

## The impact of the continuity of Fintech on digital banking

*Mohammad Ali Arabyarmohammadi\**

*Master graduate of governmental management, Iran.*

*\*Corresponding Author*

*Seyyed Hossein Mirmoeini*

*Master graduate of business management, Iran.*

### ABSTRACT

*The current research aims to study the effect of continuity of the FinTech in Digital Banking. The statistical population of this research includes all the FinTech users of Refah Bank branches of Semnan Province that have experienced using the Information Technology of Refah Bank at least once. Therefore, according to Cochran's formula, 385 were selected as the sample using a simple random sampling method. Accordingly, 385 questionnaires were distributed. After receiving, the questionnaires were evaluated. A questionnaire was used to collect the data. Furthermore, the convergent validity of the average variance extracted (AVE) was used to calculate the validity of the questionnaire, which was confirmed. In the current research, to determine the reliability of the questionnaire, two criteria of Cronbach's alpha coefficient and composite reliability were used and were confirmed based on the results. SPSS and SMART-PLS software were also used to analyze the data using statistical methods of regression analysis and structural equations. The research findings confirmed the presented conceptual model and the results of the structural equation modeling showed that the continuity of the FinTech affects digital banking.*

*Keywords: digital banking, Fintech, ECT-I*

### Introduction

Nowadays, establishing digital banking has considerable consequences in banking; because they affect customer relations and technology transformations. Digital banking first emerged in 1995 in the US and Europe. The first digital banking was established in 2000 in Japan, and then in 2013, in China. To increase the international competitiveness of the South Korean financial industry, the government allowed two digital banking of K-bank and Kako Bank to operate in 2016. They launched account opening services, loans through offline programs with higher interest rates, and lower transfer fees. As a result, the above-mentioned banks attracted 7 million customers in the first year (Shin et al, 2019).

Digital banking has become one of the main ways of multichannel services to the customers through different ways including Telephone, Internet, and cellphone, challenging the traditional methods of banking (Cortinas et al, 2010). Due to the increase in customer expectations, customer attraction, customer retention, and improving profitability have become necessary after the financial crisis in 2008, in particular (Monferrer-Tirado et al, 2016).

However, in digital banking, banking marketing has not been generally considered; also, Piyathasanan et al (2015) in a study about the effects of the internet experiences in the understanding the customer value,

argue that a few of the regulations about the way of improving the digital experience of the customers is available (Mbama and Ezepue, 2018). Developing service marketing theory for digital banking requires understanding customer preferences and motivation for customer satisfaction and loyalty (Grönroos, 1984). Therefore, in the current research, the variables of experience, satisfaction, loyalty, and financial performance have been considered in terms of digital banking and based on (Mbama and Ezepue, 2018).

On the other hand, FinTech is a dynamic part in the intersection of the technology and financial service parts in which, the technology-based companies and the new companies introduce technologies in the products and services that are currently presented by the traditional financial services industry (PricewaterhouseCoopers, 2017). The term FinTech was first introduced in the early 1990s as the Consortium of Financial Services Technology (Románova, I., & Kudinska, 2016).

To study the purposes of the continuity of the customers to use the Fintech for wealth management, the current study fills this research gap. Expectation-Confirmation Theory of Information Systems (ECT-IS) is one of the most known theoretical frameworks used for understanding the continuity of the users. This framework represents that the continuity intention of the user to use the information system depends on three variables after accepting that are customer satisfaction, Expectation Confirmation of user, and perceived profitability after use (Bhattacharjee, 2001). Also, ECT-IS has been integrated with the self-efficiency theory to consider the effect of the intrinsic motives of the users about their purposes to the continuous use of Fintech to manage the wealth based on the study conducted by Shiau et al (2020).

