



Designing a model of key indicators for evaluating financial technology in Iran's banking industry with Mixed approach

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ABSTRACT

The purpose of this research was to provide a model of key indicators for evaluating financial technology in Iran's banking industry. In this research, using a mixed-method design, in the qualitative approach, the Delphi method is used. The statistical population in the qualitative section was 12 experts who were selected based on snowball method. The process of data analysis was carried out in two stages, which includes identifying the key indicators of financial technology evaluation in Iran's banking industry through the interview tool and using thematic analysis method and theoretical validation of the research model. In the quantitative part, data were collected using a questionnaire and T-test. The results of the research showed that the key indicators model for evaluating financial technology in Iran's banking industry consists of 20 sub-indices as well as six main indicators including financial technology services, interaction of financial technologies with customers, new business partners, new revenue models, organizational innovation and innovation Technologically. The results of this study allow bank managers to have an integrated plan to improve the existing conditions to increase these factors in their organization.

Keywords

financial technology, bank, electronic banking, theme analysis

1. Introduction

Financial technology or fintech for short refers to new technologies adopted by financial institutions such as banks to provide financial services to their customers (Menton, 2019). Also, the term financial technology can be applied to any type of innovation including the automation of financial transactions and the use of cryptocurrencies such as Bitcoin and Ethereum. Traditionally, financial technology is known as information technology used by financial institutions, but it now includes a wide range of technologies that promote personal banking and microfinance (Menton¹ 2019). Over the past few decades, financial institutions have been actively pursuing the benefits of new technologies. Indeed, fintech has become a focal point for both the financial industry and academia (Azarenkova et al., 2018).

On the other hand, after the financial crisis in 2008, Fintech gained market share by providing innovative technology solutions in the traditional banking industry and in the asset management field. The increased adoption of financial technology is expected to have the greatest impact on the banking industry with regulatory differences, faster innovation processes, and greater product development (OR, 2020²). In fact, fintech creates a challenging competition for traditional banks, however, banks can also benefit from fintech (Chemmanur et al., 2020³). According to Azarenkova et al. (2018⁴), financial technology helps to introduce financial innovations to transform the financial system to achieve productivity gains. Some financial technology services include online banking, international money transfers, payments, financial planning including investment planning loans, personal and home insurance, credit card approval and check deposits using smart devices. All of these involve minimal human intervention to provide easy access and ease of use to consumers, cost savings and profit growth for organizations (Wobo⁵ et al., 2020). In addition, the integration of financial technology solutions into banks' services and products can improve customer service, strengthen customer relationships, and confirm competitive advantages. This can increase bank profitability and overall customer loyalty. For this reason, banks started investing in financial technology innovations (Chen⁶, 2020). In addition to what has been stated, financial technology offers many benefits, including the

provision of financial services to disadvantaged populations (Menton, 2019).

In this regard, previous studies have identified and investigated key indicators affecting the evaluation of financial technology in a scattered and general manner or in a specific field. The indicators used to evaluate financial technology are not only specifically related to the financial market and financial institutions, but also to general characteristics. For example, macroeconomic indicators help to discover the potential stability of financial markets (Fong⁷ et al., 2020).

Socio-demographic indicators help to find the characteristics of customers, who are ready to use services provided by financial technology to a lesser or greater extent (Junger and Mitzner, 2020). Indicators of national culture help to assess cross-border investments in a particular region and policy development (Abbasi et al.⁸, 2021). Geographic location, to questions about the distribution or concentration of financial technology (Jiao et al., 2021) as well as the availability and diversity of financial services (Xing, 2021). they answer Financial market characteristics help uncover potential relationships between financial technology and other financial market participants (Yang et al., 2021). Bank characteristics help to understand financial market readiness for faster or slower development of financial technology (Cheng, Kuo 2020). The characteristics of the fintech industry make it possible to follow the characteristics of fintech development trends (Yao et al. 2021). Academic literature research helps summarize and categorize knowledge about fintech and find urgent topics for research (Lee et al., 2020). Survey results or expert interviews help to attract a wider range of stakeholders to evaluate financial technology, for example, customers and stakeholders (Junger and Mitzner, 2020). Assessment of financial technology regulation helps to identify the fragility of financial markets and uncover areas for improvement in regulatory actions (for example, Fong et al., 2020). Furthermore, regulations must be timely and must follow changes in business models and innovation (Anagnostoulos, 2018). Finally, case studies are important for exchanging experience and accumulating knowledge in any scientific and practical issue.

