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Scientific Journal of  
**Pure and Applied Sciences**

Journal homepage: [www.Sjournals.com](http://www.Sjournals.com)



**Original article**

## Analyzing e-banking in iran and other countries

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### ARTICLE INFO

### ABSTRACT

#### *Article history,*

Received 21 April 2014

Accepted 14 May 2014

Available online 29 May 2014

#### Keywords,

Banking

Iran

Global

E-banking is the most recent outcome of modern banking services which provides unlimited markets and paves the way for better risk management. It has made a big progress during recent years especially in developed countries. However, new comer with innovative idea and strategy definitely can make position in this sector. The evolution consideration and current circumstances of E-Banking can help analyzing issues like: existing e-banks and entrants to boost the economic growth.

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## 1. Introduction

E-Banking is applying electronic devices such as internet, wireless connection networks, ATM, phone and cell phone in banking services. These services are instruments for providing currency and economic system in a country. Nowadays, E- Banking is commonly defined as phone and cell phone bank, internet bank and also ATM. For instance, cell phone banking can be regarded as providing banking services using cell phone. E- Banking provides the clients with the rights and facility of doing banking affairs by sing internet and under the authority of a specific bank. Firstly, E- Banking aimed just to attract clients to a certain bank. B the help of internet in banking industry, banks were starting to broaden their range of applying it, and nowadays, check exchange, accounting, currency exchange, clients' reports, and account criteria are performed immediately using such system. It is not only helpful to both clients and banks, but also decreases costs of banking such as wasting time and long lines. And

from the perspective of banks, with the help of E- Banking, the costs of banking services decrease, because there is no need to extra paper, extra employee and investments with other section and other banks. In fact, nowadays, banking services do not act Justin a traditional form but they are act as international ones. Nowadays, banks are facing a very stringent competition with each other in some areas such as investment and they play the roles like providing currency and economic well-fare. In a nut, banks play a very prominent role in economic domains, and without them the economic part of the society will be affected. E- Banking is one aftermath of information and communication revolution. The E- Banking changes paradigm and pattern of banking and provides faster banking services, and also minimizes wasting issues in the best way. E- Banking is composed of several levels which each one must be defined. In all levels, we can see the presence of computer systems and digital process of information. The higher levels of E- Banking, less manual works, more systematized computers, more networks available, less time restriction, and finally more secure banking system. Services are performed by internet network that takes privilege of a high security. On the other hand, E- Banking is the application of communication in exchanging currency in banking system. In addition, E- Banking could be regarded as a service producer with low costs by the help of electronic channels. These productions and services include account bill, loan, deposit management, E- payment, E-money. E- Banking is utilizing internet or intranet. Definitions such as digital money, E- check, E- money, E- signature are modern phenomena that their origin refers to E- Banking. Accounting, exchanging, receiving bill, and paying bill are given to the clients a list with time order. E- Banking has a lot of advantages such as increasing clients and reducing bank costs. Furthermore, by using E- Banking it is easy to the bank to do faster and more secure services. They can also attract more shareholders (Meihami, et al, 2013).

## **2. Methodology**

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

Electronic banking advantages: The main advantage of Electronic banking is new a distribution channels, giving improved services to customers and use of electronic commerce strategies. Electronic banking has the view of long term, middle term and short term which is a benefit. For example, short term planning consists, integrated competition & customer attraction (shorter than one year). In middle term view (18 month): channel integration (consolidation), data management, different customers, customer guide and cost decrease. For long term view: decreasing the costs of transaction processing, services to customers, income generation.

Electronic banking services in Iran: Automated teller machine (ATM): which is capable of doing a variety of banking activities and eliminating human interferences. Based on statistics related to installing ATM devices ranging from 1998 to 2004 all around the world, they have an improvement rate of 45%. Therefore, the big investment incurred in ATM installing for currency distribution around the globe. The installation rate of ATM devices in developed countries indicates that there must be one ATM device for each 742 persons. Now considering our population, Iran needs to have 95007 ATM to be along with developed countries. However, the number of ATM in Iran is 11065, i.e. 88.3% shortage in this case. To summarize, the ATMs are electronic processers or points installed by banks in specific places which are available round the clock. Using ATMs, clients are capable of doing some functions such as accounts cashing, accounts bill, cashing the check and currency. In addition to the above options, another function of ATMs is paying the bills. An ATM is able to act as a bank branch. Many banking services could be performed by them without human interfere. In addition, the ATM works round the clock and it significantly decrease the bank's costs. Point of sale (POS): A POS is a device that installed in sale centers to remove the need to transfer the physical money and to deduct money from buyer account and to add it to seller account. This activity is done by a POS connected to central computer in the bank. It is provided by the bank for the seller and has modem and printer. Sale center and department stores are where POS is used. POS functions: -Exchanging currency from buyer account to seller account, that is very secure -printing the account on paper -Bill paying availability Phone Banking: The conduction of a little business between bank and clients through phone is called phone banking. Phone banking aspects: -Giving account flow and remaining -Bill payment availability -Currency transferring to other account Internet banking system: (SIBA) at this moment of time, household banking is done through internet and with the help of debit card. The following is a list of economic services: E- check, bill payment, and other services conducted through this way. The combination of home computers and intelligence cards has the availability of sending information to them. The banks may have website to let their clients check their account remaining, account flow, loan applying, and ordering their exchanging through internet. -The availability of transferring currency to private account or other accounts that are member of SHETAB -The availability of seeing