### **Research Theoretical Foundations Financial Technologies (FinTech)**

Fintech contributes to creating more varied financial outlooks in which the customers can involve in various types of innovative financial services including payment technology, population budget, wealth management, insurance, and the block chain (Imerman and Fabozzi, 2020). As a significant part of the Fintech process, the concept of wealth management in recent years has witnessed the technology and significant disturbance in the technology; because this process results in less cost using advanced software (Lee and Shin, 2018). Utilizing Fintech in wealth management is increasing not only by the digital local population but also with richer elderly customers; because the constraints of the online/digital solutions are less than the in-person meetings with their financial advisors. Therefore, FinTech is vital for wealth management (Imerman and Fabozzi, 2020). Although there is a great potential in wealth management, its value is not stable without continuous services to their users. users' continuing goals are emphasized as a more critical factor for the success of information systems (IS) than their initial approval (Zhou et al, 2018). Continued use of Fintech is not only essential to build customer commitment and loyalty, but also to return on investment in Fintech (Bitner et al, 2002).

In particular, the use of fintech for wealth management depends not only on the technological characteristics of these innovations but also on the underlying factors of financial services and wealth management, which play an important role in influencing the customer perception of these services (Shiau et al, 2020).

### **Expectation-Confirmation Technology for Continuity of Information Systems**

Expectation confirmation theory is used mainly in the marketing area to measure the satisfaction and behaviors of the customers after purchase. Batacherchi (2001) compared the continuity goals of the users with the repurchase behaviors of the customers and expanded ECT to develop the continuity of ECT-IS. According to ECT-IS, the continuity intention of using information systems in the person depends on three variables that are satisfaction level of users with information systems, expectations confirmation of users, and the perceived profitability. By using the literature of Information Systems, the continuity of ECT-IS has been adopted and developed to explain the intention of continuity of information systems in different areas (Shiau et al, 2020).

## **Self-efficiency**

Self-efficacy is defined as the person's judgment about their ability in the implementation of the operational path required to teach the desired performance. (Compeau, D.R., and Higgins, 1995) argued that the self-efficacy does not measure the things that people have done in the past, but it judges what they can do in the future. But also, this understanding of how a person can do a job does not include their existing skills (Chen et al, 2011). The social cognitive theory explains that the precise evaluation of personal efficiency has a considerable functional value (Bandura, 1977), and also determines that how people will try and for how long will be stable against the obstacles (Bandura, 1982). Also, in the previous studies, the lack of reliability has been considered as one of the factors affecting the continuity goals of the users in the financial services directly and indirectly (Choi, 2018). Self-efficacy is flexible and can be applied in different contexts (Schneider and Chein, 2013) including electronic-based services and using a web-based Information System (Hasan, 2006).

## **Digital Banking**

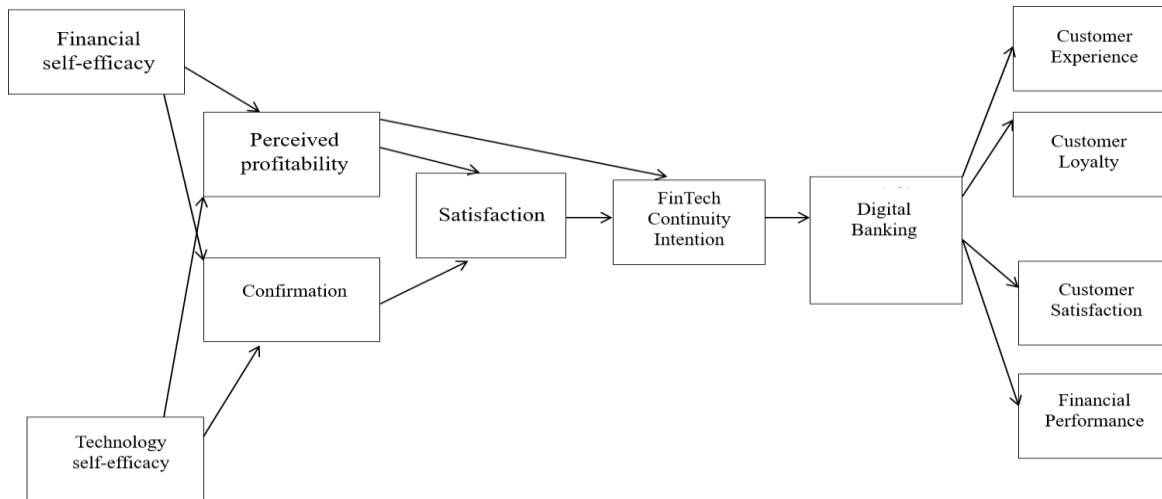
Digital banking refers to better service, research and development, and better experience through innovation (Dootson et al, 2016). Using technology such as digital banking in the service innovation is perceived for supplying the customer needs through their relationship with the service users and their perception of better service (Baba, 2012). Davis (1989) assumes that the perceived ease of use and the profitability factors affect the customers' behavior in using new technologies. In Jordan Banks, profitability, reliability, and perceived self-efficacy predict the customers' use of telephone banking (Alalwan et al, 2016).