In general, despite the multitude and dispersion of the indicators mentioned above, the lack of attention and comprehensive empirical analysis regarding the

identification of financial technology evaluation indicators in Iran's banking environment and their presentation in the form of a native model is a gap that research He is ready to review it. Based on this, the present research has first identified the key indicators of financial technology evaluation in Iran's banking industry by analyzing the opinions and views of experts and presented them in the form of a model.

This article is organized as follows. First, it examines the theoretical and empirical background and presents the literature related to financial technology, banking industry and the relationship between financial technology and banking industry based on previous studies. Second, the methodology used in this research is briefly stated. Then he presents the findings and finally discusses the results and practical implications of this research.

2. Theoretical foundations and research background

Fintech is a combination of two words, technology and finance. The search trend for this word in Google, according to Figure 1, shows that its widespread use is limited to recent years. Although experts have introduced the serious emergence of this phenomenon since 2008 (1386 AH), this word has been used in some cases before that. The lexical origin of fintech can be traced back to the early 1990s, referring to the "Financial Services Technology Consortium" and initiated by Citigroup to facilitate technological collaboration efforts in the financial sector (Erner et al., 2015).

The literature review shows that most of the existing studies have investigated the factors affecting the cooperation between banks and fintech. There are articles that describe the necessity of bank and fintech cooperation (Vanglimpiarat, 2017; Swanson et al., 2019). Other articles dealt with the obstacles of bank and fintech cooperation (such as: (Zelan and Tafili, 2017); Anagnostopoulos, 2018). Some focused on the benefits and drivers of bank and fintech cooperation (Kotze, 2018; Ashta and Biotpektrut, 2018) and some on the risks of bank and fintech cooperation (Reeve and Kaser, 2017; Vios, 2019). However, all of them have in some way contributed to the growing body of knowledge and literature on financial technology assessment in the banking industry. Some of these studies are summarized and mentioned below:

Sabanidja et al. (2022), in a research, investigated the influence of financial technology on the performance of a sustainable bank through a competitive advantage. The results show that the fintech entity can direct the performance of the sustainable bank directly and indirectly through competitive advantage. The presence of fintech is a dominant factor for achieving performance. In addition, the results show that the competitive conditions and the final technology will significantly affect the performance now and in the future. Mada et al. (2021), a research titled "Does the financial technology revolution lead to the intermediation of banks?" They studied the income of Islamic Bank. The results provide empirical evidence on the impact of the financial technology revolution on bank earnings in Malaysia. The findings also showed that there are different evidences about the impact of the financial technology revolution on the income of Islamic banks and conventional banks for the dual banking system. Islamic banks appear to be significantly affected by the fintech revolution due to the low penetration of online banking, and larger banks are relatively more invested in technology, leading to cost savings and increased productivity. Haqighi Khah et al. (1401), in a research, identified factors affecting the cooperation of banks and fintechs by using a systematic review of scientific literature. For this purpose, the method of systematic review of research literature was used and 986 articles were selected using the Prism statement framework and 41 articles were finally selected for systematic review during two stages of refinement. The findings were formulated in the form of 43 components as effective factors on the formation of cooperation patterns in the form of 11 structures and 4 main categories including the characteristics of the parties, communication characteristics, cooperation requirements and macro factors. Soltani and Tahmasabi Aghbalaghi (2013) conducted a research titled explaining the role of the strategic partnership of Bank Tejarat with fintechs in efficiency through the mediation of technological developments and digital banking. Based on the findings of this research, the role of Bank Tejarat's strategic partnership with fintechs, digital technological developments, digital banking, the role of digital technological developments and digital banking on efficiency was confirmed. On the other hand, the indirect role of mediating variables of digital technological developments and digital

