently submitted as a whole for any other degree at IIUM or any other institutions.

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LIST OF ABBREVIATIONS

ABP	Automatic Bill Payment
e.g.	<i>(exempli gratia)</i> : for example
EFT	Electronic Fund Transfer
et al.	<i>(et alia)</i> : and others
i.e.	<i>(id est.)</i> : that is
IB	Internet Banking
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
SPSS	Statistical Package for the Social Sciences
TAM	Technology Acceptance Model

CHAPTER ONE

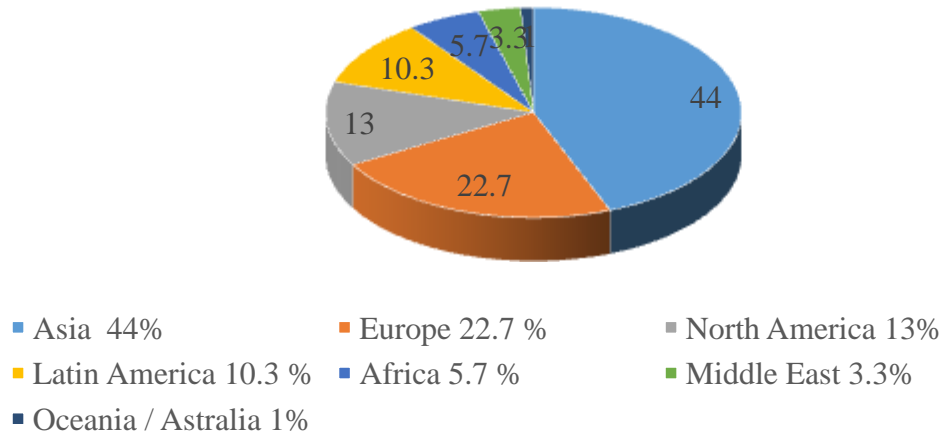
INTRODUCTION

1.1 INTRODUCTION

The rapid growth of information technology (IT) has facilitated the quick execution of many tasks. Of these, the advent of the Internet has made many difficult tasks much easier and have significantly shortened the required to perform them. Such is the case in both developed and developing countries. Global statistics in 2011 revealed that Internet users in Asia comprise 44 percent of total global users, which is the highest in the world (Figure 1.1.). From the consumers' perspective, the Internet has made several daily routine tasks easier. These include E-Banking, E-Business, Social Networking, E-Shopping and so forth. This study focuses on developments in Internet banking.

The banking industry is often updating its use of new communication media through which they offer customers convenient services. Within this evolution of banking services, the Internet is proving a notable driver of new products and services that continues to remove the need for physical presence and industrial and regulatory barriers. The Internet is also used as an effective information and communication channel and database.

Internet Users in the World Distribution by World Regions - 2011



Source: Internet World Stats- www.internetworldstats.com/stats.htm

Figure 1.1 Distribution of Internet users in different world regions.

1.2 BACKGROUND OF THE STUDY

This study investigates the intention of Iranian customers to engage in online banking. Gathering and delivery of the required relevant information through information technology have led to the creation of a large amount of new products and services. Banks and financial institutions found that innovative, up to date, convenient, and reliable services contribute to customer loyalty and satisfaction. While some banks try to fully cover the market physically, other banks try to deliver their services through intermediaries. Information technology as a strategic tool revolutionised the way financial institutions operate and offer their services. Internet banking has equipped banks to offer low cost and convenient services without restriction of time and space. Although Internet banking offers many benefits to banks and their customers compared to traditional banking, many existing problems should be addressed to help promote the extensive adoption of Internet banking.

Global advances in information technology, communication, and financial transactions have dramatically influenced the financial industry to revise their services in order to stay competitive. Banks and financial institutions must fulfil their customers' needs who demand flexible, convenient, powerful, and easy to use devices and tools.

Although Internet banking has been widely developed among customers in developed countries, less developed and developing countries are still facing difficulties achieving broad adoption of information technology through banking channels. A poor economy and inadequate infrastructures and facilities are major factors causing low customer intention to use Internet banking. Other factors such as social influence have also impacted the intention of customers to engage in online banking (Al-sukkar & Hasan, 2004). Although the mentioned factors are main determinants of the low rate of adoption in Iran, other factors such as low service quality (Pour Mirza et al., 2009), weak telecommunication infrastructure (Sheikhan, 2009), and low Internet connection quality (Mirmohhamadi & Sohrabi, 2013) have also contributed to the low customer intention to use the internet banking. While Iran has 23 million users, surprisingly, only 2 percent of these users have access to high speed Internet (Amin et al., 2008). Other factors such as low degree of trust (Manafi et al., 2011), low attraction of Internet banking, and poor skills are also associated with fewer number of adopters (Mirmohhamadi & Sohrabi, 2013).

1.3 PROBLEM STATEMENT

Although Internet banking offers lots of helpful services, Iranians have faced major difficulties adapting themselves to this new technology. Based on Al-sukkar and Hasan (2004) in Jordan, Middle East countries suffer from several problems that lead

to low adoption to Internet banking. These problems include lack of offers, privacy issues, restrictive government policies, weak facilities and telecommunications, low quality Internet connection, and low awareness of its costs and benefits. They argued that although people understand the benefits of new technology services, there is still low intention to bank using Internet channels.