bills in accordance with account -The availability bill ordering in chronological order -The awareness of all remaining of accounts -Bill payment availability -The ability to announce the check funds to the bank through the system -The availability of seeing last 30 transactions Cell phone banking: The clients are able to use bank services through installing bank software on their Cell phone. Current Cell phone banking availability: -Enabling to know about account remaining, flow, exchanging of funds among accounts with one ID member, bill payment, buying prepaid Cell phone charge, and seeing pre-paid Cell phone charge remaining information. Card service: Card service is another activity of the banks to makes the clients more comfortable. It is the use of magnetic cards instead of money. These cards are issued through a very secure procedure to let clients use them. The owner of this card is able to use it round the clock and in off days in POS, and with Pin Pad to exchange his/her funds and currency. As the number of Iranian Internet users exceeds 33 million, businesses in Iran are making the transition from traditional methods to Internet methods. This is also true about banks, which are considered as one of the links in the chain of business, that is, order, payment and delivery. In this regard, Iranian users' lack of preference for adopting this electronic method has created a gap which is seen as a major obstacle to the adoption of Internet banking. Currently, banks are faced with a dynamic environment, and all banks, regardless of their size, have set their goals to attract and retain customers to be able to adjust to rapid changes in competitive situations and market conditions (Akbari Moghadam, 2012).

ATMs: In the late 1980s, Iranian banks attempted to automate banking processes and to computerize their banking tasks. First, there was only 7 – 10 ATMs in Tehran and Sepah bank was the first bank which issued electronic cards used for very limited banking tasks in ATMs. Then, Melli bank issued electronic cards with more functionality and soon all banks were issuing cards and installing ATMs in their branches. Unfortunately, the banks were incapable of performing transactions with another one; they were isolated and none of them were integrated with another one. They had created an e-banking system based on a network not connected to other bank networks. Saderat bank had the Sepehr system, Keshavarzi bank created the Mehr system. Melli bank introduced the Siba system and Melat bank featured the Jam network. Banks were encouraging users to use their system and advertising their e-banking systems, where none of them had a significant advantage over the other.

In 2002, a network was introduced to connect Melli bank with Shahrvand superstore POSs; then the idea was generalized and a superhighway of banking transactions was designed. It was called Shetab and was tested with integration of 2 popular specialized banks of Toseésaderat and Keshavarzi and one commercial bank Saderat. In 2003, by joining the network, Saman bank was the first private bank integrated with governmental banks and in 2004 Melli bank as the Iran's biggest bank with the highest number of branches joined the network. Nowadays, a variety of governmental and private banks have joined the network and She tab has been the infrastructure network for electronic banking. Based on the Iran ministry of ICT 14,000 branches out of 15,600 are now connected to national banking network in Iran. In 2007, 8,440 ATMs and 244,000 POS with a total number of 27 million electronic cards were present in the whole country and it is predicted to install 30,000 ATMs and 900,000 POSs and to provide 75 million electronic cards for the customers until 2010 (Elli, 2011).

Internet Banking: Technological advances have created radical shifts in the world. Introducing IT has altered the way in which individuals perform their business affairs. The World Wide Web (WWW) exerts a significant impact, since it facilitates the Internet to both individuals and businesses. The number of World Wide Web users has significantly increased since its emergence in the early 1990s. Based on the numbers published by World Internet Stats, there are approximately 1,596 million users throughout the world but in year 2000 were only 360 million users. The average penetration rate and the users' growth rate are approximately 23.8 and 342.2 percent, respectively. The projected users' growth rate in the Middle East is more significant. In year 2000, there were only 3 million users in the Middle East which this rate increased by approximately 46million users in 2009; therefore, this part of the world has growth rate of 1,296.2 percent. Among the Middle East countries, Iran second to Syria has the highest growth rate. According to the numbers published by World Internet Stats, Iran in year 2000 had only 250,000 internet users where in the year 2009 with a growth rate of 9,100 percent Iran takes privilege of approximately 23 million internet users. 1993 was the first year that Internet introduced in Iran and it was applied for academic use only, since then it has been growing rapidly and now with the penetration rate of 34.9 percent Iran has more than 50% share among Middle East internet users. Such a considerable and rapid increase in the number of internet users, have provided new opportunities for a variety of businesses and has introduced new horizons for many industries (Mishra and Sahoo, 2013).

