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Displaying a Demonstrate for Ambidexterity of the Organization in Tejarat Bank of Isfahan, Utilizing the Combined Fuzzy DANP Strategy

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Abstract

Purpose : Modeling the implementation of organizational ambidexterity as an organizational ability in alignment and efficiency in response to market demands and simultaneously adapting to environmental changes through innovation and discovery of new solutions can help improve the performance of the aforementioned organizations. The purpose of this research is to design a two-level organizational model in the branches of the Tejarat Bank of Isfahan province to identify the important indicators.

Methodology : in current research, the research method is a descriptive survey, and researcher-made questionnaires were designed based on the Fuzzy Dimetal method and the fuzzy network analysis process, these indicators have been prioritized by 36 senior employees of Isfahan Tejarat Bank using the combined technique of Fuzzy Dimetal and fuzzy network analysis process.

Findings : based on the output of the above table, it indicates that the index of organizational managerial competence and loose relations, and finally attraction and employment were introduced as the most effective positive and negative indicators. the indicators of human resources of the organizational ambidexterity model, which mainly refers to the organizational and individual culture, indicate the influential role of the internals of individuals and organizations

Originality/Value : in the implementation of a new concept. In the strategic indicators, the existence of a flexible structure for the implementation of ambidexterity has been emphasized. From the aspect of social capital, the significant point is the high priority of the index of revision of social processes and components in the total indicators of ambidexterity in the organization. This means that in the initial stages of the implementation of dualism, it is necessary to review the processes and equipment to discover exploitation and exploration opportunities, plan to follow up on these opportunities at the same time, and formulate a model of ambidexterity in different parts of the bank.

Keywords: *Ambidexterity, Organization ambidexterity, Tejarat Bank, Fuzzy method, DANP*

Introduction

One of the critical changes in keeping money issues, is the sensational changes within the innovation. Futurists accept that keeping money innovations are progressively extending over the different measurements of human social orders (Adelkhani & Haghshenas Kashani, 2020).

The concept of ambidexterity is one of the new answers to the issue of ensuring the survival and success of today's organizations. Overall, ambidexterity refers to organizational capability compared to heterogeneous categories such as efficiency and innovation, differentiation strategy, cost reduction strategy, etc. (Gibson and Breakingshaw, 2007). In other words, in

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terms of time perspective, organizations can both handle current responsibilities (present and probable future) as well as future opportunities (new markets and long-term future) (Ramos et al., 2012). This concept is established in the fields of technology, innovation, networks, strategy, etc. Therefore, some scientists have used the concepts of other fields to explain organizational ambidexterity. Of course, the concept of ambidexterity today is mostly defined and designed under the two headings of exploration and exploitation. So far, three approaches have been presented to understand ambidexterity, which is sequential, structural, and contextual ambidexterity, but it is still not completely clear when and how organizations move towards ambidexterity and deserves a lot of research. Therefore, in order to solve the theoretical vacuum of this organizational field, the problem of the present research is to find the components of a dual-purpose organization in Tejarat Bank and present it as a model. The vital components of an ambidexterity organization can be related to the two categories of exploitation and exploration. Exploitation in the organization means using existing knowledge to modify current processes, while exploration refers to the production of new knowledge in the field of the organization and organizational elements (Huang et al., 2008).

Companies are always seeking to introduce new concepts and methods of competing with their rival companies. Therefore, it is now the time for these companies to think seriously about organizational intelligence as an effective resource to utilize organizational barriers to increase internal efficiency and improve their market using their organizational capabilities (Yadegari Taheri & etal, 2021).

By probing the situation of the world's important organizations in the new millennium, this point will be fulfilled that service organizations must be more flexible, more customer-oriented, more efficient, more responsive, more cost-effective, and have more added value to improve and

optimize their performance and be able to fight for survival and growth in the global economy. However, the main premise of the ambidexterity research also shows that such organizations can perform better. Some researchers have found a beneficial effect of ambidexterity (Gibson and Birkinshaw, 2007; He and Wong, 2004; Labatkin et al., 2006). Others have argued that the firm can choose alignment and compatibility and avoid the middle ground between these two variables (Jamavat et al., 1993), and some others have questioned whether there are functional benefits of ambidexterity or not (van Levy et al., 2005). On the other hand, in a meta-analysis, Junni et al. (2013) showed that when organizational growth is measured, organizational ambidexterity and performance have a positive relationship. They also state the complexity of ambidexterity on performance based on empirical evidence. Some studies have found a positive relationship (Gibson and Birkinshaw, 2004; Labatkin et al., 2006), some other studies have found a negative relationship (Atahani-Jima, 2005), and also there were some conditional effects (Lin et al., 2007). Some evidence shows that ambidexterity has a curvilinear relationship with performance (Yang and Atahani Jima, 2007) and some other evidence shows that there is no relationship between ambidexterity and performance at all (Venkatraman et al., 2007).

