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Designing and Explaining a Model for Organizational Ambidexterity with a Knowledge Commercialization Approach

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ABSTRACT

This research aims to explain the organizational ambidexterity model in Saderat Bank of Iran and its dimensions. Ambidexterity refers to the ability to succeed in two contradictory abilities at the same time, for example, ambidexterity such as exploiting current opportunities and discovering and creating new opportunities for the future, adaptation, alignment, flexibility, and efficiency. This research was conducted using a qualitative-inductive approach using the Strauss-Corbin grounded theory method. The data were obtained from the interviews conducted with 25 employees and qualified professionals of Saderat Bank of Iran and were analyzed through the three stages of open, central, and selective coding. Twelve general categories in the form of a paradigm model were identified, which included causal conditions (individual factors, organizational factors, group factors, and environmental factors), central phenomenon (organizational ambidexterity), contextual conditions (intellectual capital), intervening conditions (job-related factors, learning factors), strategies (individual strategy, organizational strategy) and consequences (individual consequences, group consequences, organizational consequences). Ambidexterity can increase the scope and depth of knowledge identified and used by the organization by focusing on two levels of knowledge: 1. paying attention to new knowledge due to its discovery capability and, 2. paying attention to current knowledge due to its exploitation capability. It can also help the development culture of learning and intelligence and enhance competitiveness.

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1. Introduction

Along with the increasing competition and environmental changes, companies are facing tensions between exploiting the existing competencies and discovering new competencies (Muñoz-Pascual, Curado & Galende, 2021). Knowledge management helps the two-sidedness in the organization. Success in this field depends not only on the company's ability to create and acquire knowledge but also on the company's ability to commercialize knowledge (Caniëls, 2021).

Organizational ambidexterity is defined as the organization's simultaneous exploitation of the existing competencies and new opportunities. Competencies and the discovery of new opportunities have played an essential role in innovation research (Curado et al., 2021). Discovery requires new knowledge that disrupts the status quo. Commercialization of knowledge, as one of the steps of knowledge management, helps ambidexterity in the organization. Discovery activities are designed to meet the needs of future customers (Gerlach, Hundeling & Rosing., 2020). Ambidexterity is known as the ability to pursue efficiency and flexibility and create a balance between exploitation and exploration. Achieving organizational ambidexterity is difficult due to the complexity of managing the inherent tension between exploitation and exploration (Park, Pavlou, & Saraf., 2020).

Of course, knowledge dissemination leads to ambiguity if the company has the capacity to absorb appropriate knowledge (Garcia, Cortes, Lajara, & Saez. 2019). The absorptive capacity of the company is defined as the potential and ability of the company to acquire, absorb, transform and use knowledge resources to create dynamic capabilities such as innovation (Sung & Choi., 2012). However, higher absorptive capacity and efforts to improve it both improve innovation and improve the firm's ability to effectively manage innovation. A company's joint pursuit of exploiting current

competencies and discovering new opportunities should place organizational ambidexterity at the center of innovation research and act as a primary imperative (Alghamdi, 2018).

A group has considered exploitation and exploration mutual that enable organizations to be more skillful and successful in doing their business than usual. Some groups have introduced adaptation and alignment and some flexibility and efficiency as characteristics of organizational ambidexterity (Papa et al., 2018).

Organizational ambidexterity has been studied in various texts, including organizational learning, strategic management, technological innovation, and organizational design (Bruyaka et al., 2020).

Mechanisms for achieving ambidexterity, include (a) pursuing simultaneous exploitation and exploration with ambidexterity structures (e.g. structural bilateral skill); (b) focusing on exploration or exploitation generally over time (eg, temporal, sequential skill); (c) creating a context that supports individuals to divide their focus between alignment and compatibility (e.g. contextual ambidexterity) (Bresciani et al., 2018);

Organizational ambidexterity, which is defined as the organization's simultaneous exploitation of existing competencies and discovery of new opportunities, has played an essential role in innovation research (Chen et al., 2019). The passage of time has shown that for sustainable success, not only excellence in exploiting current opportunities and gradual improvement of current processes is necessary, but also looking to the future, creating new opportunities, and revolutionary innovations in business processes are necessary to ensure success (Ossenbrink et al., 2019). Many authors conceptualize individual skill as an individual's ability to pursue exploitative and exploratory activities and find synergies between them. As ambidexterity may refer to other conflicting tasks, we use the term individual ambidexterity to refer to "the

ability of individuals to perform contradictory activities and switch between different mindsets and action sets” (François & Guillaume, 2010).