banking between Bank Tejarat's strategic partnership with fintechs and efficiency was confirmed. Mughni et al. (2018) conducted a research entitled *Designing and explaining the quality model of modern banking services based on fintech (digital banking)*. According to the results of the evaluations in this research, the index of personalization of information and services, stability of services, security and authentication, ease of access to services and innovation in services are prominent indicators in the quality of digital banking. As it is evident in the results of the thesis, business changes due to changes in technology, especially information and communication technology, are not a continuous improvement, but in some cases, the paradigms governing businesses, especially banking, change, which causes some of Scientific concepts about traditional businesses should change. Fonseca and Meneses (2020) conducted a study with the aim of identifying the main motivations for forming strategic partnerships between banks and fintechs. The results showed that the "customers" factor, which is realized in the will to respond to their new demands, through value creation, is the main motivation of both institutions to create a strategic alliance. It was also found that banks need the technical knowledge of fintechs, their flexibility in processes and the fact that fintech operates in special niches; Finks need market knowledge of banks and their scale. Together, they can respond to new customer demand in a better way. Hu et al. (2019) conducted a study entitled *Intention to adopt financial technology services for bank users: an empirical investigation with an extended technology acceptance model*. This paper proposes an improved technology acceptance model (TAM) that includes user innovativeness, government support, brand image and perceived risk as determinants of trust to investigate how users adopt fintech services. The results of the structural equation model show that users' trust in fintech services has a great impact, It has an important effect on the attitude of users for acceptance. Venglimpiarat (2017) conducted a research titled *FinTech Banking Industry: A Systematic Approach*. The approach of this research is a case study to analyze the characteristics of systemic innovation based on financial technology in the bank. This research presents a newly developed systematic innovation model that can be used as a dynamic tool to track the progress and pattern of technology development and diffusion. Analyzes have shown that

the systemic characteristics of the innovation process are the result of the interaction between innovation complexity and innovators' capabilities in innovation management. Finally, this research provides enlightening concepts about the systematic nature of innovation, the trend and development direction of innovation based on financial technology in the banking industry.

Summarizing the results of the theoretical foundations and previous researches shows that considering that in recent years and with the growth of the fintech phenomenon, "bank and fintech cooperation" has become an important issue in the financial ecosystem; The cooperation and application of financial technology in the electronic banking industry is an issue that needs more scientific investigation and scrutiny. By examining the theoretical literature and the existing background, the theoretical gaps in this field were revealed. It was found that, while in recent years, the speed of producing scientific resources in this field has been good, but there is still little literature about the aspects and dimensions of evaluating the performance and position of banks based on the innovation of financial technology services (Fintech) in Iran. Another research gap around this issue is that most of the previous studies have investigated the willingness of individuals and companies to use new fintech-based systems such as mobile payments (Huang et al., 2021), crowdfunding (Beeber, 2020).) and online loans (Agarwal and Zhang, 2020), and provide a comprehensive perspective on identifying the key indicators of financial technology evaluation in the banking industry with the aim of improving the situation of banks in order to maintain a competitive advantage through innovation. Financial technology services (fintech), no action has been taken. Also, to date, the focus on fintech has largely been from a Western perspective. Due to cultural and legal differences, the findings of studies on Western countries may not be generalizable to Iran. Therefore, the current research will analyze the opinions and views with the aim of providing a model for the evaluation of financial technologies in the country's banking environment. Based on this, the following objectives are defined in order to present the model of key indicators for evaluating financial technology in Iran's banking industry:

- 1) Identification of key indicators of financial technology evaluation in Iran's banking industry.
- 2) Presenting and fitting the assessment model of the key indicators of financial technology assessment in Iran's banking industry.

3. Research method

This research is exploratory from the objective of the primary audience and cross-sectional from the time dimension. It is based on mixed studies (qualitative and quantitative) and the method of data collection and analysis in the qualitative part is interview and theme analysis and in the quantitative part, questionnaire and T-test. The reason for choosing the theme analysis method in this research is to identify the primary and deep ideas of experts through semi-structured interviews to develop the theory model for future experimental researches based on qualitative findings. This method is a process for analyzing textual data and transforms scattered and diverse data into rich and detailed data. Also, T-test was used for the reason that the research model was approved by the experts in terms of comprehensiveness, uniqueness, coherence and integrity, appropriateness, and necessity. In this research, the collection of data needed to identify the dimensions and components of the research model was done with a semi-structured interview tool. The participants in the research to conduct in-depth interviews and answer the questionnaire included bank managers and experts based in Tehran province as well as university professors. In order to design the research model, 3 university professors and 9 executive experts were used based on the purposeful snowball sampling method. The academic experts were familiar with the research subject while having a doctorate degree in the fields related to the research. The executive experts also had at least a master's degree and at least 15 years of work in research-related fields. In the process of conducting the interviews and the way of designing the questions, we tried to follow the rules of the interview so that the quality and credibility of the interview situation would not be compromised. Also, in the process of conducting interviews and designing questions, we tried to follow the rules of the interview so that the quality and validity of the interview situation would not be undermined. In order to analyze the interview data, theme analysis was used. Coding steps were carried out and finally the dimensions and

