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## Examining the Impact of Trust Dimensions on Electronic Banking (Case Study: Bank Sepah, Isfahan City)

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ARTICLE INFO	ABSTRACT
<p>Article History:            Received 9 May 2022            Received in revised form 30 June 2022            Accepted 19 September 2022            Available online 20 September 2022</p>	<p>Nowadays, service industries occupy a significant share of the global economy. Similar to how manufacturing industries sell goods; service industries provide services to customers. However, unlike manufacturing, service industries focus not only on attracting new customers but also on retaining existing clients, especially key customers, to maximize profitability. The banking industry is one of the most important service sectors. Given the intense competition in this industry, banks need to employ various strategies to satisfy and retain their customers. In many countries, a considerable number of clients are still hesitant to adopt electronic banking. Convincing customers to use new methods of banking services is not straightforward, and with the rapid growth of e-commerce, trust has emerged as a crucial factor in the business environment. This study aims to investigate the impact of trust dimensions on electronic banking. The research is applied and descriptive in nature. The statistical population includes the customers of Bank Sepah in Isfahan, and a sample of 384 participants was selected based on Morgan's table. Data collection was conducted using two researcher-designed questionnaires, developed according to trust dimensions and the components of electronic banking adoption, and validated for reliability and validity through scientific methods. The reliability of the first and second questionnaires was confirmed with Cronbach's alpha coefficients of 0.834 and 0.816, respectively. Pearson correlation analysis was used to analyze the data. The results indicated that factors such as security, privacy protection, usefulness, perceived ease of use, predictability, service quality, website quality, and proper internet accessibility have a significant impact on trust in electronic banking.</p>
<p>Keywords:            Trust, Trust Dimensions, Electronic Banking, E-Commerce</p>	

### 1. INTRODUCTION

Today, electronic commerce (e-commerce) is rapidly permeating organizations and has had a profound impact on both business operations and everyday life [1]. The boundaries between information systems and e-commerce

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are rapidly diminishing [2]. For organizations, e-commerce is no longer merely an option; it has become an essential principle to maintain competitive advantage, leading to increased quality, agility, and customer access to markets, as well as reduced costs and faster market reach [3]. One prominent manifestation of e-commerce is electronic banking (e-banking). With the advancement of technology and its integration into the banking sector, significant transformations in the provision of banking services have emerged. A key technological development in banks is the advent of modern electronic channels, which offer numerous benefits to both banks and their customers. Given these advantages, banks are increasingly seeking to develop these channels [4].

In such a competitive environment, commercial organizations face numerous rivals, and gaining a leadership position in e-commerce is not straightforward. A primary reason for the failure of many commercial organizations is the lack of trust and uncertainty in virtual environments. The lack of trust in online activities represents a major barrier, delaying the growth of e-commerce. In virtual environments, sellers and customers interact through web browsers, and customer trust in online companies is established through factors beyond the physical store environment or face-to-face interactions [3].

Trust is a complex concept that has been widely studied [5]. The adoption of any technology in society requires gaining user trust, meaning that new technologies must provide infrastructure to secure customer confidence and trust [6]. The internet is inherently uncertain and risky, making trust-building a critical tool for overcoming these uncertainties [7]. Many researchers believe that e-commerce can succeed only when the general public trusts the online environment, making trust a crucial subject for research. A key reason for the reluctance of individuals and companies to engage in e-commerce is the lack of trust [8].

Trust is an essential construct in analyzing exchange relationships. For instance, in commitment-trust relationships within marketing literature, trust is an influential variable that fosters confidence, reliance, and increased interaction between parties [9]. Despite the rapid growth of e-commerce, customers remain hesitant to provide sensitive and personal information on websites, often sharing only general data. Requests for sensitive information, such as credit card numbers, may cause discomfort, reflecting a lack of customer trust in internet banking [10].

Given the growing importance of customers for organizations, trust and its dimensions have become fundamental for banks and other institutions. Understanding the nature of customer trust and the factors influencing it provides vital guidance for its development. Banks must comprehend the concept of trust in cyberspace and identify the factors that foster it. Therefore, applied research in this area is both necessary and timely. This study investigates the impact of trust dimensions on electronic banking at Bank Sepah in Isfahan. The following section presents a review of relevant studies conducted in Iran and abroad.