Digital banking enables the banks to develop the services for the customers, and reduce the costs related to sending declaration through posts and in-person transactions with customers in the branches. Today, customers expect having a similar level of interactions in digital banking and social networks (Dootson et al, 2016). Although digital banking is related to technology, it is service-oriented and conceptualizes service marketing theories (Van Looy et al, 1998). Various factors include digital banking of which, customer experience, customer satisfaction, customer loyalty, and financial performance can be mentioned according to Mbama and Ezepue (2018).

Customer experience includes all the interactions (such as logical, emotional, sensual, physical, and spiritual) between the customer, product, and the company, the value created by a set of interaction (Meyer and Schwager, 2007; Verhoef et al, 2009), and also customer buying behavior (Klaus and Maklan, 2013). Customer satisfaction occurs when the gap between the expectations and customer experiences is removed. Therefore, to improve their experience, banks must constantly ask the customers' opinions about their digital banking. The above-mentioned relationship between the customer experience and buying behavior shows that the customer experience is generated by marketing to improve customer satisfaction and loyalty and its effects on the financial performance of an organization (Mbama and Ezepue, 2018).

## **Research Conceptual Model**

The current research aims to investigate the impact of the continuity of fintech on digital banking. Therefore, according to the research literature as well as the papers, the basis of the conceptual model will be as follows. Digital banking has been considered as variable based on the opinion of (Mbama and Ezepue, 2018) and the continuity of Financial Technologies (FinTech) is based on the study conducted by (Shiau et al, 2020). Figure (1) shows the research conceptual model:



**Figure 1: Research Conceptual Model**

Research hypotheses are as follows:

Hypothesis 1: financial self-efficacy is effective on the perceived profitability.

Hypothesis 2: financial self-efficacy is effective on the confirmation.

Hypothesis 3: technology self-efficacy is effective on perceived profitability.

Hypothesis 4: technology self-efficacy is effective on the confirmation.

Hypothesis 5: perceived profitability is effective on the Fintech continuity intention.

Hypothesis 6: perceived profitability is effective on satisfaction.

Hypothesis 7: confirmation is effective on satisfaction.

Hypothesis 8: satisfaction is effective on the fintech continuity intention.

Hypothesis 9: Fintech continuity intention is effective in digital banking.

Hypothesis 10: Fintech continuity intention is effective in the customer experience of digital banking.

Hypothesis 11: fintech continuity intention is effective in the customer loyalty of digital banking.

Hypothesis 12: fintech continuity intention is effective on the customer satisfaction of digital banking.

Hypothesis 13: fintech continuity intention is effective in the financial performance of digital banking.