Iran as a developing country has faced difficulties adopting Internet banking as a new technology. People in Iran are late adopters of Internet banking. Iran has recently sought to join the World Trade Organisation (WTO). With this in mind, the government realises that a strong Internet banking system is a fundamental need and a key tool to achieve its economic goals and compete with international banks and financial institutions in the Middle East.

In addition, continuous developments in information technology has led to the unprecedented accessibility of a wide variety of services. Iranian banks need to stay innovative and offer up to date services to their customers to be able to compete with several low cost and convenient international banking services. Although commercial banks in Iran attempt to revolutionise their services to attract more customers, the new technology is often overlooked and existing adoption attempts have largely been unsuccessful. Such a predicament calls for more research on the adoption of online banking and related fields. Subsequently, there is a need to determine contributing factors to users and non-users' intention for using Internet banking. The results could help the public and private financial institutions and banks to acquire valuable information in order to offer services efficiently through Internet intermediaries leading to broader adoption of Internet banking in Iran and other developing countries. Such a development would enable Iranian banks to compete with other institutions in

the Middle East and attract international customers outside the region with fast and convenient online services.

1.4 RESEARCH QUESTIONS

This research endeavours to answer the following research questions:

1. What is the relationship between perceived ease of use and intention to use the internet banking among Iranian customers?
2. What is the relationship between perceived usefulness and intention to use the internet banking among Iranian customers?
3. What is the relationship between website design quality and Internet banking among Iranian customers?
4. What is the relationship between social influence and Internet banking among Iranian customers?

1.5 RESEARCH OBJECTIVES

As a reflection of the research question, this thesis endeavours to achieve the following objectives:

1. To determine the relationship between perceived ease of use and intention to use the internet banking among Iranian customers.
2. To determine the relationship between perceived usefulness and intention to use the internet banking among Iranian customers.
3. To determine the relationship between website design quality and Internet banking among Iranian customers.
4. To determine the relationship between social influence and Internet banking among Iranian customers.

1.6 SIGNIFICANCE OF THE STUDY

Iran is currently facing strict sanctions implemented by United States and other Western and European countries in order to stop its nuclear energy program. Although Iran's government has denied any attempt to produce nuclear weapons, these sanctions are restricting Iran's economy. Despite having industrial and agricultural sectors beside oil, still more than 60 percent of Iran's government expenditures are funded by oil export income. Iran's oil exports have declined dramatically from 2.5 to 1.1 million barrels per day due to sanctions. Consequently, the government and private sector have attempted to shift from the current oil-dependent economy to a more industrial and financial-based economy.

Since all transactions and economic activities depend on financial and banking services, it is necessary for governmental and private financial sector to employ up-to-date technologies and facilities. However, political restrictions, Internet filtering, as well as weak infrastructures have resulted in low expansion of Internet services across the country. Low quality Internet connections have also been a tiring problem for Iranian Internet users. Nevertheless, the broad platforms of services and benefits of Internet banking encourage the private and public banks to offer their services through Internet channels (Gilaninia & Moussavian, 2009).

Internet banking helps an organisation to facilitate business and reduce costs. The Central bank of Iran reported that 7.11 billion banknotes are used in Iran, the highest number in the world. The average life of each notes is 3.5 years. Besides improving service quality, establishing electronic banking reduces banks costs by 60 to 70 percent (Amadeh & Jafarpour, 2009). Hence, it is essential for governmental and private financial sectors to provide better services and attract customers to use their banking services through Internet intermediaries.

1.7 SCOPE OF THE STUDY

This research investigates the research phenomena by distributing questionnaires among Iranian customers living in Mashhad. Mashhad is the second largest city in Iran after Tehran, with a population of approximately 5 million people (quoted in Iran daily, 2013). It has as large number of banks and key governmental and private financial institutions.

1.8 DEFINITIONS OF KEY TERMS

1.8.1 Electronic commerce

Electronic commerce is defined as “accomplishing different business activities including business-to-business and business-to-customer by employing different electronic methods and technologies” (Johnson & Hall, 2005).

1.8.2 Electronic banking

Electronic banking is the interaction of information between banks and customers and delivering services through individual’s personal computers, cell phones, or television (Daniel, 1999).

1.8.3 ATM machines

Automated Teller Machines are banking terminals installed in banks or other strategic areas, providing 24-hour 7 days a week services for customers’ convenience (Odachi, 2011).

1.8.4 Smart card

Smart cards are standard sized plastic cards containing an integrated circuit, which provides capacity to keep data. Customers use smart cards as cash substitution in shopping or money transfer (Elliot & Loebbecke, 1998).

1.8.5 Electronic Funds Transfer (EFT)

Transferring money to another account by computer across a single financial organisation or through multiple organisations.

1.8.6 Electronic finance

Electronic finance is defined as “developing financial services provided by depository institutions, insurance organisations and security firms by Internet banking service technologies and facilities” (Claessens et al., 2002).