E-Banking in India: The red-tapism in public sector banking and lesser consumer base are among the reasons for the Indian banks to enter into the online banking this late. The online bank has become a feasible mode of

banking in India, due to some reasons such as the rapid development in the technological infrastructure and the more equipment in legal framework. Regulatory framework in India has dramatically progressed, and Information Technology Act 2000 seeks to address a number of e-commerce regulatory issues, to analyze the need of banks to go online and to have security actions to be adopted (since online banking bears some resemblances to e-commerce and having consider cross-border jurisdictions), and with the comprehensive and proactive guidelines brought out by the RBI (Tapas et al, 2010).

E-banking in Malaysia: The Automated Teller Machine (ATM) was the first electronic innovation used by Malaysian banks in 1981. Later, telephone banking service was introduced in 1990s. Then, in 2000, the Central Bank of Malaysia granted permission to local banks to offer Internet banking services to their customers. Maybank is the first bank to offer e-banking in Malaysia through its website [www.maybank2u.com](http://www.maybank2u.com). Some of the services include banking enquiry functions, bill payment, credit card payment, fund transfers, account summary and transaction history. Up to 2001, Suganthi et al., (2001) realized that the adoption of e-banking was not widespread initially, due to various factors such as internet accessibility, poor awareness, and security concerns. In 2006, the statistics did not change much. Three distinguished banks in the country, CIMB, Maybank and RHB Bank Berhad had approximately 917,000 e-banking users in 2006 which this figure is only 8 percent of the total number of Internet users in 2006. Thus, the figure is still considered low. However, according to a report by Bank Negara Malaysia and the Malaysian Communications and Multimedia Commission (2009), the average number of the e-banking users had increased higher than doubled from 2006 (3.2 mil) to the third quarter of 2009 (7.5 mil). Therefore, the e-banking adoption is gradually increasing (Jano, et al, 2011).

Electronic Banking in Jordan: Jordanian banking sector have been enhanced through e-banking services. In 2010, study reported ratio of banks total assets to GDP of 176% which was the highest compared to other service sectors. This improvement showed that the adoption of e-banking increases e-banking operational strategies to cope with customer's satisfaction at low-cost. Positive improvement of e-banking practices in Jordan is visible from the increase of credit facilities to different economic sector.

E-banking in Pakistan: Currently in Pakistan, the listed numbers of banks under governmental documents are 41. The number of three nationalised commercial banks is 3. There are 15 private banks, almost 15 foreign banks. While other 6 comes under specialized banking category. The major portion of population still believes on cash tradition rather than online banking. Utility bills are still sent to houses and people wait in long queues outside banks to pay those bills. Lack of customer trust keeps them away from adopting electronic service resulting to lack of e-readiness. The major reason for lack of e-readiness is lack of trust, unavailability of proper infrastructure and security, service charges and lack of education. Computer literacy is basic requirement for usage of online banking systems. Computer cost in Pakistan is too high and it's not possible for common man to purchase computer as its cost three times higher than common man salary (Oye, et al, 2008).

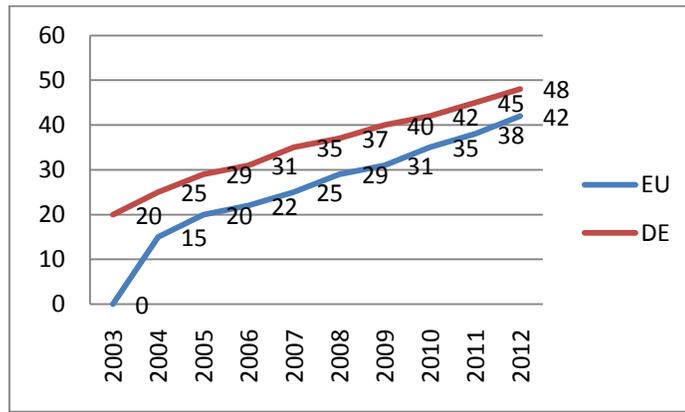
E-banking in Egypt: Egypt has a very fragmented banking system, with over 42 licensed banks. The government wants to see a reduction in the number of banks to around 25 by 2010. Banking in this North African nation is dominated by four institutions: National Bank of Egypt, Banque Misr, Banque du Caire and Bank of Alexandria. They represent half of the banking system's assets. Egypt is cash based society and no more than 10 percent of Egyptians have a bank account. However, Egypt's cellular market is experiencing unprecedented growth, a phenomenon that BIS Shrapnel forecasts will result in the number of mobile subscribers in Egypt reaching 21.1 million by the end of 2008. This offers a huge window of opportunity for banks, which have started offering mobile banking services. NSGB was the first bank in Egypt to offer mobile banking options, starting in May 2000. Around 4,000 NSGB customers receive SMS alerts on their account balances, as well as foreign exchange and stock prices. European based ATM provider Euronet and, more recently, local IT conglomerate Raya have entered the mobile banking market, with Euronet operating a similar service for Arab Bank and Egyptian American Bank. Raya works with Commercial International Bank. When MNS started in 1998, it focused on applications for Internet-related banking services. The company shifted its strategy in mid-1999 to cater to a market where mobile penetration far exceeds personal computer use. Egyptian mobile banking has already taken its first steps from mere notification to actual transactions. NBE customers can now pay for their MobiNil bills using their phones – the first time a bank has offered bill payment using SMS. EAB offers a similar service for Vodafone bills. The current number of people using mobile banking in Egypt is estimated at less than 200,000, but bankers believe there is considerable growth potential. The key is to push the use of the technology beyond banking transactions and into everyday retail use. Some banks have reduced their mobile banking overheads by outsourcing their IT hosting requirements. Technology for mobile banks a mobile and e-banking solution enabling convenient, fast, simple, and