### Research Methodology

The current research is applied in terms of purpose and survey-descriptive and correlational in terms of data collection. The statistical population of this research includes all the Fintech users of Refah Bank branches of Semnan Province who experienced using the information technology of Refah Bank. Therefore, according to the unlimited Cochran's formula, 385 users were selected as the sample using a simple random sampling method. The questionnaire was used to collect data. To confirm the validity of the measurement tools, convergent validity has been applied. Convergent validity means that the indicators of each structure have a medium correlation with each other. The criterion of being convergent validity is that the Average variance extractions be higher than 0.5. Also, in the current research, to determine the reliability of the questionnaire, two criteria of Cronbach's alpha coefficient and composite reliability have been applied. The Cronbach's alpha coefficients of all variables in this research are higher than the minimum value of 0.7. In contrast to the Cronbach's alpha, the composite reliability implicitly assumes that every indicator has the same weight, depending on the actual load factors of each structure; therefore, it presents a better criterion for the reliability. Composite reliability must be achieved higher than 0.7 to present the internal stability of the structure (Fornell and Larcker, 1981). The reliability and validity results of the measurement tools have been presented in Table (1).

**Table 1: the results of the reliability and validity of the measurement tools**

Variable	Dimensions	Number of questions	Average Variance Extracted (AVE)	Cronbach's alpha	Composite Reliability
Financial self-efficacy	-	3 (questions 1-3)	0.69	0.84	0.73
Technology self-efficacy	-	3 (questions 4-6)	0.65	0.75	0.78
Perceived profitability	-	3 (questions 7-9)	0.64	0.73	0.76
Confirmation	-	3 (questions 10-12)	0.63	0.78	0.71
Satisfaction	-	3 (questions 13-15)	0.61	0.79	0.74
FinTech continuity Intention	-	3 (questions 16-18)	0.62	0.77	0.75
Digital banking	Customer experience	3 (questions 19-21)	0.67	0.81	0.79
	Financial performance	3 (questions 22-24)	0.68	0.85	0.80
	Customer satisfaction	3 (questions 25-27)	0.64	0.83	0.84
	Customer loyalty	3 (questions 28-30)	0.65	0.82	0.85
Total	-	30 questions	0.64	0.81	0.76

### Research Findings

To analyze the research model, data analysis was used applying structural equation modeling. The software used in this research to analyze is SMART-PLS. In SMART-PLS, the value of  $t$  represents the significance of the effect of variables. If it is higher than 1.96, there is a positive effect, and it is significant. If this value is between +1.96 and -1.96, then there is no significant effect and if it is fewer than -1.96, then, there is a negative effect and it is significant. Also, if the path coefficients are higher than 0.60, then, there is a strong relationship between the two variables. If the value of the coefficient is between 0.3 and 0.6, there is an average relationship and if it is lower than 0.3, then, there is a weak relationship (Chin, 2003).

The summary of the results obtained from testing the hypotheses has been presented in Table (2).

**Table 2: Summary of the results obtained from testing the hypotheses**

Hypotheses	Path coefficient	T statistics	Result	Impact
Hypothesis 1: financial self-efficacy is effective in perceived profitability.	0.47	4.90	Significant	Average
Hypothesis 2: financial self-efficacy is effective on the confirmation.	0.15	3.17	Significant	Weak
Hypothesis 3: technology self-efficacy is effective on the perceived profitability.	0.74	20.42	Significant	Strong
Hypothesis 4: technology self-efficacy is effective in the confirmation.	0.68	15.36	Significant	Strong
Hypothesis 5: the perceived profitability is effective on the fintech continuity intention.	0.11	2.78	Significant	Weak
Hypothesis 6: perceived profitability is effective in satisfaction.	0.35	4.32	Significant	Average
Hypothesis 7: confirmation is effective on satisfaction.	0.91	16.79	Significant	Strong
Hypothesis 8: satisfaction is effective on the fintech continuity intention.	0.60	9.48	Significant	Strong
Hypothesis 9: the fintech continuity intention is effective in digital banking.	0.81	40.29	Significant	Strong
Hypothesis 10: the fintech continuity intention is effective in the customer experience of digital banking.	0.77	25.83	Significant	Strong
Hypothesis 11: the fintech continuity intention is effective in the customer loyalty of digital banking.	0.83	44.63	Significant	Strong
Hypothesis 12: the fintech continuity intention is effective on the customer satisfaction of digital banking.	0.58	20.43	Significant	Average
Hypothesis 13: the fintech continuity intention is effective in the financial performance of digital banking.	0.48	13.20	Significant	Average

