**Development of Technology Acceptance Model: Investigating the Impact of Consumer Experience, Inertia, and Culture on the Acceptance of Open Banking (Tejarat Bank as a Case Study)**

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**Introduction**

Along with recent advances in technology, a significant change has taken place in all industries, including banking industry, causing banks to move towards digital and open banking (Misra, 2019). In open banking, users can access their financial data through diverse ways, including internet banking, mobile banking and are no longer required to go to banks to do their banking (Carriere-Swallow, Haksar, & Patnam, 2021). Open banking challenges the existing data ownership methods and returns the control of financial data to consumers (Chan, 2020). In general, open banking can solve the challenges of data ownership for controlling customers’ financial information (Laplante, & Kshetri, 2021; Sivathanu, 2019) and help overcome financial problems (Arner, Barberis, & Buckley, 2015; Schueffel, 2016). Despite the benefits of open banking, studies have shown that, despite the long queues of customers in some branches of Tejarat Bank in Kashan (Iran), customers still prefer traditional/face-to-face banking and do not approve of open banking. According to the technology acceptance model (Davis, 1989), perceived ease, usefulness, and people’s attitudes are the main factors affecting people’s view towards new technologies. Studies have shown that other factors may also influence the intention to accept technology: perceived risk, previous consumption experience, uncertainty avoidance, and consumer inertia. Accordingly, the present study aims to develop a technology acceptance model (TAM) in the field of open banking.

**Materials and Methods**

This study is positivistic in terms of research philosophy. The research strategy is correlational since cause-and-effect relationships between the variables are examined in the research model. The research type is quantitative as the collected data are examined through statistical computing software. The target population of this study is the customers of Tejarat Bank branches in Kashan (Iran). G-Power software was used to determine the sample size; the suggested number of the software was 47 people. Also, to estimate the sample size, the rule of minimum 5 times and maximum 20 times of the maximum number of questions of a variable was used. Since the largest number of questions related to the variables of previous consumption experience and consumer inertia was 9 questions, the minimum and maximum sample size were determined as 45. A total of 251 questionnaires were distributed among the target samples. A questionnaire was used to collect the data. To check the validity of the measurement instrument, content validity was used for determining the appropriateness of the content of the questionnaire items. Additionally, to confirm its formal validity, the questionnaire items were extracted from previous relevant literature; duplicate items were removed; similar items were merged; and additional items were reduced. Experts confirmed the validity of the questionnaire. The questionnaire included 8 variables: the ease of use, perceived usefulness, attitudes towards use, consumer inertia, uncertainty avoidance, perceived risk, previous consumption experience, and intention to use open banking. Each dimension was investigated by a specific number of components through a researcher-made questionnaire.

In order to ensure the reliability of the questionnaire, Cronbach’s alpha method was used. The α coefficients were between 0.921 and 0.970 for the 8 variables, which indicated the reliability of the questionnaire. One-sample *t* test was run in SPSS examine the relationships between the studied variables. Due to non-normality of the data, the structural equation modelling was performed in Smart PLS software for checking the model fit and for analyzing the data.

**Results and Findings**

The results of testing the proposed research model are shown in Figure 1.



**Figure 1:** **Significant relationships based on Smart-PLS results**

As shown in Figure 1, the amount of factor loading in all the questions related to the variables is higher than 0.7; thus, the reliability of the research model can be confirmed. The numerical explanation coefficient is between zero and one, and if this number is more than 0.6, it indicates that the independent variable has been able to explain the dependent variable to a large extent. The coefficient of explanation in intention to use is 0.953, which is very high. It shows that this variable is explained by other independent variables in the study. For the amount of the explanatory coefficient in the attitudes to use variable, this number is higher than 0.6, which indicates that the independent variable of attitude can explain this variable to a large extent.

**Table 1: The results of testing the research hypotheses**

| Results  | T-test | Sig. | Hypotheses |
| --- | --- | --- | --- |
| Rejected | 0.107 | 0.915 | Intention to use← attitude to use← perceived risk |
| Confirmed | 2.730 | 0.007 | Intention to use← attitude to use← perceived usefulness |
| Rejected | 0.655 | 0.513 | Intention to use← attitude to use← perceived ease |
| Confirmed | 2.271 | 0.024 | Intention to use← attitude to use← previous consumption experience |
| Confirmed | 2.348 | 0.019 | Intention to use ←attitude to use ←consumer inertia |
| Confirmed | 3.002 | 0.003 | Intention to use ←Attitude to use ←Uncertainty avoidance |
| Confirmed | 2.421 | 0.016 | Attitude to use← perceived usefulness← perceived ease |
| Confirmed | 2.995 | 0.007 | Intention to use← perceived usefulness← perceived ease |
| Rejected | 0.115 | 0.908 | Attitude to use ←perceived risk |
| Confirmed | 2.617 | 0.009 | Attitude to use ←perceived usefulness |
| Rejected | 1.616 | 0.107 | Attitude towards perceived ease of use |
| Confirmed | 2.485 | 0.013 | Attitude to use ←previous consumption experience |
| Confirmed | 7.197 | 0.000 | Intention to use ←attitude to use |
| Confirmed | 10.659 | 0.000 | Tendency to use ←consumer inertia |
| Confirmed | 1.984 | 0.000 | Intention to use ←uncertainty avoidance |
| Confirmed | 3.618 | 0.000 | Intention to use ←perceived risk taking |
| Confirmed | 3.901 | 0.000 | Intention to use ←perceived usefulness |
| Confirmed | 5.824 | 0.000 | Intention to use ←Perceived ease of use |
| Confirmed | 4.143 | 0.000 | Intention to use ←previous consumption experience |
| Confirmed | 12.798 | 0.000 | Perceived usefulness ←Perceived ease |
| Confirmed | 2.821 | 0.005 | Attitude to use ←consumer inertia |
| Confirmed | 3.433 | 0.001 | Attitude to use ←uncertainty avoidance |

Table 1 shows the results of testing all the research hypotheses. As shown in this table, the mediating role of attitude in the relationship between perceived risk and intention to use as well as in the association between perceived ease and intention to use is rejected. In other relations of attitude mediation, due to the non-rejection of the direct and indirect influences of variables, attitude has a partial mediating role. Moreover, the perceived usefulness has a partial mediating role due to the direct and indirect effect of the perceived ease on the attitude to use.

**Conclusion**

The results showed that, among all the research hypotheses, only two hypotheses which were related to the effect of perceived risk on the attitude to use and the effect of perceived ease on the attitude to use were not confirmed. Additionally, consumer inertia, perceived risk, and uncertainty avoidance had a negative effect on the intention to use open banking while perceived usefulness, perceived ease, and previous consumption experience had a positive effect on the intention to accept open banking. To reduce the risks perceived by the customers of Tejarat Bank, the following suggestions are provided:

* Creating an option in the software to return the transactions done with a limited time condition
* Reducing the obligations of software users during the registration of bank customers
* Offering substantial support to customers with respect to the lost information and their capital

To reduce the consumer inertia of Tejarat Bank customers, the following suggestions are provided:

* Guiding and encouraging bank customers by bank employees in order to help people use open banking services
* Comparing traditional banking with open banking and explaining the positive effects of the latter for the customers

**Keywords:** consumer inertia, open banking, technology acceptance mode, consumer behavior.