

A Sustainable Internet Banking Model in Developing Countries: A Case Study of Iran

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Abstract — Most banks in the western world have adopted Internet banking (IB) or Internet online banking services to cope with societal and consumer demands. In developing countries such as Iran, IB is still in its infancy. Most of these banks may have a website that offer traditional banking services in an online mode. However, these websites or services may not be monitored or evaluated, and as such the quality of services offered may lead to customer dissatisfaction. For example, the majority of Iranian customers who have adopted IB were initially pleased but the lack of efficient service or e-service quality had caused them to return to traditional banking systems. The main objective of this study is to investigate current Iranian IB services with the aim to increase the retention of Iranian IB service providers in today's competitive marketplace. Three private banks in Iran have provided their consent to participate in this study. Findings from this research assist the researcher to develop a Sustainable IB Model (SIBM) for Iranian IB service providers. Included in this model are different dimensions of e-service quality based on different IB transaction stages which are experienced by customers during their interaction with the bank. The proposed SIBM will provide the opportunity to the Iranian IB service providers to attract prospective customers, have a greater market advantage and be a leader as an IB service provider. By adopting the new model, the IB service providers will provide a service with the goal to attract prospective customers, satisfy them, and with this satisfaction, the customer will be loyal to the banks. Moreover, the new SIBM will present a conceptual foundation for future research in IB in Iran and other IB service providers throughout the world.

Keywords – internet banking; service quality; attraction; trust; customer loyalty

1. INTRODUCTION

According to Liao and Cheung [2, p4], e-banking is “the provision of information or services by bank to its customers, via a computer, TV, telephone, or mobile phone.” Naimi Baraghani [22, p103] indicates that e-banking “is an electronic connection between bank and customer in order to prepare, manage, and control financial transactions.” E-banking can be conducted in different delivery channels or can be delivered in different platforms [22]. Table 1 shows the different types of e-banking services based on various delivery channels. In fact, e-banking is a general concept of online banking and includes PC banking, Internet banking, managed network banking, TV based banking, telephone banking, and mobile phone banking [22]. Therefore, it is important for researchers, banks, and customers to understand the correct types of online banking services and apply the correct concept to the services.

Internet banking (IB) is a banking system which is conducted via the Internet as a delivery channel [20]. In addition, IB provides both traditional banking services (i.e. opening account, transferring money, etc.) and modern banking services (i.e. bills payment, monthly statement, etc.) via the banks' website [20]. Due to rapid progress of technology, managed network banking, TV based banking, and Telephone banking, are not playing a significant role in banking today [22]. Banks need to use a delivery channel, which is more convenient, cheap, and efficient for customers and themselves. Currently, Internet is considered as a new market channel, and it offers services 24/7 to bank customers [21, 10, and 22].

IB is a convenient tool than the traditional banking system. IB can also respond to routine customer queries immediately. In the context of globalization, the growth of Internet banking has increased dramatically. Today, banks and customers can perform their banking requirements without concerns of geographical barriers of time and place [22]. Internet banking makes life much easier, as banking transactions can be performed faster and are more efficient for both banks and customers [14].

TABLE 1: Types of e-banking services based on delivery channel

Type of delivery channel	Type of banking service	Description
PC	PC banking	Proprietary software which is provided by bank which needs to be installed in customers PC. Customers try to access to the bank directly through a modem.
Internet	Internet banking	Customers can access to the bank via Internet.
Managed network	Managed network banking	Customers can access to their accounts via online services which is provided by third party
TV	TV based banking	Account information can be seen on customers TV screen via satellite or cable.
Telephone	Telephone banking	Customers can access to their bank via telephone by using their own ID and password
Mobile phone	Mobile phone banking	Customers can access to their accounts via their mobiles by using SMS, WAP (Internet connection)

Most banks in the Western world have adopted IB or Internet online banking services to cope with societal and consumer demands [20]. In developing countries such as Iran, IB is still in its infancy. Most of these banks may have a website that offer traditional banking services in an online mode [22]. However, these websites or services may not be monitored or evaluated, and as such the quality of services offered may lead to customer dissatisfaction. For example, the majority of Iranian customers who have adopted IB were initially pleased, but the lack of efficient and quality service had caused them to return to traditional banking systems [22]. In light of this, many IB service providers must develop a sustainable IB model in order to increase and maintain customer satisfaction level and to be able to remain competitive in the online global marketplace. The main objective of this study is to investigate current Iranian IB services with the aim to increase the sustainability of Iranian IB service providers in today competitive marketplace.