The ambidexterity leadership model specifically describes open and closed leader behaviors in the innovation process. Leadership in innovation differs from leadership in other organizational contexts because the innovation process exhibits some unique characteristics. Innovation is defined as the "deliberate introduction and application in a role, group, or organization of ideas, processes, products, or procedures. On the one hand, creativity requires to have capable human resource. Divergent thinking, breaking old rules and assumptions, and acquiring new knowledge, and on the other hand, implementation of ideas requires focusing on efficiency and yielding an efficient product. Employees are more successful in terms of innovation performance when they act on both requirements. Open leader behavior involves giving employees opportunities to develop new ideas and challenge current conditions (Marabelli, Frigerio, & Rajola., 2021). This paradox has been experienced in industries and manufacturing sector of the United States with advanced technology. The effects of the multiplicity of categories of emerging markets have been evaluated in such industries on the strategic behaviors related to the innovation of the current companies. The effect of this multiplicity on the opportunity-ambiguity tension in the fields have been emphasized (Lo et al., 2020). Industries categorized as emerging markets offer more opportunities for companies to innovate. Ambidextrous firms simultaneously engage in exploiting existing competencies and exploring new opportunities rather than trading between the two (Jansen et al., 2009). In this way, ambidextrous companies can take advantage of short-term opportunities (incremental innovation) through exploitation and, as a result, through exploration, benefit from long-term innovative developments (radical innovation) (Shafiq et al., 2020).

One of the most important challenges faced by organizations in complex and

dynamic environments is how to balance exploratory and innovative activities with exploitative activities. Overcoming such a challenge requires organizations to pay attention to the development of ambidextrous leadership since these leaders play a very important role in the process of developing human resources, improving organizational management, and ultimately growing organizational performance (Tehrani et al., 2019).

In general, having the right balance in exploring and exploiting opportunities is a necessity in the changing business environment with rapid technological changes, and the banking network is no exception. In the era of rapid changes and competitive markets, banks need ambidexterity to achieve profitability, growth, and sustainability, but so far, no integrated model of organizational ambidexterity has been presented. Following the recent financial crises in the country, much attention has been paid to the performance of banks. In the meantime, banks pay more and more attention to efficiency and flexibility of operations. Banks have understood the necessity of organizational ambidexterity and seek to understand the mechanisms of organizational ambidexterity implementation. Therefore, considering the novelty of the ambidexterity concept in Iranian society, understanding the importance and necessity of identifying the factors affecting organizational ambidexterity in Saderat Bank of Iran and examining its consequences and strategies seems necessary. To promote innovation, they need commercialization of knowledge among employees and the absorption capacity of the company. Considering the importance of the issue in the banking industry, this study investigates the role of knowledge commercialization (knowledge gathering and knowledge dissemination) in organizational ambidexterity (exploration and exploitation). Therefore, this research aims to develop an organizational ambidexterity model using the knowledge commercialization approach in Saderat Bank in Iran.

2. Literature Review

Ambidexterity

Organizational ambidexterity is considered as the ability to align and succeed in managing today's business demands and at the same time adapting to environmental changes (Yalcin et al., 2019). This ability requires appropriate adaptation, integration, and resetting of organizational strategy as well as internal and external skills and resources necessary to coordinate with the environmental changes (Yao-Ping Peng et al., 2019). It is argued that organizational ambidexterity can enable companies to efficiently manage current business demands while fundamentally adapting to changes to develop sustainable supply chain systems (Güemes et al., 2020).