components of the research model were identified and to confirm the validity of the analysis of the interviews. To calculate the reliability of the above tests, three interviews were selected as samples from among the conducted interviews and each of them was recoded in a short time interval (two weeks). Then the specified codes were compared in two time intervals for each of the interviews. In each of the interviews, codes that were similar in two time intervals were identified as "agreement" and non-similar codes as "disagreement". The re-test reliability of the interviews conducted in this research using the determined formula is equal to 87%, which is more than the acceptable value of 60%.

4. Findings

4.1. Identifying the key indicators of financial technology evaluation in Iran's banking industry

As mentioned in the research method section, in the present research, in order to collect data in the qualitative section, interviews were used and theme analysis method was used for analysis. Based on this and with the aim of collecting qualitative data, after reviewing the literature related to the research topic, a framework was developed for asking questions of interviews with experts. Next, 12 academic experts as well as bank managers and experts based in Tehran province were selected through the snowball sampling method. In the second phase, the interviews were coded using the six-step inductive theme analysis method of Brown and Clark (2006). Based on this and during the data familiarization phase, the speech evidences (29 cases) identified from the text of the interviews were labeled in the form of 20 primary codes. In the following, in order to familiarize with the coding stage, a part of the interview conducted with one of the participants is given:

Participant 5: "...startups have expanded their scope by entering banking activities. In the past these activities were covered by banks. The rapid growth of financial technology has created a banking business perspective that required more innovative solutions. has changed. A group in the financial services and management industry sees the development of fintech as a threat to the traditional banking industry. Some believe that fintech is a challenge that can be turned into an opportunity. Therefore, fintech companies as a

real competitor. Considered for the traditional banking system, this challenger has several fronts for banks to face; productivity is one of these fronts. Increased efficiency and productivity through financial technology, mainly due to personalization of loans and disintermediation. processes by eliminating intermediaries. New technologies such as "Blockchain" also increase efficiency. Since banks usually do not adopt new technologies quickly due to the regulatory environment and often rely on decades-old IT infrastructures, it is expected that These innovations bring more profit to fintech companies. In addition, blockchain technology can be used to improve transaction security. Although we mainly focus on the banking industry, I believe that fintech affects financial markets and banks only slightly differently. Given that the benefits of opportunities and exposure to risks depend on many factors, such as the local environment, management and the global environment change.

An example of how the data familiarization and labeling steps are performed is presented in Figure 1.

In the stage of classification of primary codes and formation of sub-theme, the obtained primary codes were examined and then the researcher put the codes that are close to each other in terms of meaning and meaning and have so-called semantic affinity with each other in one group and creates new meanings and words. In fact, the researcher categorizes the codes in the form of sub-themes. To learn more about these categories, an example is given below.

According to Table 1, things such as customer-centricity, increasing the productivity of banking services, reducing credit risk and developing financial plans are placed in a category under the title of financial technology services. According to the presented sample, the final results of this category, or in other words, the statistics of the sub-themes as well as the main theme of the research, for the sake of brevity, are presented in Table 2.