2. INTERNET BANKING IN IRAN

Banking in Iran like other Iranian daily life activities has moved toward online operations over the last two decades. E-banking is a vivid example of this trend [24]. E-banking industry in Iran started in the late 70s when Tehran Bank installed about 10 Automated Teller Machine (ATM) in some of its branches. These ATMs were able to dispense cash and customers were able to withdraw from their account without the assistance from a bank teller. Unfortunately, the use of the ATM devices were stopped during the 80s following policy changes in the Iranian banks and changes in the political and economic system accompanied by the US trade embargos [22]. It was only in the early 90s that Iranian banks have gradually updated their banking systems and began to install ATM devices. The re-introduction and implementation of the ATMs were made easier with the steady growth of Internet connectivity in all parts of the country [24].

In July 2002, an information exchange network between Iranian banks known as SHETAB embarked on an alliance project to connect ATM devices of three public banks, Keshavarzi Bank, Toseh Saderat Bank, and Saderat Iran Bank. At the same time, two Iranian private banks, Saman Bank and Karafarin Bank, had also requested to be part of the new project [7]. Since then, Iranian banks have implemented and use new banking technologies such as multi-function ATMs, telephone banking, electronic transfers, electronic cash cards, and Internet banking [29]. Today, most if not all, Iranian banks realized that Internet banking leads to many significant benefits. The use of IB may “create new markets, reduce operational costs, administrative costs, and the workforce” [27, p207]. Given the competitive nature of the marketplace and the economy of Iran, banks should take advantage of implementing Internet banking as a service to the bank customers [28].

3. CUSTOMER SATISFACTION

Customer satisfaction, in marketing and business literature and also in information systems studies [1, 21, and 30] has been defined in different ways, but all of them are based on disconfirmation theory. Satisfaction is measured by a difference between perceived performance or quality and cognitive standards like expectations and desires [21]. Customer satisfaction is customers’ judgment of products or services regarding to their requirements and expectations [21, and 30]. In fact, satisfaction is a person’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations [1]. Applying these point of views and relating them to an online or virtual environment, satisfaction is defined as “a judgment or appraisal of quality derived from the total experience offered by the website” [4, 114].

4. SERVICE QUALITY

“Service quality was initiated in the late 1970s, grown in the 1980s, and progressed in the 1990s” [1, 4]. In general, service quality is defined as discrepancy between customers □ expectations of service providers" performance and their evaluation of the actual services they receive. Therefore, it occurs when customers receive services which are more than their expectations [23].

In a virtual environment, customers experience e-service quality. E-service quality is the evaluation of e-shopping, e-purchasing, and delivering of products and services based on efficiency and effectiveness [33]. Many researchers apply the terms service quality and e-service quality interchangeably. Regardless of this, the importance of service quality in virtual environments is much more than traditional environments [17]. In fact, with the Internet and globalization, most of the businesses and services in this global marketplace are interdependent. On one hand, the Internet and globalization offer many prospective customers to businesses. Conversely, more competitive marketplace was created compared to the traditional businesses [18]. Therefore, most of the online businesses strive hard to attract more customers toward their businesses by providing more efficient and convenient e-service quality. In other words, online businesses spend a considerable amount of time to ensure that efficient e-service quality is provided to customers. In the virtual environment, services to customers are offered via the use of interactive information [25]. In an e-commerce setting, providing a high quality service is pivotal to the success of their business [4]. In this instance, e-service quality can have a significant influence on customers:

- trust [13],
- inclination to use the website [2,4, and 9],
- perceived importance of the availability of products or services in an online setting [13],
- consent to pay via the use of the website [7],
- loyalty to the website [27],
- recommendation to use the website [10].

There are several studies that have focused on identifying and measuring the dimensions of e-service quality. Studies are summarized and adapted by [17]. According to [17], it can be concluded that first, despite the several studies regarding the e-service quality, most of the scholarly researches focus on e-service quality and customers □ response in e-retailing context (i.e. selling goods or services) rather than online organizations (i.e. banks) [4]. Second, there is no specific dimension of e-service quality for Internet banking except [15, 14, 12, and 25].

TABLE 2: The adapted dimensions of e-services quality from Ladhari [17]

Dimensions of e-service	Authors	Description
Efficiency	[18]	The ease and speed of accessing and using the site.
Information	[18, 15, and 25]	Providing the customers with information they need through the bank's web site
Banking Service product quality	[15, and 25]	The width of product range like checking and savings accounts, funds transfer, loans, credit card services, and etc.
System availability	[18]	The correct technical functioning of the site.
Fulfilment	[18]	The extent to which the site's promises about order delivery and item availability are fulfilled.
Privacy	[18]	The degree to which the site is safe and protects customer information.
Responsiveness	[18, 15, and 25]	Effective handling of problems and returns through the site.
Contact	[18]	The availability of assistance through online representatives.
Compensation	[18]	The degree to which the site compensates customers for problems.