The limited financial resources and facilities of banks, especially in developing countries, have necessitated the need for planning to increase the efficiency and productivity of banks. Since doing any work requires a suitable instrument, the use of a scientific method as a precise instrument to evaluate the performance of bank branches, is inevitable and has prompted researchers to continuous exploration to compile and introduce effective methods for evaluating the organization's performance. In this line, some of the conducted studies provide a positive relationship (Gritz et al., 2009; Gibson and Birkinshaw, 2007; He and Wang, 2004). Some others provide curvilinear

relationships, for example, in a study conducted by Wagner and his colleagues (2012) in 605 technology companies, a curvilinear relationship was found between ambidexterity and performance. In the same way, the study of Jansen et al. (2005) demonstrated that ambidexterity is very useful for the organization in environmental uncertainty contexts. Mars (1991) also stated that on some occasions, organizations face costs due to more or less concentration on ambidexterity. Therefore, regardless of the use of diverse scales of ambidexterity, different levels of analysis about the relationship between ambidexterity and performance provided reliable results (O'Reilly and Tushman, 2013).

Recently, the Tejarat Bank embarked on research measures regarding the importance of reforming organizational issues and their role in overall performance (reducing costs and increasing productivity). It can cause many achievements in the applicability of the current research.

The financial sector plays an increasing role in economic growth and development in the global economy (Nguyen et al, 2022). In recent years, the banking industry has seen fierce competition with many opportunities and threats. Banks can develop strategies to achieve a good competitive position in the market by examining their strengths and Existing opportunities in the market. To create and develop different competitive opportunities over the competitors, some ways and means can be used (KianMehr & Etal, 2021). The banking industry and its related organization have a relatively broad structure that includes significant elements in all areas of competition with other organizations, attracting the opinion of customers and the organization. Thus, the main question of this research is, what is the optimal model for ambidexterity of the organization in Isfahan Tejarat Bank using fuzzy integration methods?

Research Background

Yunita et al. (2023) did a research with the title "Organizational ambidexterity: The role

of technological capacity and dynamic capabilities in the face of environmental dynamism". Their investigation found that technological capacity influences organizational Ambidexterity, with the link becoming stronger when mediated by an organization's dynamic capability. In the meantime, environmental dynamism has no impact on the organizational ambidexterity of the banking sector in Indonesia. Their findings also indicate that the associated security risk will increase if a bank improves its technological capacity in a highly dynamic environment. This paper is an empirical study of technological capacity and presents a method for creating organizational ambidexterity through dynamic capability, especially in the banking sector.

Wang et al. (2023) did a research with the title "Wear glasses for supervisors to discover the beauty of subordinates: Supervisor developmental feedback and organizational ambidexterity". The results indicate that supervisor developmental feedback has a positive effect on organizational ambidexterity and that organizational learning plays a fully mediating role between supervisor developmental feedback and organizational ambidexterity. Transformational leadership positively moderates the mediating effect of organizational learning between supervisor developmental feedback and organizational ambidexterity, while transactional leadership negatively moderates the mediating effect of organizational learning between supervisor developmental feedback and organizational ambidexterity. Finally, this paper constructs a moderated mediation model and presents various implications concerning how and when to promote organizational ambidexterity.

Ed-Dafali et al. (2023) did a research with the title "Strategic orientations, organizational ambidexterity, and sustainable competitive advantage: Mediating role of industry 4.0 readiness in emerging markets". Their findings reveal that entrepreneurial orientation has a greater effect on SCA than market orientation in emerging markets.

Furthermore, Industry 4.0 readiness acts as a full intermediary between strategic orientations and sustainable competitive advantage. This study contributes to the existing literature by exploring the relationship between strategic orientation and sustainable competitive advantage through Industry 4.0 as the mediator. SMEs' managers can use these findings to rethink their technology adoption strategies and exploitative and explorative approaches.

Aftab et al. (2022) conducted research titled organizational ambidexterity, firm performance, and sustainable development: the mediating role of entrepreneurial orientation in small and medium companies of Pakistan. This empirical research examines the mediating role of entrepreneurial orientation in the relationship between organizational ambidexterity, sustainable development participation, and firm performance. Data were collected from 339 small and medium companies using a time lag approach and analyzed by using structural equation modeling (SEM). The results confirmed the mediation of entrepreneurial orientation in the relationships between organizational ambidexterity, firm performance, and sustainable development participation. Institutional support also strengthens the relationship between entrepreneurial orientation, firm performance, and sustainable development approaches. The current study provides detailed theoretical and managerial implications for the effective use of institutional support to enhance firm performance and sustainable development participation.