secure branchless banking, with support for e-payment gateways, is indispensable for banks reaching out to the unbanked. Such a solution can help reduce costs while increasing speed and efficiency through SMS-driven banking services (Banking the Unbanked: Going Mobile in Africa, 2009).

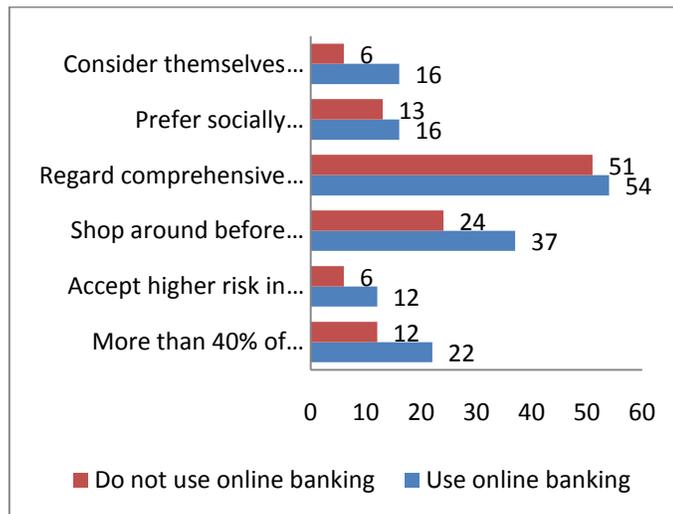
E-banking in USA: In contrast with the rest of the world, mobile banking in the US took some time to take off. One of the primary reasons was the legislative hassle involved. By tying a bank's mobile service to particular telecom service providers, banks lost control over the application's Pan-American availability and its look and feel which were essential to brand identification. Moreover, differing state laws made providing mobile banking to customers across the US a near impossible experience. Mobile banking in its initial stages also suffered from a lack of compelling features and consumer friendliness and limited device support, poor network availability and slow speeds. However, with the network neutrality legislation expected to be passed in the US Congress, the mobile banking experience is set for an overhaul. The long-awaited Broadband Investment and Consumer Choice Act, expected to be passed by the US Congress, will do away many current federal and state rules for the delivery of voice, video and data services. It aims to level the playing field between telephone, cable and satellite companies while opening the door for the delivery of emerging broadband services. It calls for removing state and local franchise requirements for all video providers, including telephone companies. Most significantly, the bill states that consumers may not be denied access to any legal content provided over the facilities used for broadband communications. Broadband services are largely freed from federal and state regulation at both the wholesale and retail levels. Communication services in the US are going to be modernized – finally. And, as legal roadblocks to mobile banking are removed, mobile banking is set to become even more popular. Today, the mobile banking channel in the US is no less important than online banking was in the late 1990s. This growth is attributed to improvements across wireless networks, handsets and applications, and marketing and technology investments being made by top banks to increase consumer awareness. With a mobile subscriber base of 255.4 million subscribers, mobile device penetration at an all-time high of 84.06%, and legal and market dynamics shifting, mobile banking is set for takeoff. It is estimated that mobile penetration in the US will touch 100% by 2013. Even a relatively low-key acceptance of mobile banking services among mobile subscribers can result in impressive numbers. Further, consumers are demanding mobile banking, spurred by the advantages it offers in terms of convenience, control, self-service and immediacy. According to a July 2008 report the demand for internet-enabled services is strong and consumers are looking to access the internet, with the added convenience of mobility. It forecasts that innovation in wireless products is accelerating, and wireless data take-up rates will increase. Mobile banking is likely to see a surge in such a scenario. Surveys have been conducted that show US consumers will respond to mobile banking if they feel banks will support a broad range of devices with good security and a simple user experience. An ever-greater number of consumers are taking to mobile banking in the US and even more are expected to join in over the next couple of years. Survey estimates that up to 30% of online banking users will adopt the mobile channel in the next five years. However, mobile banking is also likely to appeal to a segment of the banking population that accesses services via ATMs, but is not willing to use or is comfortable with online banking. Competitive pressures from banks that have entered the m-banking market, vendor solutions, and demand from corporations will be important drivers. It was estimated that 8 of the top 25 banks will have a solution out in 2008, and 14 of the top 25 would address this channel in one way or another by the end of 2009. Banks will increasingly adopt the mobile banking channel because of the varied advantages it offers in terms of customer satisfaction and retention, cost effectiveness and revenue growth. Bilizing the numbers suggest that mobile banking is set to transform the financial services industry by providing convenient solutions for access to a wide range of financial services while on the move. Once mobile banking becomes popular, it's likely to pave the way for e-wallet transactions where the mobile phone is used to make payments at physical points-of-sale (PoS) terminals. Perhaps the most exciting development will be the use of mobile wallets to allow overseas remittances. This constitutes a significant market in the US. As the market for mobile banking expands, let us look at how banks in the US can leverage it to their advantage (Mobilizing Customers: Mobile Banking in the US. 2013).