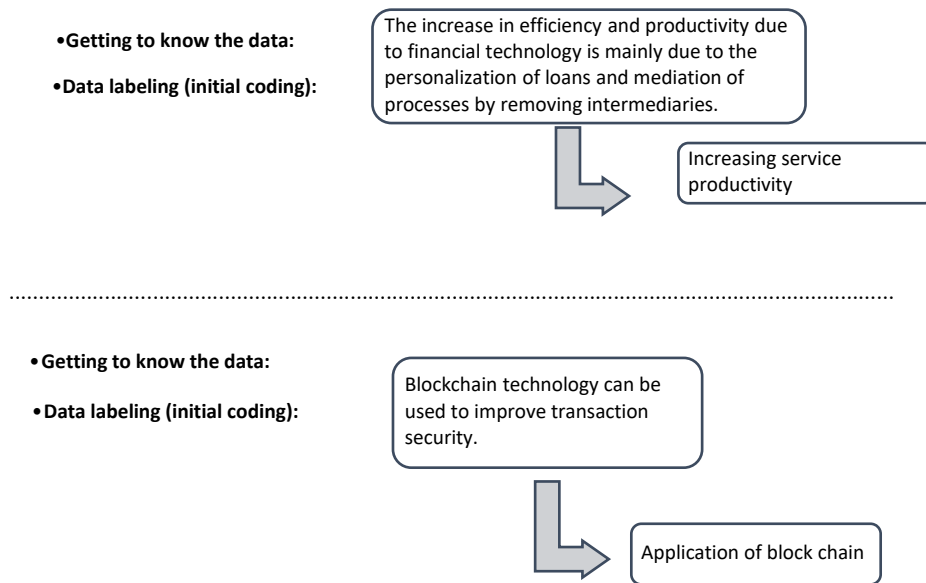


Figure 1. An example of how to perform the familiarization and data labeling steps

Table 1. An example of how to perform the stage of classifying primary codes and forming sub-themes

Verbal evidence (the number in parentheses indicates the code of the interviewee)	Initial code	Sub-theme
Increasing focus on customer needs to provide personalized and customized services with the help of financial technologies.(1) The financial services industry in Fintech has changed from a product-oriented approach to a customer-oriented approach(2).	Customer oriented	Financial technology services
Financial technology is necessary to accelerate transaction speed and improve the efficiency of services with the help of financial technologies.(3) The increase in efficiency and productivity due to financial technology is mainly due to the personalization of loans and mediation of processes by removing intermediaries.(4)	Increasing the efficiency of banking services	
used financial technologies to collect consumer behavior data in order to reduce credit risk (5).	Reducing credit risk	
Financial technology has facilitated customer validation (6).	Development of financial plans	

Table 2. Summary of the results of the present research in the theme analysis section

Primary code	The sub-theme	The main theme
Customer oriented	Financial technology services	Key indicators of financial technology evaluation in the banking industry
Increasing the efficiency of banking services		
Reducing credit risk		
Development of financial plans		
Increasing communication channels with customers	Interaction of financial technologies with customers	
Active identification of customer needs		
Providing customized services		
The union of banks with Fin techs	New business partners	
Alliance with physical businesses		
Alliance with financial peers		
Achieving multifaceted business strategies	New revenue models	
Achieving professional business strategies		
organizational restructuring	Organizational Innovation	
Improvement in employee training and learning		
Innovation in organizational culture		
Development of big data analysis	Technological innovation	
Development of intelligent investment management		
Application of block chain		
Access to new payment methods		
Digital marketing development		

According to the results of the research in the qualitative part (Table 2), on this basis and during the data familiarization phase, the speech evidence (29 cases) identified from the text of the interviews was labeled in the form of 20 primary codes. Finally, the primary codes were categorized into six sub-themes and then, a main theme. Therefore, the model of the key indicators of financial technology evaluation in

Iran's banking industry has been presented according to Figure 2.