Kloss et al. (2021) conducted research titled organizational ambidexterity and competitive advantage: the role of strategic agility in the exploration-exploitation paradox. Through a mixed method, consisting of a literature of review and quantitative analysis of 150 medium-sized German companies in the engineering industry, it is shown how factors such as ambidexterity, exploration, and exploitation, affect the competitive advantage of

companies in conjunction with strategic agility. Therefore, companies should either prefer the exploration strategy of innovation processes to achieve completely new knowledge, products, and services or combine the exploitation strategy with strategic agility. A solo exploitation strategy is not beneficial for increasing competitive advantage, while a two-sided strategy seems to negatively affect a firm's competitive advantage.

Willms et al. (2019) conducted a research titled the recognition of top managers facilitates organizational ambidexterity: the mediating role of cognitive processes; this study aids top managers' cognition by theoretically developing the relationship between cognitive frameworks and organizational ambidexterity and the mediating process of cognitive differentiation and integration. Using a sample of 101 top managers, this study utilizes the proposed model in a cross-sectional design using structural equations of partial minimum squares. Contradictory frames are not significantly related to a lack of organizational conflict. Appreciating productivity and discovery won't lead to loss of conflict, but it is a prelude to differentiation and cognitive integration of top managers. Cognitive differentiation and integration of top managers mediate the relationship between top managers' paradoxical framework and organizational ambidexterity. Furthermore, top managers' cognitive integration reduces the effect of top managers' cognitive differentiation and organizational ambidexterity, which emphasizes the pivotal role of top managers' cognitive integration.

Research Method

In terms of purpose, this research is practical, and in terms of data collection method, the current study is a descriptive survey, for which Excel 2021 and Superdecision have been used to analyze questionnaire data (fuzzy dimetal and fuzzy network analysis process). The statistical population of this research includes

managers and senior employees of Tejarat Bank of Isfahan province, which was distributed in 36 questionnaires, as the basis of measurement and analysis in this research. The research tool consisted of two researcher-made questionnaires, the validity of the research was confirmed by university professors and other conducted research, and the reliability (Cronbach's alpha) was equal to 0.89. It should be mentioned that the fundamental model of this research was compiled based on the research of Vahedi et al. (2022).

DEMATEL fuzzy method

The DEMATEL technique is a method for complex problems first introduced by American scientists between 1926 and 1972; this technique was built based on the theory of graph that was able to solve problems with a simple method. However, there was a problem with the DEMATEL technique, as it relied on a fuzzy DEMATEL technique, which made decisions in conditions of uncertainty. Fuzzy DEMATEL makes it easy to make decisions in terms of environmental uncertainty through language variables. This technique can be easily applied to such fields as production, organization management, information systems, and environmental uncertainty (Zhou & et al. 2011). Furthermore, this technique can solve all problems that organizations confront in group decision-making under fuzzy conditions (Reyes et al., 2011). This method involves the following steps. Create a matrix of direct relationships between system factors. Experts, using the linguistic variables, expressed their views about the mutual impact of the main factors on each other. By converting linguistic estimates into fuzzy numbers, the primary direct relation matrix $A = [a_{ij}]$ was created, in which A is the nonnegative matrix $N \times N$, and the frame a_{ij} is a triangular fuzzy number representing the direct impact of factor i on factor j . When $i = j$, the diameter components of the matrix are zero (Cheng et al., 2009),

$$A = \begin{bmatrix} a_{11} & a_{1j} & a_{1n} \\ a_{i1} & a_{ij} & a_{in} \\ a_{n1} & a_{nj} & a_{nn} \end{bmatrix}$$

Gather the data and merge respondents' opinions. In this step, to determine the effect of each criterion on another, the symbol $O_{ij} = (l_{ij}, m_{ij}, u_{ij})$ was used to represent the respondents' comments on the effect of factor i on factor j . Where $i = j$ in the matrix, the number was zero. For every respondent, a matrix $n * n$ b , a with fuzzy frame, was defined as $O^{\sim p} = [O^{\sim p}_{ij}]$ where p is the number of respondents and n is the number of factors under investigation. As a result, $O^{\sim 1}, O^{\sim 2}, \dots, O^{\sim p}$ were the matrices of responder p . Make the initial decision matrix (O). From the simple average, the comments of all individuals with triangular fuzzy dimensions were $O_{ij} = (l_{ij}, m_{ij}, u_{ij})$ (Jassbi et al., 2010).

$$\tilde{O}_{ij} = \frac{1}{p} \sum_{p=1}^p \tilde{a}_{ij}^p$$

$$\tilde{O} = \begin{bmatrix} \tilde{o}_{11} & \tilde{o}_{12} & \tilde{o}_{13} & \dots & \tilde{o}_{1n} \\ \tilde{o}_{21} & \tilde{o}_{22} & \tilde{o}_{23} & \dots & \tilde{o}_{2n} \\ \tilde{o}_{31} & \tilde{o}_{32} & \tilde{o}_{33} & \dots & \tilde{o}_{3n} \\ \dots & \dots & \dots & \dots & \dots \\ \tilde{o}_{m1} & \tilde{o}_{m2} & \tilde{o}_{m3} & \dots & \tilde{o}_{mn} \end{bmatrix}$$