According to the path coefficient related to the first hypothesis, it can be concluded that the financial self-efficacy of 0.47 has a positive and significant effect on perceived profitability. That is to say, if the financial self-efficacy increases 1 unit, there is a 95% possibility that the perceived profitability increases 0.47. the path coefficient of other hypotheses can also be explained the same way. Figures (2) and (3) represent the research model at the mode of estimating the coefficients and research model at the mode of the significance of coefficients, respectively.

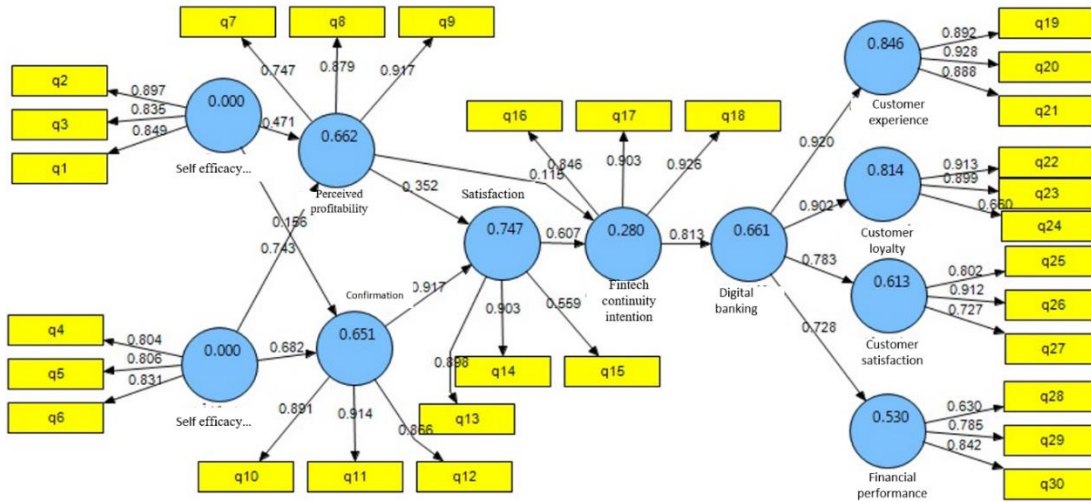