1.8.7 Electronic Money

Electronic money is defined as “stocks of financial value through electronic tools which allow to purchase and transfer money electronically instead of visiting banks physically to access services and accomplish tasks” (European Central Bank, 1998).

1.9 THESIS OUTLINE

The study comprises two main sections. Section A includes three chapters starting with an introduction in chapter one, followed by literature review in chapter two. Lastly in chapter three, the methodology and research design are explained.

Section B includes chapters four and five. Chapter four contains the data analysis and results. The study ends with a discussion and conclusion in chapter five.

1.10 CHAPTER SUMMARY

The current chapter started with an introduction explaining the importance and role of Internet in fast changing life and business environments. The chapter then explained the necessity of adopting latest banking technology and facilities. In the background of study, some previous research on the topic was quoted. Research problems, objectives and significance of the study were further explained in the chapter. Finally, some keywords used in the thesis were defined.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The 2014 Internet Trends revealed that Smartphone users comprise some 30 percent of total mobile users. The report highlighted that there was a global increase of 15.6 percent for the with double-digit future growth forecasts (Internet Society Global Internet Report, 2014). E-Marketer data supported this by asserting that a minimum of 2.23 billion people globally access the internet via mobiles at least once a month (eMarketer Databases, 2015). Furthermore, PayPal disclosed that in 2013 online transactions worth some \$127 billion were performed via mobile internet access. Similarly, Alipay claimed that online transaction worth \$150 billion were performed via mobile internet access for the same period (PayPal Annual Report, 2014).

This chapter begins with definitions of key terms such as electronic commerce, Internet banking, benefits and channels followed by international studies on adoption of Internet banking in different countries using different theories and models. It then explains the adoption of Internet banking in developing countries and Iran. Finally, the chapter defines the variables in the research hypothesis and relationships among independent and dependent variables by referring to previous studies.

2.2 ELECTRONIC COMMERCE AND ELECTRONIC BANKING

The introduction of e-commerce has led to major rapid advancements in online systems allowing easy access to online transactions. The services offered online vary widely from paying bills to buying groceries. It has caused many contemporary

merchants to modernise by providing online platforms for their products and services leading to expansion of m-commerce. Figure 2.1 shows global online shopping trends for 2012, 2013, and 2014 with forecasts until 2018. For example, in 2016, online shopping is expected to reach 1.92 trillion U.S. dollars (Pewinternet.org).

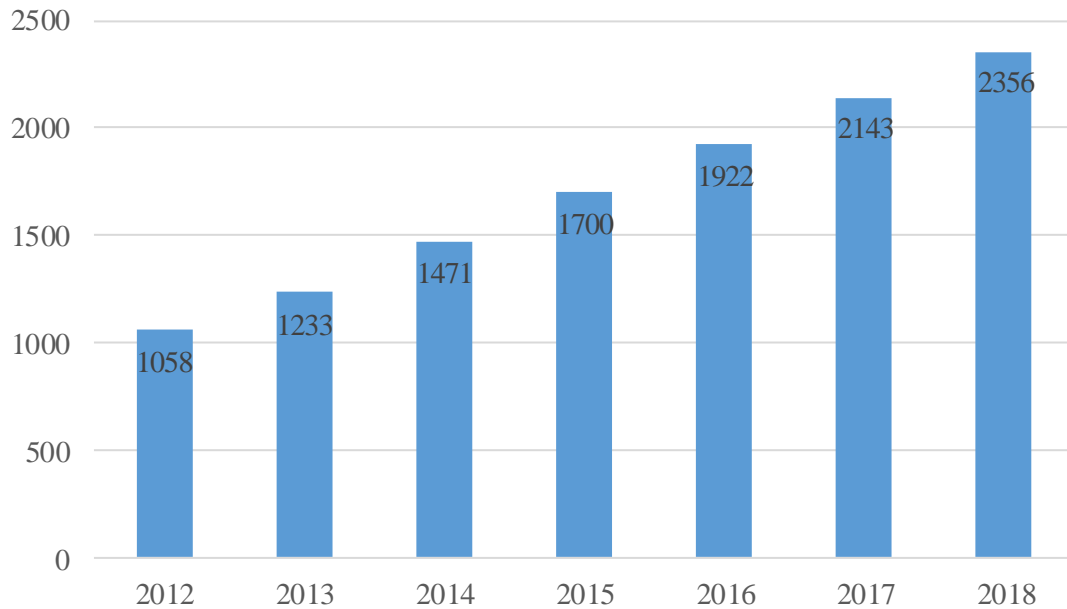


Figure 2.1 Worldwide online shopping

Electronic commerce has been defined differently by different scholars. For example, Johnson and Hall (2005) considered electronic commerce as “accomplishing different types of business activities through the use of different methods and technologies”. It includes the purchase, sale, and trade of products or services through virtual channels. Internet as a part of information technology innovation has significantly changed the structure of many businesses such as banking, insurance, government services, shopping, and learning. Online banking from home as a distance banking service has been offered as early as 1980. In the late 80s, people understood Internet banking as access to banking services through terminal, keyboard, and phone lines. In 1981, the United States started online banking in Citibank, Chase Manhattan,