Calculate the normalized matrix. To create the normalized matrix, the following relations were utilized (Zhou et al., 2011).

$$Z_h^{\sim} = k \times O_h^{\sim} \quad h=1, m, u$$

$$k = \min \left[\frac{1}{\text{Max} \sum_{j=1}^n |\tilde{o}_{ij}|}, \frac{1}{\text{Max} \sum_{i=1}^n |\tilde{o}_{ij}|} \right]$$

$$i, j \in \{1, 2, 3, \dots, n\}$$

$$\tilde{z} = \begin{bmatrix} \tilde{z}_{11} & \tilde{z}_{12} & \tilde{z}_{13} & \dots & \tilde{z}_{1n} \\ \tilde{z}_{21} & \tilde{z}_{22} & \tilde{z}_{23} & \dots & \tilde{z}_{2n} \\ \tilde{z}_{31} & \tilde{z}_{32} & \tilde{z}_{33} & \dots & \tilde{z}_{3n} \\ \dots & \dots & \dots & \dots & \dots \\ \tilde{z}_{m1} & \tilde{z}_{m2} & \tilde{z}_{m3} & \dots & \tilde{z}_{mn} \end{bmatrix}$$

Create matrix V . Matrix V was calculated for every fuzzy limit (l_{ij} , m_{ij} , u_{ij}) via.

$$l_{ij}'' = \tilde{z}_l \times (I - \tilde{z}_l)^{-1}$$

$$m_{ij}'' = \tilde{z}_m \times (I - \tilde{z}_m)^{-1}$$

$$u_{ij}'' = \tilde{z}_u \times (I - \tilde{z}_u)^{-1}$$

Finally, each of the lower, middle, and upper triangles were bound together, as a result of which matrix \tilde{V} was formulated.

$$\tilde{V} = \begin{bmatrix} \tilde{v}_{11} & \tilde{v}_{12} & \tilde{v}_{13} & \dots & \tilde{v}_{1n} \\ \tilde{v}_{21} & \tilde{v}_{22} & \tilde{v}_{23} & \dots & \tilde{v}_{2n} \\ \tilde{v}_{31} & \tilde{v}_{32} & \tilde{v}_{33} & \dots & \tilde{v}_{3n} \\ \dots & \dots & \dots & \dots & \dots \\ \tilde{v}_{m1} & \tilde{v}_{m2} & \tilde{v}_{m3} & \dots & \tilde{v}_{mn} \end{bmatrix}$$

Fuzzify non-fuzzy numbers. For this purpose, i and j were used, according to the following relations.

$$v = \frac{(l + 4m + u)}{6}$$

As a result of which we have.

$$V = \begin{bmatrix} v_{11} & v_{12} & v_{13} & \dots & v_{1n} \\ v_{21} & v_{22} & v_{23} & \dots & v_{2n} \\ v_{31} & v_{32} & v_{33} & \dots & v_{3n} \\ \dots & \dots & \dots & \dots & \dots \\ v_{m1} & v_{m2} & v_{m3} & \dots & v_{mn} \end{bmatrix}$$

Fuzzy ANP method The ANP Analytic network process proposed by Saaty (2004) deals with multi-criteria decision-making problems in which there is an interaction and interdependence among decision-making criteria (or opinions, sub-criteria). In the ANP technique, to demonstrate the existing dependencies of decision-making levels, a super matrix is normally constructed. In this study, a grid and a super matrix were used (see Fig. 1).

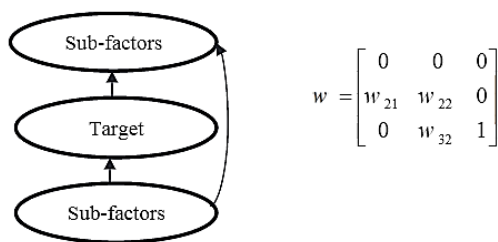


Fig 1. The grid used in this research and its super matrix

The first level of the network included the goals, and the second level addressed the main factors which had Zornian affiliations and were placed at the third level. In the super matrix W , W_{21} was the relative weight of the main factors with respect to the target node W_{22} . The internal weight between the main

W_{32} factors was the weight of the subframes relative to their respective principal factors. The matrix T was the output of the DEMATEL method; after normalization, it was considered to be the matrix W_{22} . To calculate W_{21} and W_3 , pairwise comparisons were made. To calculate fuzzy numbers, α_{ij} values were considered. Expert opinions were processed directly (Ataei, 2010). Fuzzy numbers at this stage could be calculated based on different membership functions such as triangular or trapezoidal formats. Given the high application and simplicity of working with the triangular method, a fuzzy number was defined through the following relations (Liu & Chen, 2007).

$$\alpha_{ij} = (\alpha_{ij}, d_{ij}, g_{ij})$$

$$\alpha_{ij} = \text{Min}(b_{ijk}), k = 1, 2, \dots, n$$

$$d_{ij} = (\prod_{k=1}^n b_{ijk}), k = 1, 2, \dots, n$$

$$g_{ij} = \text{Max}(b_{ijk}), k = 1, 2, \dots, n$$

In addition, each factor's importance is shown on the diagram to illustrate which factors in a system can be more efficient or have an increased influence over others.