Position of E-Banking in Other Countries: In 2012, over 40% of Europeans will use online banking. The figure will probably be 47% in Germany. Growth trends have been mostly stable in Europe within the last few years. Two considerable exceptions are France where online banking adoption jumped 11 pp. in 2010 and the UK where adoption remained flat. Chart 1. Online banking provides highest channel satisfaction. Globally, 83% of banking clients feel satisfaction with online banking (Germany: 80%). This could be regarded as the highest score of all banking channels. Users of online banking are a dynamic group of financial clients who are eager to gather information, compare and evaluate financial products. Such self-directedness develops financial literacy: online

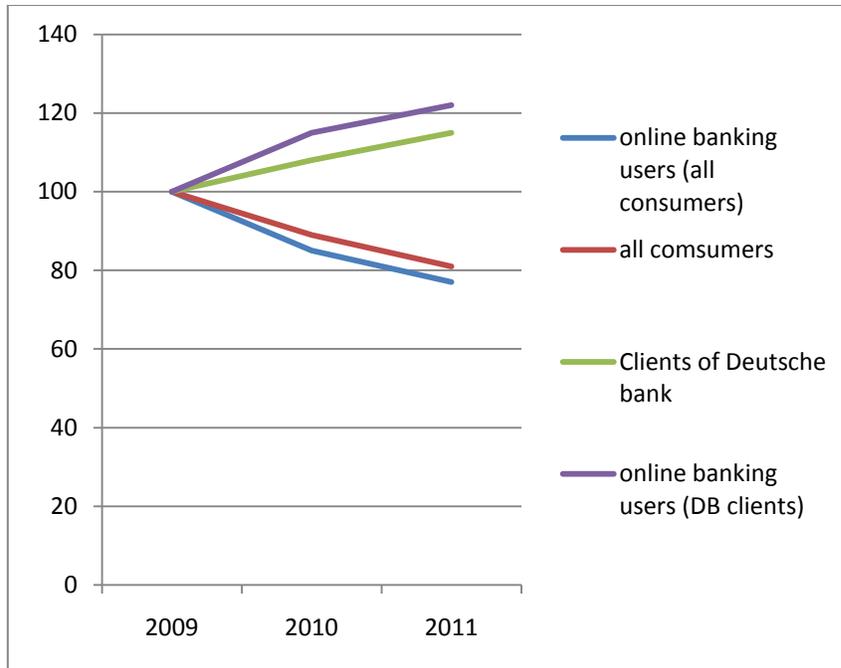
banking users are more likely to consider themselves as efficient investors. Chart 2. A considerable number of Germans have downgraded their financial literacy. The number of clients who regard themselves as savvy investors has decreased over the last few years. Consequently, clients may avoid making informed choices. But there is also a responsibility for financial firms to explain the future events. Unlike the trend, an increasing number of DB clients consider themselves in the know—users of online banking. Chart 3 (Meyer, 2012). Online banking grows mostly at the expense of branch visits. Bank customers in Europe significantly increased their use of online banking. However, in France and Italy, they also visited bank branches more often. See chart 4. Security concerns are often a significant barrier to online banking. It could be said that there exists a negative correlation between security concerns and online-banking adoption. French customers are somewhat exceptional because despite they have the most concerns, they show medium adoption rates. See chart 5. Education is the driving factor in online-banking adoption. Europeans equipped with higher formal education are inclined to use the internet and to do financial transactions online. More educated people are early adopters and have fewer reservations against such technology. Furthermore, they are confident to protect themselves against security threats. See chart 6



**Chart 1.** More than 40% of European will bank online by 2012 Online banking adoption, % of all individuals.  
Sources: DB Research, Eurostat, 2011.



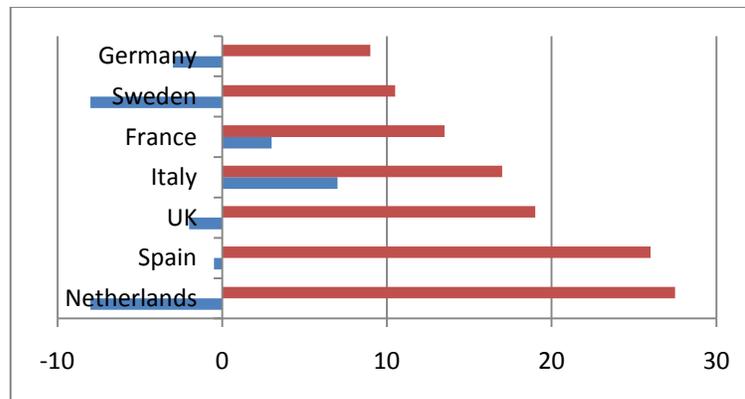
**Chart 2.** Online banking does crowd out personal consultation. % of German consumers, 2011.  
Sources: DB Research, TdW (Hrsg. Institut für Medien und Konsumentenforschung IMUK GmbH & Co.KG), 2011.