Figure 2: Research model in coefficient estimation mode

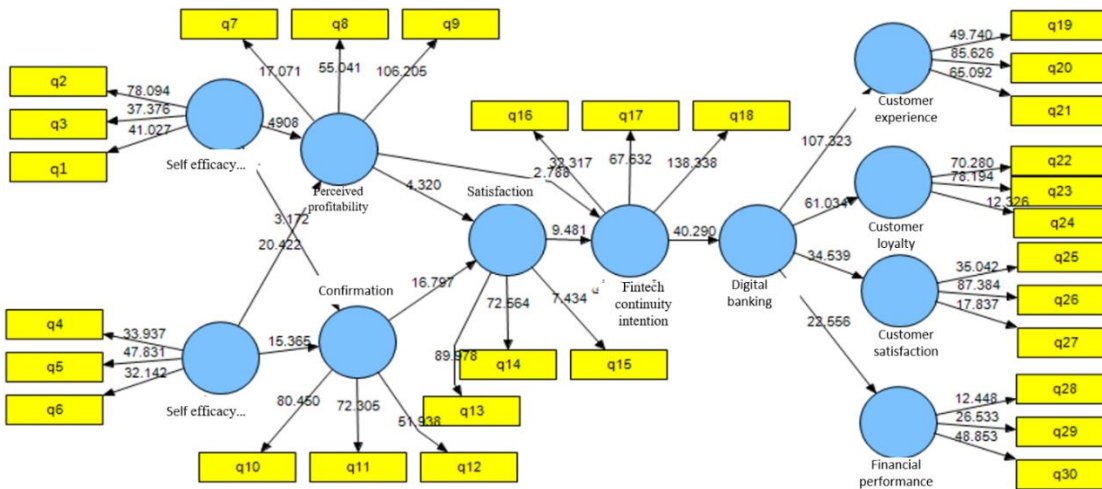
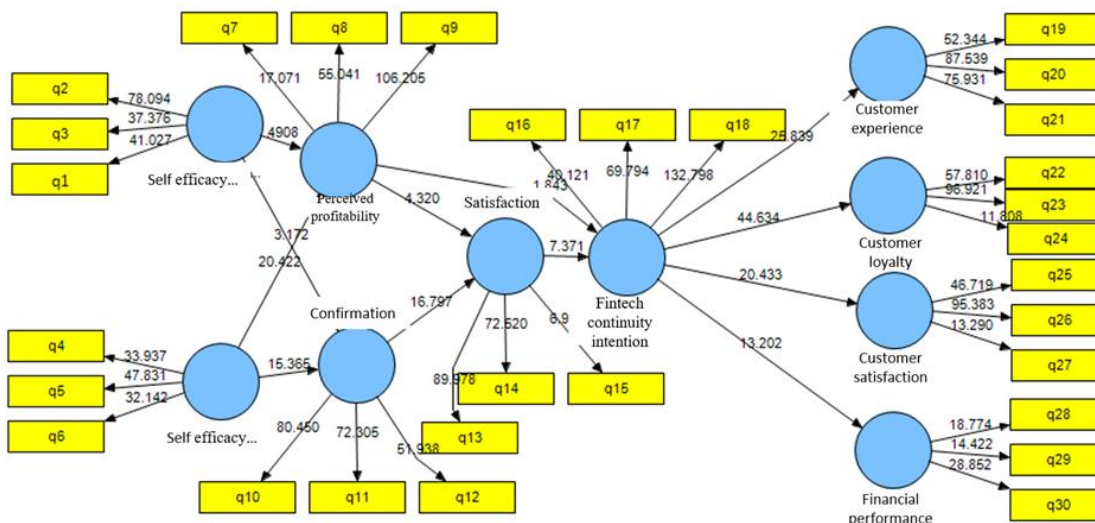


Figure 3: Research model in the significant mode of coefficients

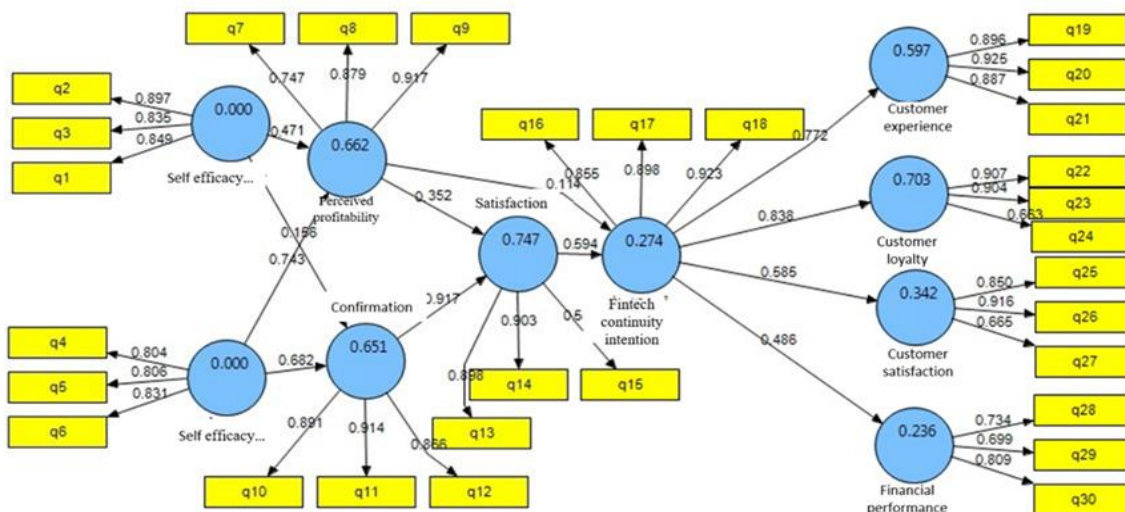
The research model in the significant state of coefficients is shown in Figure 3. Based on the results of the research model, the amount of variance that the developed model has been able to explain for the criterion variables is 0.36. Therefore, based on the results of the proposed model, it has been able to explain 0.36 of the variance of the purchase intention.