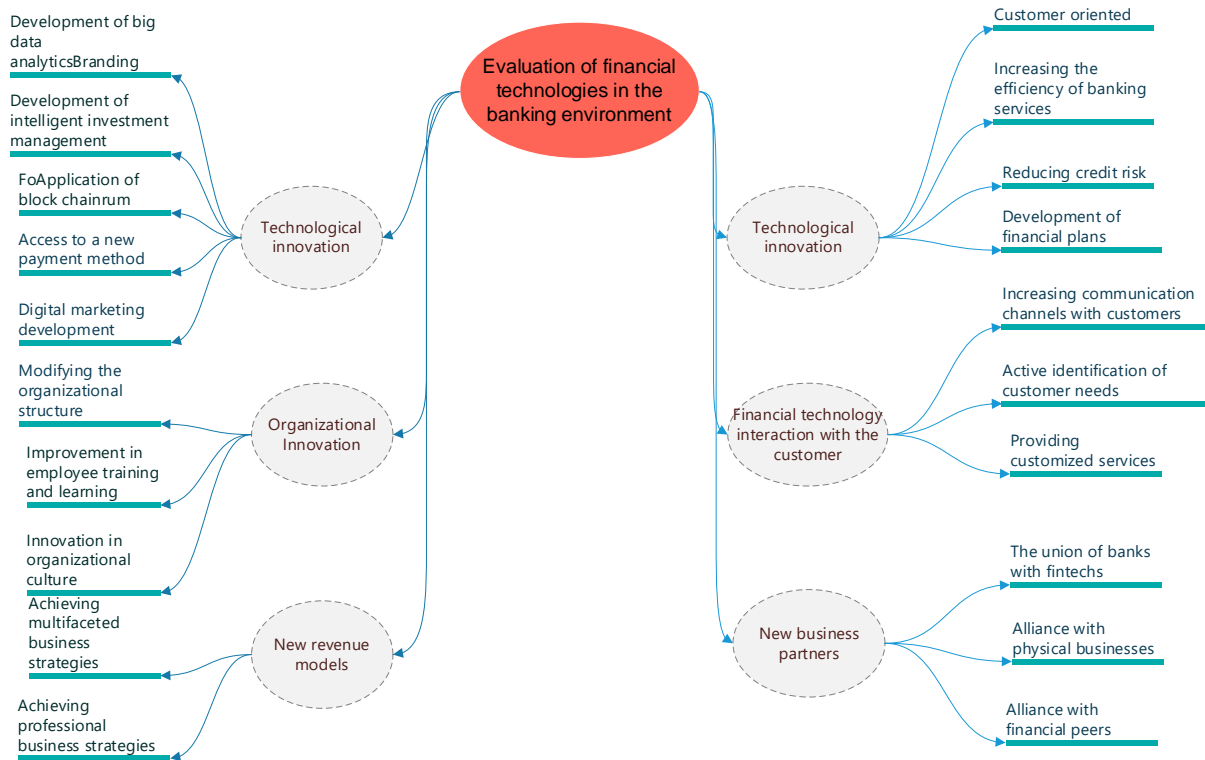


Figure 2- Model of key indicators of financial technology evaluation in Iran's banking industry

4-2- Validation of the research model

In this part, the results of the analysis related to the theoretical validity of the research model (Figure 1) are presented. The questions in this section are designed to give respondents the space to use the options "very little", "little", "a lot" and "very much" in relation to the structure of the axes and constituent domains. They comment. The questions related to this section as well as the analysis of each answer are given below.

□ The first question: To what extent is the presented model for the key indicators of financial technology evaluation in Iran's banking industry comprehensive (with regard to all indicators)?

The results related to the validity of the comprehensiveness of the research model are presented in this section and the validation of this section is evaluated based on the relevant question. Out of the total 12 respondents, 10 people gave a positive and very high answer and 2 people voted for the high option. As a result, the percentage of positive answers is equal to 83%.

In order to check the comprehensiveness of the research model, a sample has been used according to experts and the T-Tech test. The results show that at the error level of 0.05, the obtained t value is equal to 35.54 and the significance level is equal to 0.000. Based on this, the opinion that the research model is comprehensive is confirmed by the experts. to be

Table 3. Validity of the comprehensiveness of the research model

Comprehensiveness of the research model	t	df	Significance level	difference in averages	Confidence interval 0.95	
					low	high
	35.546	14	***	3.8	3.57	4.3

❖ **The second question:** To what extent is the presented model unique (assigning each index to a component)?

The results related to the uniqueness of the research model are presented in this section and the validity of this section is evaluated based on the relevant question. Out of 12 respondents, 9 people gave a positive and very high answer and 3 people voted for the high option. As a result, the percentage of positive answers is equal to 75%.

In order to check the uniqueness of the model of the key indicators of financial technology evaluation in the banking industry of Iran, according to experts and a sample T-Tech test has been used. The results show that at the error level of 0.05, the obtained t value is equal to 31.58 and the significance level is equal to 0.000. Based on this, the statement that the research model has the unique feature of the opinion of experts is confirmed.

❖ **The third question:** To what extent does the presented model have internal coherence and uniformity (the homogeneity of the indicators of each component)?

The results related to the coherence and uniformity of the research model are presented in this section and the validity of this section is evaluated based on the relevant question. Out of 12 respondents, 9 people gave a positive and very high answer and 3 people voted for the high option. As a result, the percentage of positive answers is equal to 75%.

In order to check the coherence and uniformity of the model of the key indicators of financial technology evaluation in the banking industry of Iran, according to experts and a sample T-Tech test has been used. The results show that at the error level of 0.05, the t-value obtained is equal to 21.25 and the significance level is

equal to 0.001. Based on this, the comment that the research model has the characteristic of coherence and uniformity, The opinion of experts is confirmed.

❖ **Question 4:** To what extent is the model of key indicators of financial technology evaluation in Iran's banking industry appropriate to the current needs and prospects of the studied organization?