**Chart 3.** German downgrade their financial competence Share of German consumers considering they savvy investors, rebased 2009=100.

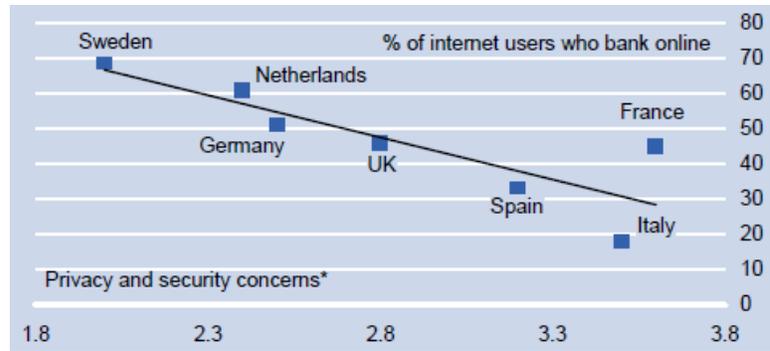
Sources: DB Research, TdW (Hrsg. Institut für Medien und Konsumentenforschung IMUK GmbH & Co.KG), 2011.

%of responses, CAGR 2001-2005



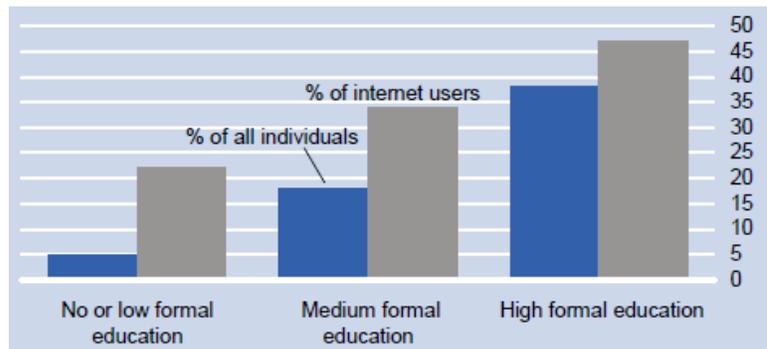
**Chart 4.** Online banking grows – usually, but not always at the expense of branch visits Q: Which banking channels do you use at least monthly?

Source: Forrester, 2005



**Chart 5.** Security concerns correlate with low online banking adoption.

R2 = 0.7111 \*Scale from 1 (less concerned) to 5 (extremely concerned) Source: Forrester, 2005



**Chart 6.** Education boosts online-banking adoption.

% of EU individuals who use online banking or brokerage by education, 2005  
Source: Eurostat, 2006

### 3. Method of payment in european countries

France - In France credit cards are the dominant online payment method. To a much lesser extent cash-on-delivery and alternative payment methods are also used. PayPal ranks second in the top of the most popular online payment systems in France, following Visa, according to ITespresso.fr In 2008, the volume of payments via PayPal reached EUR 1 billion on the French market alone (versus EUR 41 billion in the world). The number of PayPal account holders has reached 8 million in this country. France is the third European country in terms of the number of PayPal accounts, after the UK (21 million) and Germany (10 million). In Europe there are 52 million PayPal account holders.

Germany - German consumers have a clear preference for direct debit payment method ELV. This is followed by payment by credit cards, online bank payment methods such as giro pay and so for tuberweisung, and e-wallets. PayPal is gaining popularity across Europe, especially in Germany: in March 2009, PayPal had more than 10 million accounts, as compared to 5 million in February 2007.

Italy - In Italy consumers primary use credit cards to pay online although cash-on-delivery and alternative payment methods are also frequently used.

United Kingdom - Debit and credit cards are most frequently used for online purchasing, with Maestro representing around 10% of all transactions. Other methods such as e-wallets and pre-paid cards are used to a lesser extent. Factors that contribute to success of online banking based Internet payments

There are several variables that influence the level of success:

- Guaranteed payment. Buyers are not able to reverse a completed payment one-sided (charge back), because they authenticated the transaction personally through their online banking. For merchants and banks this eliminates fraud and therefore costly losses and back office processes.

- Price model. Some schemes have a transaction pricing and others use a percentage pricing model. With a rising e-commerce average transaction value, a fixed fee per

Transaction is more advantageous for merchants. When a percentage based pricing model is used there is little price differentiation with credit cards. The differences in success between the different countries of this payment method category can largely be attributed to the different pricing models. Where a percentage based pricing model is used merchants have little incentive to widely promote this alternative payment method.