Table 2 shows the adapted dimensions of e-services quality from Ladhari [17]. According to table 2, it can be concluded that there are very few studies [15, and 25] focusing on the banking industry in identifying and measuring the dimensions of e-service quality in IB.

Many studies regarding e-service quality have concluded that e-service quality leads to customer satisfaction [21, 16, 31, 26, 18, 2, 19, 25, 4, 9, and 30]. For example, a research by [30] indicates that web service quality will directly result in customer satisfaction. Online businesses must design a strategy to find out dimensions of e-service quality which increase customer satisfaction [30]. Positive or negative perceptions of e-service quality characteristics will affect customers satisfaction or dissatisfaction with the e-businesses. In fact, if a high level of e-service quality is delivered to customers via web, then satisfaction must be fulfilled [4]. In online purchasing context, there are three types of satisfaction based on transaction stages [18]. In fact, customers are satisfied with e-service quality at three stages (i.e. pre-transaction stage, transaction stage, and post-transaction stage). Based a review of aforementioned literature covering the relationship between e-service quality and customer satisfaction [21, 30, 26, 18, 2, 19, 25, 4, 9, and 31], it can be concluded that:

- E-service quality is an antecedent of customer satisfaction
- There are different types of satisfaction based on transaction stages.
- There are less studies to assess e-service quality and customer satisfaction in IB context [25].
- No one has distinguished satisfaction based on transaction stages except [18] in online shopping.
- There is no specific satisfaction model based on transaction stages for IB.

5. SUSTAINABILITY

Most online businesses try to be sustainable in today's global competitive market place. In terms of businesses prospective, the term sustainability can be described as applying a business strategy to be able to remain long time in global market place. Sustainability is one of the key elements of being successful for both private and public organizations [11]. Sustainability is an organizational responsibility, and can decrease business risks, and also raise marketing opportunities [13]. If firms apply sustainable strategies into their marketing strategies, then they can guarantee themselves to have a distinguishable advantage among the other competitive businesses [11]. A research by [25] indicates that there is no specific study between customer satisfaction and customer retention in IB context. As such, with the introduction of IB and globalization, IB like many other businesses encountered a competitive marketplace. Many IB service providers therefore must develop a sustainable model to allow them to remain competitive in the online market.

6. ATTRACTION, TRUST AND LOYALTY

According to [18], attraction in marketing and business, is the acquisition of new customers as well as distinguishing from competitors by providing an interest in the products or services. Attraction is a fundamental precondition for the commencement of customers' interaction with the business and it can maintain and enhance relationships with the current and prospective customers [18]. Virtual environments provide an online facility for businesses to present their products and services via the website. Therefore, the quality of website plays a significant role in pulling customers toward the online business [18]. For example, the ease and speed of using the firms' website, attract more customers and as a result, increase the usage of the online business services [1]. As such, if attraction between customer and online business exists, there is a basis enthusiasm for a relationship to continue and develop [18].

According to Albassam and Alshawi [1], trust is the willingness to rely on an exchange partner in whom one has confidence. Naimi Baraghani [22] believes that trust might exist 'when one party has confidence in an exchange partner's reliability and integrity.' Due to the nature of risk in economic transactions, the issues such as trust and confidence are essential [22]. This is particularly true in online businesses, where customers and online service providers are separated physically, the relationship between them is encapsulated, and the cyber-laws are not legislated well [27]. Trust arises in situations where factors such as 'Risk, uncertainty and interdependence exist' [29]. Virtual environments intensity these factors, and as a result leads customers to interact with the online businesses discreetly [29]. Therefore, increased trust means customers feel safe in online businesses and intend to fulfil a deal [18]. If the online businesses are not able to gain customers' trust, customers do not guaranty to perform their deal while they are visiting the website [18]. As such, according to Albassam and Alshawi [1], trust in online businesses is difficult to gain and is simple to lose.

According to Saleh [27, p14], "customer loyalty, is measured in repeat purchase and referrals, and is the key driver of profitability for most online businesses." The main determinant that shows loyalty is the repurchase of a product, dealing with the business again, recommending the product or business to others, and long-term stay with the firms [30]. In terms of e-businesses, satisfied online customers are more likely to be online loyal customers, they are more likely to visit a website again and recommend the online services to the other customers [30]. Customer satisfaction causes customer loyalty and the more customer satisfaction will result in more level of loyalty to the firm [5]. According to Udo, Bagchi, and Kirs [30], "As the cost of customer acquisition rises and Internet competition increases, no one can afford to lose e-shoppers after only one visit." Li and Suomi [18], state that loyal customers through repurchasing, bring more profit to the

online businesses than seeking new customers, and they also recommend the online businesses to the new customers leading to a prospective source of profit. As such, loyalty plays a significant role in retaining businesses.