The results related to the appropriateness of the research model with the current needs and prospects of the studied organization are presented in this section and the validity of this section is evaluated based on the relevant question. Out of the total 12 respondents, 10 people gave a positive and very high answer and 2 people voted for the high option. As a result, the percentage of positive answers is equal to 83%.

In order to check the opinions of experts regarding the appropriateness of the research model with the current needs and prospects of the studied organization (engineering system organization), a sample T-Tech test has been used. The results show that at the error level of 0.05, the obtained t-value is equal to 35.46 and the significance level is equal to 0.000. Based on this, the comment that the research model is suitable for the current situation and organizational perspective. has, it is confirmed by experts.

The results obtained from the implementation of a four-question questionnaire for the theoretical validation of the research model are such that according to the data obtained from the questionnaire as well as the analysis resulting from it, all the questions and data are approved by the experts. Based on this, the research model is valid and can be used as a basis for evaluating financial technology in Iran's banking industry.

Table 4. Results related to the uniqueness of the research model

The uniqueness of the research model	t	df	Significance level	difference in averages	Confidence interval 0.95	
					low	high
	31.588	14	•/•••	3.733	3.48	3.99

Table 5. Results related to the coherence and uniformity of the research model

Coherence and uniformity	t	df	Significance level	difference in averages	Confidence interval 0.95	
					low	high
	21.258	14	0.001	3.56	۳,۵۶	۳,۹۵

Table 6. The results related to the appropriateness of the research model with the current needs and prospects of the studied organization.

Suitability to the study organization	t	df	Significance level	difference in averages	Confidence interval 0.95	
					low	high
	35.546	14	0.000	3.8	3.57	4.03

5. Conclusion and presentation of proposal

The present research was carried out in an attempt to determine the model of the key indicators of financial technology evaluation in Iran's banking industry. Based on this, the components of the mentioned model are based on the analysis of the results of the interviews with the method of theme analysis, identification and then, using the questionnaire tool and sample t-tech test, the theoretical validation of the research model in terms of comprehensiveness, uniqueness, coherence. And integrity, fit, need, done. Based on this, the research model (Figure 2) is valid and can be used as a basis for knowledge management in engineering organizations.

(figure 1). Considering the use of the interview tool and then the foundational data theory to identify the dimensions and components and finally draw the research model, the current research has presented a model with unique variables. However, in general, with the research that has been done in the field of bank and fintech cooperation, such as the research of Sabanidja and others (2022); Haqiqi Khah and others (1401); Sultani and Tahmasabi Aghbalaghi (2019); Moghni et al. (2018); Fonseca and Meneses (2020); Venglimpiarat (2017) is aligned and has contributed to the development of this type of studies. In the following, the research findings are discussed.

In explaining the results of the present research, it can be stated that financial technology services, which have the highest priority among the key indicators of financial technology evaluation in the banking environment, include customer-oriented components, increasing the productivity of banking services, reducing It is credit risk and development of financial plans. Therefore, according to the findings of the research, it can be argued that the increased focus on customer needs to provide personalized and customized services with the help of financial technologies has changed the financial services industry in the field of fintech from a product-oriented approach to a customer-oriented approach. Due to financial technology, efficiency and productivity are mainly due to the personalization of loans and mediation of processes by eliminating intermediaries. Therefore, financial technology is necessary to accelerate transaction speed and improve the efficiency of services with the help of financial technologies. In addition, financial technologies can be used to collect consumer behavior data in order to reduce credit risk. Therefore, financial technology facilitates the validation of customers. In addition, with the help of financial technologies, financial services can be combined with new business scenarios to develop new financial plans Digital empowerment allows comercial banks to solve the problems of

customer segmentation, accurate marketing of customers ,differentiated customer service and increased customer stickiness

The interaction of financial technologies with the customer is also assigned the second priority among the key indicators of evaluating financial technologies in the banking environment, which includes increasing communication channels with customers, actively identifying customer needs, and providing customized services. Therefore, according to the findings of the research, it can be argued that equipping new technologies to launch more communication channels such as mobile banking, internet banking is one of the advantages of financial technology that actively analyzes the potential needs of target customers, takes measures to take care of customer needs and provide Provides accurate financial services. Also, it is possible to improve the interaction of financial technologies with customers by providing personal services based on customer needs, such as using specialized mobile applications.