Markets allocate resources efficiently for their best short-term use, while the company must transform them into output with the potential to create new values in the long-term using the capacity and management competence (Princes, 2020). Despite the importance of ambidextrous leadership to advance organizational goals, many managers have failed in using this leadership style (Syed et al., 2019). In general, the managers who have failed to implement ambidexterity have not been able to use their resources and capabilities well. One of the factors that cause the lack of development and efficiency of these organizations is the rule of organizational silence and the lack of participation of employees in decision-making. Therefore, as Birkinshaw and Gupta (2013) suggested, companies should seek to achieve some kind of empowerment to manage the tensions and conflicts between the two different learning activities of exploration and exploitation. Researchers consider exploitation as the continuous improvement of existing services and processes with the same productivity, and they also equate discovery with innovation by viewing it as activities to acquire and

develop entirely new knowledge and services (Sahi et al., 2020). Exploration requires search, discovery, experience, risk-taking, and innovation, while exploitation includes behavioral patterns characterized by refinement, execution, productivity, production, and selection (Raisch et al., 2009). The main issue in empowering the quality of management is not its existence, because senior managers are the only decision-makers capable of balancing these competing goals and reducing the organization's tendency to follow the easiest path. Organizational ambidexterity has been studied in various texts, such as organizational learning, strategic management, technological innovation, and organizational design, and several mechanisms have been proposed to achieve ambidexterity skills (Rosalie et al., 2018).

They argue that economic efficiency can only be maximized through rapid and comprehensive implementation of privatization and marketization, which shifts attention from adaptation to concerns about adaptation, and from the question of how to improve immediate "fit" with a new economic environment to the question of how organizational structure changes to enhance its ability to respond to future unpredictable changes in the environment (Yigit, 2013).

Commercialization of knowledge

The 7 stages of commercialization of knowledge and organizational findings include idea generation, idea evaluation, knowledge generation, knowledge application review, commercial analysis of goods and services, market measurement, technical and operational aspects, and commercialization (Echendu et al., 2011).

Nowadays, it seems necessary to apply knowledge management in all organizations, including educational, health, industrial and commercial institutions. Despite the expansion of knowledge management in recent years, many

institutions feel disappointed in its optimal use (Biranvand, 2020). These organizations seek to find a suitable answer to the following questions: How to produce, store and distribute knowledge in the organization, how to implement the concepts and principles of knowledge management in the organization, and How to make sure that employees share knowledge capital in the organization. To optimally apply knowledge management, institutions must understand the necessity of creating a culture of knowledge sharing among employees through a process called "commercialization of knowledge management" (Baycan et al., 2018). Commercialization of knowledge management in the institution is important since, firstly, it corrects the employees' misunderstanding of knowledge management., Secondly, it helps them to understand the benefits of knowledge sharing in the organization (Saif et al., 2018).

Knowledge management deals with making knowledge available to people who need it. However, the optimal use of available knowledge is possible only when it is understood where to look for it (Ismail et al., 2015). Research indicates that the most important obstacle to the effective implementation of knowledge management in the organization is the lack of knowledge-sharing culture and lack of understanding of the numerous benefits of knowledge management among employees (Zargaran Khoozani & Mostofi Far, 2018).

In the following section, internal and external studies have been reviewed in line with the research objectives. Various researchers in the fields of innovation, learning, entrepreneurship, and change have used the concept of ambidexterity and emphasized the importance of knowledge in regulating and establishing balance between exploratory activities and exploitation activities.

Shafiq et al. (2020), showed that creating a sustainable competitive advantage is the result of knowledge sharing and organizational ambidexterity. Gerlach et al. (2020) stated that instrumental leadership, as well as open and closed leader behaviors, are positively related to ambivalence in the organization. Gill et al. (2020) maintained that the employees'

competence and motivation affect their application of knowledge, and spending extra time and effort to help customers. Similarly, Luo et al. (2020) concluded that the number of emerging markets in an industry with innovation efforts in the field of increasing the role of knowledge causes knowledge ambiguity.