In the development analysis method, for each row of the pairwise comparison matrix, the S_k value, which was itself a triangular number, was calculated via.

$$S_k = \sum_{j=1}^n M_{kj} * \left[\sum_{i=1}^m \sum_{j=1}^n M_{ij} \right]^{-1}$$

Where k is the row number, while j and I indicate the options and indicators, respectively. In general, in the development analysis method, after the calculation of S_k , have to be obtained, the magnitude of items with respect to each other must be computed. If M_1 and M_2 are two triangular fuzzy numbers, the magnitude of M_1 over M_2 , shown by $V(M_1 \geq M_2)$, is decided as follows.

$$\left. \begin{aligned} V(m_1 \geq m_2) &= 1 \\ \text{if } m_1 &\geq m_2 \\ V(m_1 \geq m_2) &= \text{hgt}(m_1 \cap m_2) \\ \text{otherwise} \end{aligned} \right\}$$

we have,

$$\text{hgt}(M_1 \cap M_2) = \frac{u_1 - l_2}{(u_1 - l_2) + (m_2 - m_1)}$$

The formula could also be computed through the equation below. The size of a triangular fuzzy number which is larger than of another triangular fuzzy number k is verified through Eq.

$$V(M_1 \geq M_2, \dots, M_k) = V(M_1 \geq M_2), \dots, V(M_1 \geq M_k)$$

To make the weights of the indicators in the pairwise comparison matrix, this relation was used:

$$W'(x_i) = \text{Min}\{V(S_i \geq S_k)\}, \quad k=1,2,\dots,n, \quad k \neq i$$

The weight vector of the indices was then formulated as follows,

$$W'(x_i) = [W'(c_1), W'(c_2), \dots, W'(c_n)]^T,$$

which is the vector of abnormal coefficients of the fuzzy analytic hierarchical process. Based on the following equation, the abnormal results obtained from the relation above are normalized. The normalized results were obtained through the following equation.

$$W_i = \frac{w'_i}{\sum w'_i}$$

where Factors is the vector of the abnormal coefficients of the fuzzy hierarchy process. Through the following relation, the results were obtained with a view to the above normal relation. The normalized results were calculated via.

$$w_c = B W$$

The complete solution to the network analysis process, and even the hierarchical analysis process, can only be used in a real and precise method when the number of criteria and options are limited.

Findings

The findings of this research are presented in such a way that the first one of the dimensions is fully evaluated in the stages of fuzzy DANP and finally the output model is presented:

Table 1.

Conceptual model of indicators affecting organizational ambidexterity. Source: Vahedi et al. (2022)

Strategic competence	Social capital	Human resources management
Individual competence	Strong cores	Absorption and employment
Social competence	Weak relations	Education and development
Organizational management competence	Network structure/portability	performance management
	Identity	Job design
	Values	Teamwork
	Perspective	
	common language	

Investigating the status of the main dimensions, the findings of the fuzzy Dimetal:

This section is provided based on the descriptions in a step- by- step approach. Due to space limitations, only one sample analysis is presented. The rest of the information is reported in the tables:

Table 2.

Criteria & symbol

Criterion	Symbol	No
Human resources management	C1	1

Criterion	Symbol	No
Social capital	C2	2
Strategic competence	C3	3

To check the criteria, the opinions of 36 expert people are used, the following table demonstrates the parity comparison of each expert's opinion. In these matrices, $\tilde{x}_{ij}=(l_{ij},m_{ij},u_{ij})$ are triangular fuzzy numbers and $\tilde{x}_{ii}=(i= 1,2,3,\dots,n)$ are considered as fuzzy numbers (0,0,0). According to these cases, the opinions of experts are collected and combined using the mentioned formulas in the analysis method section:

Table 3.

Parity comparison of each expert's opinion

	C1			C2			C3		
C1	0.00	0.00	0.00	1.00	1.70	3.00	1.00	1.62	3.00
C2	1.00	1.73	3.00	0.00	0.00	0.00	1.00	1.62	3.00
C3	1.00	1.70	3.00	1.00	2.08	3.00	0.00	0.00	0.00

Based on the formulas mentioned in the normalization method section in Fuzzy Dimetal, the integrated opinion matrix is

calculated as shown in the below table. The following table shows the normalized matrix.

Table 4.