## **2. LITERATURE REVIEW**

Samizadeh and Bakhshi (2017) conducted a study titled “Providing a Model for Electronic Banking Adoption Considering Customer Trust”. Their research structure was based on the Technology Acceptance Model (TAM) and incorporated additional variables, such as trust, security, prior experience, service awareness, and internet access quality. The sample consisted of 180 customers, and data were collected using a standardized questionnaire to examine factors affecting customer behavior in adopting electronic banking. Their results indicated that internet connection quality and awareness of e-banking services significantly influenced perceived usefulness and perceived ease of use, while trust had a significant impact on attitudes toward e-banking adoption [11].

Gilani Nia and Mousavian (2009) investigated factors influencing customer inclination to use e-banking services, focusing on the impact of perceived security on electronic banking adoption among customers of bank branches in Gilan. They distributed 465 questionnaires and found that perceived security is one of the main determinants of e-banking adoption [12].

Kim et al. (2010) specifically examined electronic payment systems in South Korea. Using data from 219 respondents and structural equation modeling, their conceptual model was tested. The study revealed that system security, technical protection, and perceived security of electronic payment systems directly and significantly influenced perceived trust in the system [13].

Hyang Shik Yan and Linzy Barker (2013) developed a quantitative model to examine the effects of customer personality and perceptions on internet banking usage. Their model included four dimensions: (1) perception of security concerns, (2) website usability including perceived usefulness and ease of use, (3) environmental concerns related to natural resource protection as a social dimension, and (4) openness to advanced technologies as a personal characteristic. Their findings indicated that website usability (usefulness and ease of use) and security concerns significantly influenced internet banking adoption [14].

Sanayei and Salehnia (2009) conducted a case study in state-owned banks in Isfahan. They first designed a model based on theoretical foundations, incorporating three dimensions: socio-cultural factors, economic factors, and security/trust-related factors. Testing the model revealed that socio-cultural problems, economic issues, security challenges, and lack of customer trust hinder the expansion of electronic banking [15].

Soleimani et al. (2012) examined factors influencing electronic banking adoption, including network and service quality, perceived usefulness, security perceptions, privacy concerns, internet quality, among others. Among these factors, security and trust were identified as the most influential in e-banking adoption [16].

Pandi et al. (2015) reported that most respondents were concerned about security and believed that e-banking transactions were not trustworthy [17].

Yousefzi et al. (2009) identified trust as a key element in e-commerce, particularly where uncertainty and interdependence exist. Their findings showed that trust and perceived risk directly affect the intention to use e-banking. They also indicated that trust has a multidimensional structure, comprising perceived reliability, perceived security, and perceived privacy [18].

Oviu and Sia (2010) studied trust dimensions in e-banking, considering factors such as normal system operation, information quality, website technical techniques, structural guarantees, usability, usefulness, perceived enjoyment (aesthetic website design), customization of products and services, customer knowledge and skills, third-party involvement, and feedback mechanisms. Their results showed that all factors except third-party involvement and feedback mechanisms had significant impacts [19].

Wadi Nasri and Sharafeddin (2012) conducted research on factors influencing internet banking adoption in Tunisia. They distributed 284 questionnaires to customers and found that banks need to enhance informational and financial security to increase customer adoption of internet banking [20].

Based on the literature review of studies conducted in Iran and abroad, the following conceptual model was selected for this research.

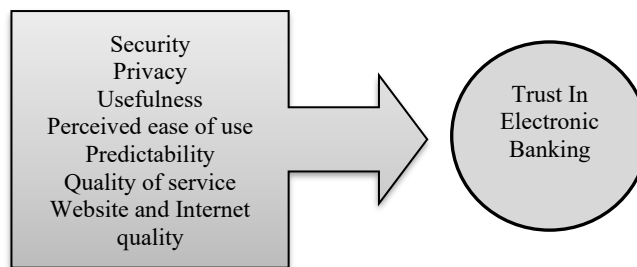


Fig. 1. Research Model

### 3. RESEARCH METHODOLOGY

This study employed a descriptive-survey design and was conducted at Bank Sepah. The statistical population consisted of all Bank Sepah customers. A sample of 384 participants was selected using simple random sampling, based on Morgan's table.

Data were collected using two researcher-designed questionnaires. The first questionnaire measured trust dimensions, while the second assessed the components of electronic banking adoption. All questionnaire items were structured on a five-point Likert scale. Content validity was confirmed by several experts, and reliability was verified using Cronbach’s alpha: 0.834 for the trust dimensions questionnaire and 0.816 for the e-banking adoption components questionnaire. Pearson correlation analysis was employed to test the hypotheses.