Findings of Zhaxylyk's (2020) study indicate that organizations operating in transition economies must find a balance between exploratory and applied knowledge activities to be ambidextrous.

Venugopal et al. (2020), stated that the integration of more knowledge behaviors increases the organization's hybrid ambidexterity, and hybrid ambivalence balances the relationship between behavioral integration and organization performance. Bruyaka and Prange (2020) showed the importance of institutionalizing knowledge to improve ambidexterity. Garcia et al. (2019) concluded that organizational ambivalence has a positive effect on organizational performance. Junni et al. (2013) noted that companies involved in exploitation and exploration through combination or balance; are more likely to achieve higher performance. Habibzadeh et al.(2021) found that organizational intelligence, organizational agility, and organizational commitment have direct effects on organizational performance. Tehrani et al. (2019) stated that the mediating role of social capital in the relationship between ambidextrous leadership and employees' silence has also been confirmed. Haghighi et al. (2016) stated that innovative culture and organizational memory can improve the performance of new product development in knowledge-based companies through exploration and exploitation. Moradi et al. (2014) stated that knowledge leadership can facilitate organizational ambidexterity.

Razavi et al. (2014) concluded that focusing on the promotion of ambidexterity leads to the development and promotion of strategic entrepreneurship in the organization. Achieving two pillars of the organization means the possibility of commercializing more products and services and achieving profit and growth at the same time. Commercialization is measured

with items such as ideation ability, ability in research and development, manufacturing and prototyping, sales, and finally the market. By studying the research of organizational ambidexterity at the level of company and organization analysis, it is evident that the determinants and environmental factors affecting organizational ambidexterity have been studied extensively, but organizational ambidexterity has received scant attention in the banking industry. There is a need for qualitative and empirical research in this field. Thus, this research intends to investigate the organizational ambidexterity in the field of banking and present the organizational ambidexterity model in Saderat Bank in Iran.

3. Methodology

This research deals with identifying organizational ambidexterity in Saderat Bank in Iran using a qualitative-inductive approach and the grounded theory by Strauss and Corbin (1998) Semi-structured interviews were used as the research tools. The main structure of data analysis in Strauss and Corbin's method is based on the three open, central, and selective coding process. Some of the interview questions were: "What are the factors affecting organizational ambidexterity? What characteristics distinguish the optimal situation of organizational ambidexterity? What are the obstacles to increasing ambidexterity in organizations?"

Participants in this research were the organization members related to the research topic, the managers, elites of the organization, management departments, and the staff of Saderat Bank. Twenty-five people were selected through purposeful

sampling. The adequacy of the number of studied samples was obtained through the theoretical saturation (Glasser & Strauss, 1967).

4. Findings

To answer the research question "What is the conceptual paradigm of organizational ambidexterity?" based on the analysis of interviews conducted with the employees of Saderat Bank, factors affecting organizational ambidexterity, the consequences of organizational ambidexterity, strategies, intervening, and contextual conditions were identified as presented in the following section.

After the open coding process, 43 descriptive codes were extracted. In the second step, based on the similarity and distinction between the extracted codes, the codes were grouped on a common axis and 12 axis codes were obtained. In the third stage, based on the six-component paradigmatic model of Strauss and Corbin, one of the categories was selected as the central category and its relationship with other categories was determined.

Causal conditions

Causal conditions are categories that affect the central category. According to the conducted interviews, the central codes of "individual factors, organizational factors, environmental factors, and group factors" have been identified and linked to the wider selection code called causal conditions, as described in Table 1.