Normalized matrix

	1			2			3		
C1	0.00	0.00	0.00	0.018	0.031	0.055	0.018	0.030	0.055
C2	0.018	0.032	0.055	0.00	0.00	0.00	0.018	0.030	0.055
C3	0.018	0.031	0.055	0.018	0.038	0.055	0.00	0.00	0.00

After calculating the above matrices, the total fuzzy relations matrix is normalized consistent with the formulas mentioned in the

fuzzy dimetal section for normalization and is given below:

The below table shows the v matrix.

Table 5.

The v matrix

	1			2			3		
C1	0.002	0.053	0.014	0.020	0.036	0.067	0.020	0.035	0.068
C2	0.020	0.036	0.066	0.020	0.005	0.013	0.020	0.035	0.067
C3	0.020	0.035	0.065	0.020	0.042	0.065	0.002	0.005	0.013

To apply the relations obtained from the fuzzy Dimetal in the fuzzy network analysis process, the total interface matrix must be removed from the fuzzy state; therefore, in the first stage, the relationship matrix is diffused and column-normalized, then it becomes fuzzy in the final stage of the network analysis process:

Table 6.

Total interface matrix

	C1	C2	C3
C1	0.0403	0.0365	0.0368
C2	0.0338	0.0316	0.0474
C3	0.0296	0.0353	0.0338

In the following table, the normal diffused total relations matrix is presented:

Table 7.

Total relationship matrix

	C ₁	C ₂	C ₃
C ₁	0.3886	0.3530	0.3119
C ₂	0.3259	0.3056	0.4017
C ₃	0.2854	0.3414	0.2864

Findings of the fuzzy analytic network process

In this section, after preparing the questionnaire, a copy version was presented to 36 bank experts who participated in the current study. Afterward, validation and analysis criteria were examined. At this stage, the comparison was done through the relative importance of all questionnaires. Accordingly, the matrix of parity comparisons was created. Through this

process, the importance coefficient of the main ambidexterity indicators of the organization, and the thickness matrix of the importance coefficient of the indicators compared to the index were calculated.

Calculation of triangular fuzzy numbers

According to the relative importance of the calculated values in the previous step, to integrate all the experts' opinions, triangular fuzzy numbers are calculated. The set of triangular fuzzy numbers is defined as follows.

$$\tilde{a}_{ij} = (\alpha_{ij}, \beta_{ij}, \delta_{ij})$$

Where \tilde{a}_{ij} is the set of triangular fuzzy numbers, α_{ij} is the minimum value of criterion j for i dimension, β_{ij} is the geometric mean of criterion j for i dimension, and δ_{ij} is the maximum value of criterion j for i dimension. The following table illustrates the triangular fuzzy numbers calculated under the organizational ambidexterity criteria. As it can be observed, the numbers in parentheses in order from the right side indicate the minimum value of criterion j for i dimension, the geometric mean of criterion j for i dimension, and the highest value of criterion j for i dimension.

Table 8.
Geometric mean of criterion j for i dimension

	1		2		3				
C1	1.00	1.00	1.00	0.50	1.44	3.00	2.00	2.62	3.00
C2	0.33	0.69	2.00	1.00	1.00	1.00	2.00	2.29	3.00
C3	0.33	0.38	0.50	0.33	0.44	0.50	1.00	1.00	1.00

The coefficients of each parity comparison matrix:

In this phase, using the definitions of the fuzzy network analysis process, the coefficients of each parity comparison matrix are calculated:

$$\left[\sum_{i=1}^m \sum_{j=1}^n M_{ij} \right] = (8.49 \ 1086 \ 15)^{-1}$$

$$= (0.0667 \ 0.0920 \ 0.1177)$$

$$S_1 = (1.66 \ 2.07 \ 3.5) * (0.0667 \ 0.0920 \ 0.1177)$$

$$= (0.1107 \ 0.1904 \ 0.4120)$$

$$S_2 = (1.83 \ 2.88 \ 4.5) * (0.0667 \ 0.0920 \ 0.1177)$$

$$= (0.1221 \ 0.2650 \ 0.5297)$$

$$S_{33} = (5 \ 5.91 \ 7) * (0.0667 \ 0.0920 \ 0.1177)$$

$$= (0.3335 \ 0.5437 \ 0.8239)$$

The magnitude of each element over other elements: Now, the magnitude of each element should be calculated over other elements:

Table 9.
Magnitude of each element over other elements

S ₁	S ₂	S ₃
≥S ₂ = 0.795	≥S ₁ = 1	≥S ₁ = 1
≥S ₃ = 0.181	≥S ₃ = 0.413	≥S ₂ = 1

After determining the magnitude of each element over other elements, it is allowed to calculate the magnitude of one S_i over other S_is:

$$\text{Min } V(S_1 \geq S_2, S_3) = 0.181$$

$$\text{Min } V(S_2 \geq S_1, S_3) = 0.413$$

$$\text{Min } V(S_3 \geq S_1, S_2) = 1$$

These numbers represent the non-normalized weights of C1 to C3 indices, and the normalized weights of the above indices are given below:

$$W = [1135 \ 0.2591 \ 0.096]$$

Subsequently, the dependence between the criteria calculated by the fuzzy Dimetal method was considered in this section:

Table 10.
Dependence between the criteria

	C ₁	C ₂	C ₃
C ₁	0.3119	0.3530	0.3886
C ₂	0.4017	0.3056	0.3259
C ₃	0.2864	0.3414	0.2854

The criteria are obtained by considering the dependence by combining the results and using the relation $W\epsilon = B * W$.