7. RESEARCH METHODOLOGY

For this research, qualitative method has been chosen. A qualitative approach can provide a better understanding of the phenomenon under investigation, and the problem can be understood within the context. To understand the characteristics of SIBM the qualitative approach will be more appropriate.

Due to the political nature and sensitivity of the public banks in Iran and the difficulty in getting consent from them, this study has focused on the private banking sector of Iran. The Iranian public banks are directly under the government's policies and due to this and privacy laws in Iran, information of the banks are sensitive and difficult to access. There are sixteen private banks in Iran. Of the sixteen banks, three banks are without IB facility and four banks were recently converted into private banks. Three of the private banks have given their consent to participate in this research.

In light of having difficulties to arrange a meeting with a group of Iranian banks and customers, in-depth interviews as a qualitative method have been used individually to collect data. By using in-depth interviews, the researcher was able to study the problems to enrich the research output. In the interviews, the researcher explored perceptions, understanding, and experiences of banks and customers who have some similar experiences with regard to research problems. In addition, because of repeated contacts and lengthy interview between the researcher and individuals, the findings have been enhanced and more accurate. Using in-depth interviewing allowed the researcher to gain a richer insight into the bank and customer's perspectives, to enhance the first SIBM.

8. PROPOSED RESEARCH CONCEPTUAL MODEL

The proposed research model is called the Sustainable IB Model (SIBM) and is based on studies such as:

- E-service quality [18, 15, 25]
- Transaction stages [18]
- Satisfaction [21, 26, 2, 19, and 25]
- Loyalty [18, 5, 32, 3, and 8].

Based on the aforementioned studies, the new model combines the concepts of (1) Transaction stages, (2) E-service quality, (3) Customer satisfaction levels and (4) Customer sustainability levels. Therefore, the new model provides a new comprehensive sustainable model in the IB context. The new model has adapted transaction stages from [18] and dimensions of e-service quality from [18, 15 and 25]. Therefore, in the new model, the dimensions of e-service quality are subdivided into three categories such as: Pre-Transaction Service Quality (PTSQ), Transaction Service Quality (TSQ) and Post-Transaction Service Quality (POTSQ).

TABLE 1: The adapted dimension of e-services quality from [18, 15 and 25].

Pre-Transaction Service Quality (PTSQ)	Transaction Service Quality (TSQ)	Post Transaction Service Quality (POTSQ)
• Efficiency [18]	• System availability [18]	• Responsiveness [18,15, and 25]
• Information [18, 15, and 25]	• Fulfillment [18]	• Contact [18]
• Banking service product quality [15 and 25]	• Privacy [18]	• Compensation [18]

Table 1 shows the adapted dimension of e-services quality from [18, 15 and 25]. These dimensions of e-service quality are categorised based on each transaction stage. As shown in table 3, PTSQ includes dimensions such as efficiency and information, TSQ includes system availability, fulfilment and privacy and POTSQ includes responsiveness, contact and compensation.