Table 1. Causal conditions on organizational ambidexterity

Main theme	Sub-theme	Codes
Individual factors	Individual characteristics	Age
		Years of service
		Level of Education
		sex
	Personality characteristics	Openness to experience
		Conscientiousness
		Efficacy
Group agents	leadership	Collaborative
		transformational
	connections	Unofficial channels
		knowledge management

	conflict	Competition
		Cooperation
	work team	Problem-solving teams
		Autonomous teams
Organizational factors	Organizational Structure	The life of the organization
		Organization size
	Organizational Culture	An innovative and skilled culture
		Corporate identity
	HR policies and procedures	Selection methods
		Training and development programs
		performance evaluation
		Managing workforce diversity
Environmental factors	Political factors	government policy
		International policies
	Economic factors	market trending
		Intensity of competition
	Social factors	Population age pyramid
		Social Awareness
	Technological factors	The rate of technological change
	the environment	Environmental changes
	Legal factors	Monetary and banking laws of the country

Strategy

Strategies are based on actions and reactions to control, manage and feedback on the phenomenon under study. Strategies are purposeful and are accomplished for a

reason. Four concepts regarding organizational ambidexterity strategies were identified and extracted in the studied organization, which are presented in two parts of individual and organizational strategies as described in Table 2:

Table 2. Organizational ambidexterity strategies

Main theme	The codes	Examples of descriptions
Individual strategies	Designing an optimal intellectual capital management system	An example of description Developing a suitable policy for the optimal management of human capital from the beginning of employment Designing a communication capital strengthening system to share more knowledge and strengthen social interactions Creating dynamic processes to maximize the use of organizational capital
	Designing a mastery evaluation system	Measuring and evaluating the two-way and comparing the result with a standard or a scale that can evaluate the desired quantity and quality accurately and without personal judgments. Measuring the functioning of organizational ambidexterity and estimating its efficiency in reaching the organization's goals
Organizational strategies	Designing the system of equipping and allocating resources	Control of liquidity and volume of money in circulation Developing a defined and forward-looking credit policy

Background conditions

The background is the set of special characteristics that indicate the desired

phenomenon, it was identified and extracted as described in Table 3.

Table 3. Background conditions of organizational ambidexterity

Main theme	Codes	Examples of descriptions
Intellectual Capital	Communication capital	Social relationships are related to exploratory and exploitative innovation in financial services institutions.
	Human Capital	The knowledge, skills and abilities of employees play an important role in enabling the organization.
	Organizational capital	Institutionalized and accumulated knowledge in the organization is the foundation of organizational ambidexterity.

Intervening conditions

The study participants suggested that job-related factors are learning factors, including the intervening conditions of the

organization's ambidexterity, which were identified and extracted as described in Table 4.

Table 4. Intervening conditions in organizational ambidexterity

Main theme	Codes	Examples of descriptions
Job-related factors	Discipline, traction, support and trust	Discipline, elasticity, support and trust are effective by encouraging people to make integrated judgments regarding the division of time between the conflicting demands of exploitation and exploration.
Agents	Absorption capacity	Absorptive capacity enables an organization to be more proactive and explore emerging technologies and market opportunities.
learning	Psychological security	Exploration is risky and low psychological security can create fear of being punished for expected consequences. Also, exploration in environments that seem unsafe to take risks is difficult.

Consequences

The consequences of organizational ambidexterity are the results that emerge as a result of strategies. Based on the conducted

interviews, the results including individual results and group results are shown in Table 5.

Table 5. Intervening conditions in organizational ambidexterity

Main theme	The codes	Example of descriptions
Individual consequences	Improve learning	Discovery capability seeks radical innovation and new knowledge and expands the scope of knowledge in the organization, and exploitation capability by focusing on planned innovation and relying on existing (current) knowledge improves the depth of organizational knowledge.
	Increasing creativity and innovation	When people share their experiences and accumulated knowledge with others, innovation and creativity are promoted.
	Increase job satisfaction	In ambidextrous organizations, employees continuously expand their ability to obtain the results they truly desire. Patterns of thinking are presented and collective demands are given the opportunity to emerge, and employees constantly learn to learn and teach. The development of knowledge and innovation brings the organization dynamism and employee satisfaction.
Group consequences	Compatibility with others	In ambidextrous organizations, cooperation and extensive communication increase the compatibility of a person with others.
	Prevent burnout	Innovation and discovery inspire a sense of freshness to employees
	Reducing deviant behaviors in the workplace	The satisfaction obtained from doing work prevents antisocial behavior in the workplace.
	Increasing organizational citizenship behaviors	Exploration and exploitation leads a person to perform activities beyond the defined tasks.
Organizational consequences	Improving organizational performance	Organizational mastery leads to improved performance through marketing, attracting resources and creating innovation.
	Management of organizational paradoxes	Mastery is a process that, by establishing a balance in the wisdom components and providing learning capabilities, ultimately leads to the resolution of conflicts that originate from discovery and exploitation.
	Organizational development	Ambivalence creates a body of knowledge and practice that improves organizational efficiency and individual development through increased coordination.
	Strategic entrepreneurship	Through the continuous flow of innovation, value creation and balance of resources between exploration and exploitation, ambidexterity leads to the creation and exploitation of unseen profitable opportunities.