-Acceptance by the consumer community. People like to stick to their habits, also in the process of doing a payment. When a payment strongly resembles an online banking transaction, the change of habit is minimal.

-Level of commitment and push from the merchant communities. In countries with successfully introduced payment methods the merchant community plays an important role in the adoption of the payment method.

-Amount of cooperation between the participating banks. In some markets the scheme is rolled out by the inter-bank organization, in others the banks themselves take the lead. This depends on the specific market structure. In Germany almost 2000 banks are active on the retail market, whereas in the Netherlands only 4 banks represent more than 97% of the account holders. Some of the schemes are offered by one bank only, such as Nordau's Solo (Nordic) and ING's Home 'Pay (Belgium). For these payment methods the market development will be slow, and the reach will always stay limited.

-Level of adoption of online banking in a particular country. The adoption rate of online banking is different per country but in general it is growing in each market.

### **3.1. Online banking reach in Europe in 2009 (source: comscore)**

Despite the big differences between countries, we strongly believe that online banking based Internet payments are a compelling proposition to Internet merchants, if the surrounding conditions (pricing, marketing, market attitude etc.) are optimised. The main value drivers for merchants are elimination of fraud and reduction of cost. Cost reduction is a direct consequence of the fraud reduction and instant payment confirmation, but also a low processing cost per transaction contributes to this. The main value driver for buyers is the ease of use and increased trust when doing a transaction. More standardization is needed on a European level. At present, online banking based e-payments (OBEPs) are mostly a local affair, with the mono- and multi-bank solutions restricted to their domestic market. Through the ICPNO attempts are made to make these local services interoperable while through the European Payments Council efforts have been made to create a European standard for these payment methods. The intermediary services, on the other hand, are not limited to their domestic market and can relatively easily add new banks in new markets. These intermediary services can therefore quickly and easily offer cross borders payments.

The merchant community can play a pivotal role in expressing their needs for Internet payment methods which better match their requirements in terms of usability, security, price and scope. This, coupled with competition by intermediary services, will raise the awareness with banks that the e-commerce sector is a profitable business sector. And that this sector is very open for innovation of payment instruments and other solutions that will increase the overall operational efficiencies (Boer, et al, 2010).

China and the world: Chinese online payment industry has characteristics which are different compared to other countries, as its most preferred online payment instrument is remittance (debit transfer), collection (credit transfer) and collection with acceptance China is a vast market and its development represents a real challenge to e-commerce across the globe. In 2009, the Chinese online payment market has not been affected by the financial crisis, registering rapid growth in terms of both number of users and market scale. The number of users has climbed from 52 million in 2008 to over 90 million in 2009, while the online payment market hit EUR 42.28 billion (CNY 430 billion), up from EUR 20.65 billion (CNY 210 billion) in the previous year. Within China, the largest online payments method is Alipay. Alipay is part of the Alibaba Group, founded in 1999, which also own the Alibaba e-commerce platform. Alipay is an escrow service that lets consumers pay online by credit card or online bank. Alipay keeps the payment until the goods are delivered and then transfers the funds to the merchant. As competition in the online payments industry continues to intensify, Alipay is set to expand its footprint and challenge PayPal by revealing plans to top eBay's division by transaction value in two years. Alipay has already reached the 270 million user milestone by late 2009, as compared to 200 million users reported in July 2009. Alibaba has already started expanding into the rest of China, but in 2009 also entered the United States and the European markets. It is unlikely that in the short term this entry will impact online payments, but as their base in China continues to grow their foothold in the US and Europe may leave a sizable footprint (Boer, et al, 2010).

<b>Country</b>	<b>% online population using online banking</b>
Netherlands	52.9
France	49.9
Sweden	48.4
UK	46.1
Belgium	39.0
Germany	38.6
Denmark	36.7
Spain	35.2
Norway	34.4
Finland	33.1
Ireland	28.4
Turkey	28.0
Italy	26.9
Austria	23.4
Portugal	17.2
Switzerland	15.9
Russia	6.0

Banking on Internet and mobile is gaining popularity: However, security threats continue to loom The Pew Internet & American Life Project Tracking survey of December 2010 said that nearly 60% of all Americans who used the Internet did some banking over it. In the United Kingdom, the number of bank accounts registered for Internet banking grew sharply from 28 million in 2006 to 45 million in 2010. With over 100 million, a Chinese bank has the largest number of Internet banking users in the world. Cut to mobile banking. A research firm estimated that about 110 million people worldwide used mobile banking and related services in 2010. It also indicated that the geographies of Asia Pacific, Middle East and Africa would be the most important markets for financial services using the mobile device. Another one forecasts a stupendous 660% growth in mobile banking and payment services between 2009 and 2014. A number of factors, including lower cost of connectivity, greater Internet and mobile Internet penetration, affordability of devices and the arrival of the smartphone have gone into popularizing online (Internet and mobile) banking around the world (Mobilizing Customers: Mobile Banking in the US.,2013).