Table 11.
Finally Weight

	C1	C2	C3			Finally Weight	Rank
C ₁	0.3119	0.3530	0.3886	*	0.1135	0.3312	2
C ₂	0.4017	0.3056	0.3259		0.2591	0.3682	1
C ₃	0.2864	0.3414	0.2854		0.6273	0.3002	3

The above table depicts the general indicators on which the relationships mentioned above, and the important trends and weights are calculated.

In the following, the final weight of the indicators is presented in the following table:

Table 12.
The final weight of the indicators

Rank	Total weight	Final weight	Variable	Indicator weight	Indicator
3	0.0582	0.175692	Absorption and employment	0.3312	Human resources management
7	0.0546	0.165062	Training and development		
6	0.0562	0.169647	performance management		
10	0.0500	0.150953	Compensation for services		
8	0.0545	0.164685	Job design		
4	0.0575	0.173662	Teamwork	0.3682	Social capital
10	0.0500	0.1357	Strong cores		
2	0.0783	0.2126	Weak relations		
13	0.0464	0.1260	Network structure/portability		
16	0.0438	0.1189	Trust		
14	0.0463	0.1258	Identity		
12	0.0476	0.1294	Values		
15	0.0443	0.1204	Perspective	0.3005	Strategic Competence
17	0.0427	0.1159	Common language		
11	0.0489	0.1627	Individual competence		
9	0.0534	0.1778	Social competence		
1	0.1414	0.4704	Organizational management competence		
5	0.0568	0.1891	Professional competence		

The output of the above table indicates that the index of organizational managerial competence and weak relations and finally absorption and employment were announced as the most effective positive indicators.

Conclusion

The existence of uncertainties and the increase of influencing factors in organizations and the complexity of the organization's systems have made it difficult for managers to achieve their purposes. Every organization faces a different level of risks and hazards depending on the type of activity and the level of sensitivity of its assets. Considering the limitations of organizations in accessing sufficient resources, providing solutions, and allocating necessary resources

to deal with risk factors in the organization are influential factors that will be fulfilled based on the priority of risks. Organizational ambidexterity is a concept that can overcome all of these risks and create and rehabilitate a flexible and competitive organization. Considering the existence of many competitors and the requirements of the industry, the banking industry of the country regards organizational ambidexterity as a necessary factor. According to the conveyed definitions and concepts in the previous chapters, for a bank such as Tejarat Bank, the most necessary variable is the implementation of issues that can sustain the current status of the organization. This section was conducted with the aim of answering the last question of the present

research, which is to identify important indicators in policy-making for the implementation of organizational ambidexterity in Tejarat Bank branches. All of the related results are shown in Table 12. The output of the above table displays that the index of organizational managerial competence and weak relations and finally absorption and employment were introduced as the most effective positive and negative indicators. As mentioned in the above table, social capital has been introduced as the most important criterion, which emphasizes that the results of this research are a confirmation of other research in the field of implementing a new discussion in the organization, in which organizational managerial competence is a fundamental factor. The direction of acceptance of the new change has been familiarized as a fundamental factor. It has been further stated that relationships can be regarded as a crucial criterion for the implementation of ambidexterity. Of course, it should be considered after the organizational managerial competence. Therefore, after ranking the dimensions in the sub-components, it can be concluded that if in the first steps of the process, it will be applicable to facilitate management approval and then relational components and finally absorption and employment in the organization, then expect the correct implementation of organizational ambidexterity. From the comparison between the current and the previous research, the results confirm that the support of senior management is considered the most important factor in the new change of an organization.

The difference and superiority of the present research with previous research are:

- Inadequacy of the indicators affecting the ambidexterity with the type of industrial and service activities, as well as their non-operational nature. On the other hand, considering the factors of current research, we tried to select industrial and academic experts to create appropriate indicators based on the industry and weight them through the process of fuzzy network analysis and fuzzy

dimetal, which is an accurate and comprehensive decision-making technique.

- In past research, the weighting of indicators was done by relying on one method (for example, only hierarchical analysis process or network analysis process or Shannon entropy); But in this research, the importance of parity comparisons was determined by using the internal relationship map extracted from the fuzzy dimetal technique. In the second part, the process of fuzzy network analysis was applied. Such kind of weighting method distinguishes the current research from other prioritization research.

- In the presented research in the review of literature, each of them had some defects in expressing the dimensions, but the model of current research has tried to cover all of the issues.