### 3.1 Findings

**Hypothesis 1:** There is a significant relationship between security and trust in electronic banking.

**Table 1.** Correlation Analysis for Hypothesis 1

Variable		Security	Trust in E-Banking
Security	Pearson correlation coefficient (r)	1	0.478
	Sig	-	0.000
	N	384	384

As shown in Table 1, the Pearson correlation coefficient between security and trust in electronic banking is 0.478. The significance level is 0.000, which is less than 0.05, indicating a significant positive correlation between security and trust in electronic banking at Bank Sepah, Isfahan.

**Hypothesis 2:** There is a significant relationship between privacy protection and trust in electronic banking.

**Table 2.** Correlation Analysis for Hypothesis 2

Variable		Privacy Protection	Trust in E-Banking
Privacy Protection	Pearson correlation coefficient (r)	1	0.431
	Sig (2-tailed)	-	0.000
	N	384	384

**Interpretation:** The Pearson correlation coefficient between privacy protection and trust in electronic banking is 0.431, with a significance level of 0.000 (<0.05). This indicates a statistically significant positive relationship between privacy protection and trust in electronic banking.

Table 2 shows a Pearson correlation coefficient of 0.431 between privacy protection and trust in electronic banking. The significance level is 0.000, indicating a significant positive relationship.

**Hypothesis 3:** There is a significant relationship between perceived usefulness and ease of use, and trust in electronic banking.

**Table 3.** Correlation Analysis for Hypothesis 3

Variable	Perceived Usefulness & Ease of Use	Trust in E-Banking
Perceived Usefulness & Ease of Use	1	0.438
Sig	-	0.000
N	384	384

As indicated in Table 3, the correlation coefficient is 0.438, with a significance level of 0.000, confirming a significant positive relationship between perceived usefulness & ease of use and trust in electronic banking.

**Hypothesis 4:** There is a significant relationship between predictability and trust in electronic banking.

**Table 4.** Correlation Analysis for Hypothesis 4

Variable		Security	Predictability
Predictability	Pearson correlation coefficient (r)	1	0.421
	Sig (2-tailed)	-	0.000
	N	384	384

Table 4 shows a correlation coefficient of 0.421, with a significance level of 0.000, indicating a significant positive relationship between predictability and trust in electronic banking.

**Hypothesis 5:** There is a significant relationship between service quality and trust in electronic banking.

**Table 5.** Correlation Analysis for Hypothesis 5

Variable		Service Quality	Predictability
Service Quality	Pearson correlation coefficient (r)	1	0.410
	Sig (2-tailed)	-	0.000
	N	384	384

As seen in Table 5, the correlation coefficient between service quality and trust in electronic banking is 0.410. The significance level of 0.000 confirms a significant positive correlation.

**Hypothesis 6:** There is a significant relationship between website quality and adequate internet access, and trust in electronic banking.

**Table 6.** Correlation Analysis for Hypothesis 6

Variable		Website Quality & Internet Access	Predictability
Website Quality & Internet Access	Pearson correlation coefficient (r)	1	0.428
	Sig (2-tailed)	-	0.000
	N	384	384

Table 6 shows a correlation coefficient of 0.428 between website quality & adequate internet access and trust in electronic banking. The significance level is 0.000, indicating a significant positive relationship.

#### 4. RESULTS

With the emergence of e-commerce, many economic and industrial sectors have been significantly influenced by this promising technology. However, no industry has experienced the impact of e-commerce as profoundly as the banking sector. Today, the use of internet banking is more a necessity than a competitive advantage, and trust has become a critical requirement in the context of e-commerce.

In electronic commerce environments, building trust and achieving success appears more challenging. Trust is a long-term construct that is difficult to establish and easily lost. Since web-based business success inherently depends on its customers, customer trust in internet banking is both sensitive and vital.

Accordingly, this study investigated the effect of trust dimensions on electronic banking at Bank Sepah. Data were collected using two questionnaires distributed among the bank’s electronic banking customers. The reliability and validity of the questionnaires were confirmed through Cronbach’s alpha. Based on the findings, factors such as security, privacy protection, perceived usefulness and ease of use, predictability, service quality, website quality,

and adequate internet access have a significant impact on trust in electronic banking at Bank Sepah in Isfahan. These results are consistent with previous studies [11], [16], [21], and [22].

### **Transparency Statement**

The data supporting this study are available upon reasonable request to the corresponding author, subject to ethical and confidentiality considerations.

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### **Declaration of Interest**

The authors declare that they have no competing interests.

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