Also, the research model in the case of coefficient estimation (the effect of continuity intention on the dimensions of banking and digital) is shown in Figure 4.



**Figure 4: Research model in coefficient estimation mode (the effect of continuity intention on the dimensions of digital banking)**

The research model of the significance of the coefficients (the effect of the intention of continuity on the dimensions of digital banking) is shown in Figure 5.



**Figure 5: The research model of the significance of coefficients (effect of continuity intention on the dimensions of digital banking)**

**Fitness of the Model**

To evaluate the goodness of fit of the model, the GOF indicator has been used, and the value of this indicator had been measured using Equation (1). When the GOF value is higher than 0.5, it indicates that the fitness of the model is acceptable. When the GOF value calculated for the research model is higher than 0.5, it indicates the goodness of fit of the model. The fitness of the model has been presented in Table (3).

$$\text{Equation (1): Fitness of the research model } GOF = \sqrt{(\text{Mean}(\text{communality})) \times (\text{Mean}(r^2))}$$

**Table 3: Fitness of the research model test**

Research variables	The goodness of fit of the model	Permitted range
Research Model	0.661	Higher than 0.5

### Conclusion and Suggestions

The current study aims to investigate the effect of fintech continuity in digital banking. The research results showed that the fintech continuity intention is effective in digital banking and its other aspects. Also, other hypotheses were confirmed, and the results showed that the satisfaction affects the fintech continuity intention; furthermore, the perceived profitability is effective on the fintech continuity intention. The most effectivity in the hypotheses is the relationship between the confirmation and the satisfaction with the value of 0.91. according to the results, the fintech continuity management needs to consider other intrinsic factors of users including financial self-efficacy and technology self-efficacy, and allocate the products and services of the logical wealth management to the fintech users, increasing the users' satisfaction. Furthermore, according to the results, the effect of financial technology continuity on digital banking means that the fintech-related factors must be emphasized.

The more emphasis is placed on the factors influencing FinTech, the stronger digital banking will be; hence, it is suggested that:

- ✓ In the area of digital banking, financial self-efficacy and technology self-efficacy must be considered. FinTech wealth management not only includes the acceptance and use of the technology but also, has a level of reliability for the personal financial management competency, which results in a positive effect in digital banking in four areas of customer satisfaction, loyalty, financial performance, and customer experience. In the area of digital banking, the significance of particular forms of self-efficacy in different areas is emphasized rather than the general self-efficacy. Technology self-efficacy is a valuable predictor applied for perceived profitability. Also, as a consequence, proper financial performance has occurred in digital banking.
- ✓ The main focus is on the passive and promoter customers through which, encourages customers to use information systems and then, the customer experience be satisfactory, and as a result, their loyalty is retained. In the industry of financial service of Refah Bank, there are challenges in the banking competitions that require cooperation between the branches of the banks to provide a ground to promote the wide acceptance of this system in the organization, and as a result, improve the financial performance and increase the financial profitability. considering that the confirmation affects the satisfaction, thus, it indicates the significance and confirmation theory in the information systems and financial FinTech.

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