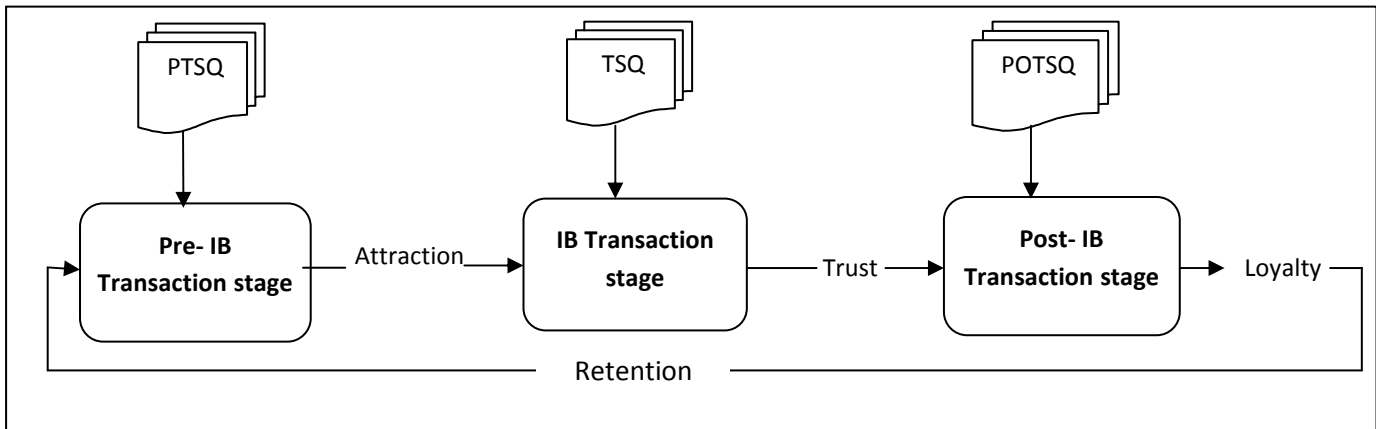


FIGURE 1: Proposed Sustainable IB Model

The proposed SIBM as illustrated in figure 1, shows the interaction occurring between customer and bank. Customers of IB might experience three transaction stages during their interaction with the IB service provider. These transaction stages include Pre-Transaction stage, Transaction stage and Post-Transaction stage. Moreover, during the customer's interaction with the bank, customers might experience three customer satisfaction levels and three customer sustainability levels. The customer satisfaction levels include customer satisfaction level 1, 2 and 3 where level 1 is the lowest amount of satisfaction and level 3 is the highest. Customer sustainability levels include Attraction, Trust, and Loyalty.

A. Pre-Transaction Stage

At the pre-transaction stage, customers perceive Pre-transaction Service Quality (PTSQ). At this stage, customers assess the efficiency, information of bank's website and the variety of IB services. The evaluation of PTSQ and IBSD refer directly to the customers' satisfaction. If the customers achieve a basic satisfaction (satisfaction level 1) they might become attracted (customer sustainability level 1) and might decide to deal with the bank.

B. Transaction Stage

At the transaction stage, the IB service provider and the attracted customers negotiate the conditions of their transaction. If customers perceive an efficient Transaction Service Quality (TSQ), they might agree on the conditions and the transaction might be carried out. In fact, the customers' evaluation of TSQ depends on the customers' satisfaction. For example, the availability of services is as important as issues such as privacy and websites safety. If the customers achieve a much higher satisfaction (satisfaction level 2) the customers might trust the bank (customer sustainability level 2) and a real deal might be fulfilled.

C. Post-Transaction Stage

The Post-transaction stage refers to caring for customers and responding to customers' problems occurring after the real deal. At the post-transaction stage, the Post Transaction Service Quality (PQTSQ) is critical in customers' evaluation. For instance, the bank's enthusiasm to respond customers' problems, the quantity and the quality of contact customers, and the degree to which the bank will compensate customers' problem affect customers' evaluation. If the customers achieve a high satisfaction (satisfaction level 3), the customers with loyalty, might keep dealing with the bank (customer sustainability level 3) and a long-term relationship might be built between the bank and the customers.

9. CONCLUSION

The issues such as understanding the dimensions of e-service quality or being sustainable in today's competitive marketplace are still very important for both IB service providers and researchers [22]. In terms of identifying the dimensions of e-service quality, a "considerable level of e-service quality offers invaluable opportunities to firms to distinguish themselves in competitive online marketplace" [22, p16]. Researchers and practitioners believe that e-service quality is the best measurement of a firm's performance [22, 13, and 18]. IB is popular in advanced countries, but it is in

early stages of development in developing countries [14]. In developing countries, inefficient e-service quality has led to customer dissatisfaction, and as a result demise of the firms [29]. For example, most Iranian customers initially have adopted IB as a convenient method for their daily banking requirements, but inefficient e-service quality re-encourages them to return to the traditional banking systems [24]. Therefore, it is necessary for the bank sectors in developing countries like Iran to research on dimensions of e-service quality in order to enhance their customer satisfaction and retain their customers. In terms of sustainability, Internet and globalization will result in a competitive marketplace for firms [18]. Today, all organizations and business sectors, regardless of their sizes, integrate sustainable strategies to their work. Integrating sustainability concepts into businesses' day to day operations brings many benefits to firms. Therefore, Iranian IB service providers, like other organizations or businesses, need to design and integrate a sustainable model to remain competitive in today's online marketplace. Therefore, based on these two aforementioned points of view, the research offers a new SIBM to Iranian IB service providers. The new model will enable Iranian IB service providers to allocate their resources on the right and efficient dimensions of e-service quality to attract more customers, gain customers' trust and make customers more loyal to the IB service provider. As such, the new model will make Iranian IB service providers more dominant in a competitive marketplace.

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