Mobile Banking in the World wide: Mobile Banking has really caught up in India – according to recently conducted survey by ACI Worldwide, 76% of Indian mobile respondents used their mobiles for banking in last 6 months. This percentage is highest across the world. Comparatively, only 38% respondents from US, and 31% from UK used mobile banking in last 6 months. China came in after India with 70% users using mobile banking followed by South Africa (61%). The global average for Mobile Banking adoption rate stands at 35% Importance of Mobile Payments & Money Movement -According to the survey, the countries with highest levels of mobile payment adoption also display highest importance on mobile payments and money movement. Roughly two-thirds of Indian consumers consider making payments and moving money using their mobile phone in the next three years to be -very important to them -in contrast only one in 10 French and Canadian consumers think mobile payment is -Very Important. Replacing Traditional Payment Cards with Mobile Payments-Over 8 out of 10 Indians responded that they would prefer using a mobile phone to make a payment instead of traditional payment cards. The lack of importance of mobile payments and money movement in a number of countries belies the interest that many consumers across the globe have in using their mobile phone to replace carrying payment cards. In Brazil, for example, although 39% of consumers consider mobile payment and money movement to be -very important, 75% would use their mobile phone to replace cards. Even in France, where just 9% of French consumers place a high importance on mobile payments and money movement, 44% express interest in replacing their payment cards. One surprising fact in all the above findings is that western countries like US, UK, France, Germany etc. are low on mobile banking and payments. One of the reason I see is that they transact more from Desktop PC's. Whereas in countries like India & China, majority of consumers only have mobiles on which they can carry out mobile banking / payments ( as they don't own personal computers) (Mishra , and Sahoo, 2013).

Status quo of internet and online banking users: Over the past decade the share of the German population using the internet has swollen to a total of roughly 56 million (as of 2011). In particular, among the younger age cohorts between 14 and 39 over 90% of the population is more or less routinely familiar with the internet. By contrast, there is still considerable latent growth potential in the 50+ cohort. Many people in this cohort have yet to come into contact with the internet in either their private lives or on the job. However, changes are shaping up on the horizon: the sharpest increase can be observed in the 60-69 cohort. There, the share rose by 6.4 percentage points within two years, to 60.4% (2012). The proportion of online banking users in relation to total internet users has also grown over the past few years. In 2011, one internet user in two utilised online banking offers from financial service providers. The 65+ age cohort posted the fastest growth between 2006 and 2011. On average, the share of the pensioner generation increased by over 15% per year. Given the relatively low starting level this growth rate is set to continue for some time. Some 69% of 25 to 44-year-olds were familiar with online banking services last year, while the figure among 45 to 64-year-olds was only 51%. There were virtually no changes in the cohort of those aged 10-15. This young generation had a share of less than 3% on an annual average.

Challenges of Electronic banking systems: Here we note some challenges of Electronic banking systems:

Challenges before system

1. Lack of outline plans & sufficient study to perform new technology.
2. Lack of choose that how perform technology with the highest efficiency.
3. Lack of culture and knowledge of banks about Electronic banking.
4. Lack of engagement of banks management in the system.
5. Lack of management to use experts in IT section.
6. Traditional attitude toward data reengineering.
7. Lack of economic justification and risk to use Electronic banking systems.

Challenges with performing system

1. Weakness of available facilities
2. Lack of money protection
3. Lack of special enterprises or their support, ca, gateway institutes such as ps ps & VISA
4. Lack of content & customers interest

Challenges after system

1. Lack of legal rights and electronic justification
2. People don't like to reveal their financial policies
3. Lack of motivation and culture training
4. Lack of trust in users
5. Lack of electronically security e.g.: E-sing & PKI

#### **4. Conclusions and Recommendations**

Information technology is considered as the key driver for the changes taking place around the world. Due to a pervasive and steadily growth of information and communication technology, the world banking industry is entering into new phenomena of unprecedented form of competition supported by modern information and communication infrastructure. Low level of infrastructural development, lack of suitable legal and regulatory framework, inadequate banking system, high rates of illiteracy, resistance to changes in technology among customers and staff, frequent power interruption and security issues are the main challenges for developing e-banking in Iran. In order to promote and develop viable e-banking in Iran the following recommendations are forwarded:

-Banks should invest in automating their banking system and it is imperative to devise strategies that involve alliances and collaborations between and amongst private and public banks. Such alliances and collaborations would enhance e-banking initiatives in Iran.

-Current laws don't accommodate e-contracts and e-signatures and hence a comprehensive regulatory and legal framework for e-banking and e-commerce should be developed.

-Public awareness on the use of ICT, e-commerce and e-Payment need to be raised.

-Provide incentives for financial institutions to invest rigorously on ICT and use of e-commerce and e-Payment.

-Ongoing efforts by ETC to expand ICT infrastructure should be encouraged.

- The government should consider the liberalization of the telecom industry to enhance efficiency and competition within the sector.
- The government should consider the liberalization of the financial sector for foreign bank entry to enhance the introduction of modern technology in the banking sector.
- Frequent connectivity failure in telephone line and electricity should be drastically improved.

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