New income models also have the third priority among the key indicators of financial technology evaluation in the banking environment, which includes the achievement of multifaceted business strategies as well as the achievement of professional business strategies. Therefore, according to the findings of the research, it can be argued that the achievement of multifaceted business strategies in order to develop diverse products or markets, such as internal e-commerce platforms and equipping business data collected through e-commerce transactions to provide appropriate financial services, from business and Cross-border banking works are carried out to serve all groups by simultaneously attracting them and thereby creating value. Also, in order to achieve professional business strategies, you can focus on specific groups to provide more professional products and services.

Technological innovation is also assigned the fourth priority among the key indicators of evaluating financial technologies in the banking environment, which includes five components: the development of big data analysis, the development of intelligent investment management, the use of block chain, the acquisition of new payment methods and Also the development of digital marketing. Therefore, according to the findings of the research, it can be argued that with the development of big data analysis, to create patterns of customer behavior to discover the new demands of banking customers, and also, the use of new financial technologies to provide effective investment portfolio proposals to customers. For example, smart investment by the bank in the financial market, the development of smart investment management by the researcher It can be.

In this regard, blockchain technology can be used to improve transaction security. Because using the innovation provided by blockchain technology in domestic Fintechs, these technologies have the potential to lead to almost instant settlement of transactions. In addition, credit payment can be used in many online stores through electronic portals, or the Internet of Things and biometric identification technology can be used to provide creative payment methods such as facial and fingerprint recognition. . Of course, all of the things mentioned above have led to the development of digital marketing and enabled banks and also financial and credit institutions that use cyber space well to have happy and interactive customers. You can even use digital media, content marketing, and databases to increase advertising of new services and accelerate customer understanding of these services.

Organizational innovation has also been given the fifth priority among the key indicators of evaluating financial technologies in the banking environment, which includes the three components of reforming the organizational structure, improving employee training and learning, and innovation in organizational culture. Therefore, according to the findings of the research, it can be argued that by creating online financial centers and process improvement departments to accelerate financial innovation, quick adaptation to external changes and improve decision-making efficiency; The knowledge and professional skills of the personnel are increased and thus the smooth implementation of the new services is ensured. In fact, the use of new financial technology requires the training of current employees to use these technologies. Therefore, by creating incentive mechanisms to motivate employees, participation in innovation and development of innovative organizational culture can be realized.

New business partners have also been given the sixth priority among the key indicators of evaluating financial technologies in the banking environment, which includes the three components of alliances between banks and fintechs , alliances with physical businesses, and alliances with financial peers. Therefore, according to the findings of the research, it can be argued that the union of banks with fintechs creates the ability to share data, which can increase the financial needs of potential customers. Discover customer satisfaction. Also, in line with the alliance with physical businesses, it is possible to provide facilities for offline businesses to install ATM machines in the business premises or provide other suitable services of this kind. In addition, an alliance with domestic and foreign financial counterparts can be formed to develop the content and range of services. Because banks and financial peers have the

ability to cooperate in different projects through financial technologies.

organizations Based on agency theory and monitoring cost perspectives, financial development research shows that the development of financial technology has facilitated the digital transformation of commercial banks, On the other side, fintech also affects competitive advantage, and fintech is necessary to achieve a competitive advantage and sustainable performance. Then, collaboration with fintech entities is the dominant factor in achieving sustainable bank performance. The empirical study contributes that collaboration with fintech entities is an eligible and suitable choice as a booster to improve competitive advantage and sustainable bank performance. Besides, the utilisation of fintech is essential to get closer to the banks and their customers.. The mentioned evaluation requires knowing the key indicators of financial technology evaluation in the banking industry. This recognition in the field of financial performance evaluation of banks is one of the main characteristics in the success of bank evaluation. Therefore, in this research, using the opinions of banking experts and university professors, evaluation components were extracted from the interviews, taking into account the experimental and academic aspects as well as the current conditions, in order to The tool achieved uniform and universal evaluation components in the form of a specific model, which can act as a decision-making reference for evaluating the performance and position of banks based on the innovation of financial technology services (Fintech). which has been largely ignored in scientific research until now. However, the results of this research help to expand the theoretical and empirical foundations of this field. Public policy makers, banks as responsible for monitoring payment and settlement systems and in general, the country's banking system are among the beneficiaries of this research. In addition, the research results can be used by all investors, entrepreneurs and researchers in the fields of banking and financial technology.

6. Resources

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