Based on the main themes of the research and sub-themes related to factors affecting organizational ambivalence, the consequences of organizational

ambidexterity, strategies, intervening, and background conditions in Saderat Bank of Iran are presented in figure 1 in the form of a conceptual model:

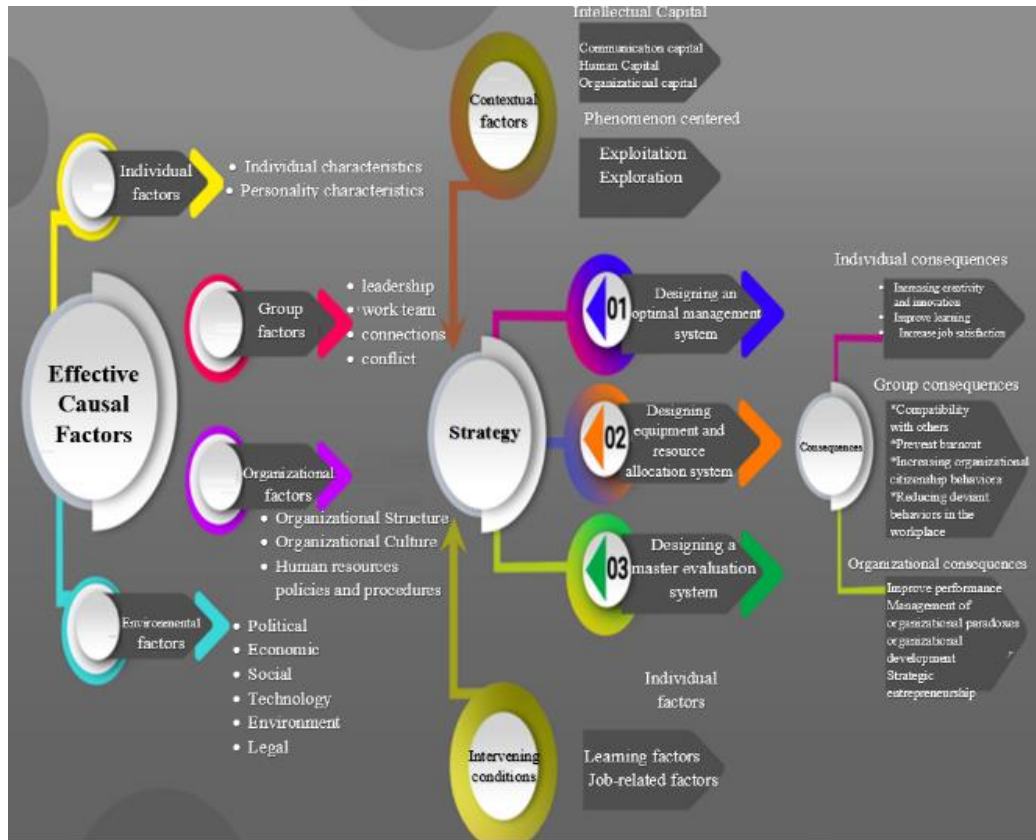


Fig 1. Conceptual research model (researcher-made source)

5. Discussion

The present article examines the explanation of a model for organizational ambidexterity with the approach of knowledge commercialization.

The results obtained in this research were an attempt to identify the factors affecting organizational ambidexterity, contextual and intervening factors, strategies, and consequences of organizational ambidexterity in Saderat Bank in Iran.