Practical Suggestions

According to the findings and results, practical suggestions that can be presented in this section include the following:

1. In the management aspect, it is suggested that by holding consensus and coordination meetings between the managers of the organization and the senior management, a suitable strategy is formulated and communicated to all sectors of the banking industry to achieve organizational ambidexterity and continuous improvement. It is notable that in the first level, this process should be implemented at the branch level, and then it can be expanded to the national management level. Formulation of the aforementioned strategy should contain long-term goal setting, provision, allocation of financial and human resources, setting priorities, and determining performance evaluation indicators, etc.
2. Considering the prevailing culture of large organizations such as Tejarat Bank, it is suggested that to reach a logical conclusion in the short term, strategy, and operational solutions to accomplish organizational ambidexterity, should be announced to all

- departments and individuals by high levels of management during periodic management support meetings to inform people about the procedure of activities.
3. It is suggested to form a committee entitled ambidexterity of the organization, consisting of the middle managers of each organizational element. By holding regular meetings, the members of this committee can reach operational solutions (technical and partial) to establish and stabilize the ambidexterity of the organization.
 4. It is suggested to hold a training course to teach the concept of organizational ambidexterity at different levels of the organization, and to ensure the transfer of this knowledge to the members of the organization.
 5. It is suggested to define and implement a suitable incentive system, such as a quality award, to discuss organizational ambidexterity. In such an approach, in a periodical trend and based on the evaluation criteria determined in the ambidexterity strategy, the best departments and people are encouraged in the field of achieving the ambidexterity of the organization.
 6. It is suggested to add a section called innovation management to the current structure in each department of the organization, and select one of the people working in the same department as the innovation manager. This solution seems necessary to balance the exploration and the exploitation components in different parts of the organization. It should be noted that the trustees of the innovation department can also be members of the ambidexterity committee of the organization.
 7. It is suggested that a comprehensive information and communication system be launched the entitled integrated system in the organization, and some vital information such as the current performance status of various departments of the organization is presented to all employees. Also, this system may be led to create an environment for presenting ideas, and the creative solutions of departmental staff.
 8. It is suggested that with the participation of technicians, professors, and experts, the concept of ambidexterity and its related components should be included in the job description of all managers and employees of the bank organization. This job description should include sections that cover both exploration and exploitation components and realize the performance guarantee for each of the variables. Employees should be familiar with the ambidexterity culture ruling the organization from the first moment of employment by probing their job description.
 9. It is suggested that the public relations unit of the bank should be established in the branch setting for greater coordination and alignment with other elements of the organization. At least, through the information system of the organization, it should be continuously familiar with the issues and ideas of the employees.
 10. It is suggested that, in emergency times, when hiring new employees, especially for management positions, people with management knowledge (knowledge of management disciplines) should be employed, or at least the employed people should be required to take training courses related to public management. It seems that some points of the managerial, contextual, and knowledge barriers that exist in the realization of concepts such as ambidexterity, is the lack of belief on the part of managers in the scientific topics of management which is caused by their lack of knowledge.
 11. It is suggested that specialized forces in their specific level should have specialized knowledge of that level and should have unique training based on their levels through documented training programs.
 12. It is suggested that the firm has a continuous, planned relationship with the university and have a mutual relationship. University theorists are also used in the affairs of the firm. The meaning of this

sentence is to strengthen the connection between the industry and the university.

13. It is suggested to provide the knowledge related to the existing technologies in the organization, to provide current knowledge to the personnel at the specialized levels, to ask the personnel to record the relevant experiences to prevent the additional cost, and to document the processes in a more precise way.
14. Managers are advised to take into account the scientific variables expressed in the articles, considering that they were able to express the variables of the real environment in the interview, in order to make the right decision in line with discovery and productivity.

Research Proposals

1. It is recommended to the banking industry of the country, considering the importance of the organization's ambidexterity in this industry, to prepare the research priorities needed in organizational issues, especially for universities and scientific research centers.
2. Analyzing the findings of this research and comparing it with similar models in other research as comparative analysis research.
3. Analysis of the research process in normal and deterministic mode: considering that the process of this research was performed in a non-deterministic and fuzzy environment, it is recommended to do it in a deterministic environment and compare the results.
4. Providing a method based on artificial intelligence, and obtained indicators to improve the current status of Tejarat Bank.
5. It is suggested to use the given model, which includes the components affecting the ambidexterity of the organization in the statistical population of Tejarat Bank, which is in other banks, to evaluate the indicators of the ambidexterity in the organization.
6. Prioritizing dimensions of organizational ambidexterity based on the effectiveness of organizational performance, can

facilitate strategy and plan through this method.

7. It is suggested that the behavior of the society is also intervened in these relations and the research environment should be closer to reality.
8. It is suggested to conduct research in the field of ambidexterity messages of the organization (apart from its impact on organizational performance).

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