After coding the data obtained from the interviews with 15 employees of Saderat Bank of Iran, seven primary codes (third level) were obtained in the field of individual factors that create organizational ambidexterity, and these codes were divided into two sub-themes of individual characteristics and personality characteristics. Also, eight primary codes

were obtained in the field of group factors that create organizational ambidexterity.

These codes were divided into four sub-themes of leadership, communication, conflict, and work team. In the field of organizational factors creating organizational ambidexterity, eight primary codes (third level) were obtained, and these codes were divided into three sub-themes of organizational structure, organizational culture, and human resource policies and methods. In the field of environmental factors that create organizational ambidexterity, nine primary codes were obtained, and these codes were divided into six sub-themes of political, economic, social, technological, environmental, and legal factors. Eleven concepts regarding the consequences of organizational ambidexterity in three sections: individual

consequences of organizational ambidexterity (with the sub-themes of improving learning, increasing creativity and innovation, increasing job satisfaction), group consequences of organizational ambidexterity (with the sub-themes of compatibility with others, preventing burnouts, reducing deviant behaviors in the workplace and increasing organizational citizenship behaviors) and organizational consequences resulting from the ambidexterity (with the sub-themes of improving organizational performance, managing organizational paradoxes, organizational development, and strategic entrepreneurship) were identified and extracted.

The analysis of the staffs' statements showed that the strategies included individual and organizational strategies, designing an optimal management system for intellectual capital, designing a mastery evaluation system, and designing a system for equipping and allocating resources.

In this regard, Bruyaka and Prange (2020) showed that the establishment of an organizational ambidexterity requires the establishment of the necessary infrastructure. The results of the research by Garcia et al, (2019), Papa et al., (2020) and Habibzadeh et al, (2021), are in line with these findings.

As a result of the analysis of the data obtained from the interviews, the existence of background conditions that affect the strategies was confirmed. Intellectual capital was identified as a contextual factor in three dimensions of communication capital, human capital, and organizational capital. The analysis of the interview data revealed that the intervening factors in organizational ambivalence. These factors are categorized into two parts: job-related factors and learning factors. Job-related factors include discipline, traction, support, and trust, and learning factors include absorption capacity and psychological security. It has been argued that organizational ambidexterity increases employee satisfaction (Moradi et al, 2014), customer satisfaction (Yalsin et al, 2019), and profits (Gerlach et al., 2020). It also improves performance in the long term (Biranvand, 2020).

The results of the current research provide suitable suggestions for Iran Saderat Bank in particular and the banking network in general as follows:

1. Considering the introduction of effective factors in organizational ambidexterity at the four levels of individual, group, organization, and environmental, it is suggested to all the managers of the organizations to recognize and strengthen the effective factors in creating organizational ambidexterity.

2. It is suggested that managers gain a better understanding of ambivalence and how to achieve it by recognizing and controlling job-related factors and learning factors, identified as intervening factors in this research.

3. It is suggested to the managers of the organizations to consider the intellectual capital in the three dimensions of communication capital, human capital, and organizational capital as the contribution of the organization to the knowledge of individuals, groups, networks as well as the procedures, processes and organizational systems, identified as the background context in organizational ambidexterity in this research.

4. It is suggested that by implementing the strategies of this model, managers of the organization should take a big step toward making the organization more efficient, especially in the process of attracting and training, and maintaining human resources. It is important to improve the methods of evaluating the performance of employees as well as formulating an evaluation framework for organizational ambidexterity.

5. Due to the intense competition of banks within the country's banking system and also due to the changes in banking methods from traditional to electronic, the need for simultaneous exploration and exploitation is felt more than ever. It is suggested to all the managers of the country's banking network to consider the consequences of organizational ambivalence identified at the three individual, group, and organizational levels in this research.

6. Saderat Bank managers are suggested to move towards the success of the

organization through innovation in achieving success, investing in high technologies, developing strategic relationships with key foreign stakeholders, and providing funds for domestic investment activities.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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