International Journal of Digital Content Management (IJDCM)
Vol. 3, No. 4, Winter & Spring 2022
dcm.atu.ac.ir
DOI: 10.22054/dcm.2022.14023

ATU PRESS

Original Research
Accept Date: 07 March 2022
Receive Date: 23 February 2022
eISSN: 2717-3313
ISSN: 2717-3305

Organizational Ambidexterity Model for Digital Innovation in the Banking Industry

Mitra Mottaghi — PhD student in Public Administration, Islamic Azad University, Dehaghan Branch

Mohammad Reza Dalvi — Associate Professor, Department of Management, Islamic Azad University, Dehaghan Branch.

Alireza Shirvani — Associate Professor, Department of Management of Islamic Azad University, Darghan Branch

Abstract

This article examines organizational ambidexterity model for digital innovation in the banking industry and explains the dimensions of ambidexterity model in this organization. The approach of the present research is mixed consisting of two phases: qualitative and quantitative. In the qualitative phase, in order to participate in in-depth exploration from the perspective of the participants, conducting individual interviews is considered as an appropriate method. Semi-structured method was adopted based on the purpose of this study. The sampling method is based on a theoretical qualitative approach. The statistical population of the study consists of all employees of Saderat Bank of Iran. At this stage, a 96-item researcher-made questionnaire was developed based on the designed-model and 380 questionnaires were distributed among the staff using clustered sampling method. Technological advancements have led to the creation of innovative products and services across various industries. This has enabled extraordinary transformations in business systems to

* Corresponding Author: mdalvi@dehaghan.ac.ir

How to Cite: Mottaghi, M., Dalvi, MR., Shirvani, A. (2022). Organizational Ambidexterity Model for Digital Innovation in the Banking Industry, *International Journal of Digital Content Management (IJDCM)*, 2(4), 113-135.

adapt towards rapid changes, increase the capacity to innovate, reduce costs by utilizing knowledge sources across the organization to excel at a competitive rate. This study identified the dimensions and components of organizational ambidexterity through reviewing the literature of organizational ambidexterity as well as interviewing an expert group and analyzing their viewpoints. Then, by distributing a researcher-made questionnaire and statistical analysis, it examined the research pattern in the current and desirable situation of the organization.

Keywords: organizational ambidexterity, digital innovation, banking industry.

Introduction

The rapid development of digital technologies, such as artificial intelligence, big data, cloud computing, block chain, and the industrial internet, is transforming the traditional economy into the digital economy and intelligent economy, and digital transformation has become an integral mechanism for enterprises to achieve innovation and sustainable development (Vial, 2021).Organizational ambidexterity, the ability to simultaneously handle explorative and exploitative learning, has by extant research been suggested as a potential strategy to foster organizational ability to maintain daily business concerns while continuously changing to tomorrow's business needs (Zhang et al, 2021). It has been longer than two decades since the term entered the realm of management literature in order to describe organizations, and various scholars and experts have come up with ideas for this concept. Some experts have identified exploitation and exploration as two techniques, enabling organizations to become more proficient and successful than usual in their businesses (Velu et al, 2021).

Nevertheless, to the best of our knowledge, there is still no empirical work within the management literature analyzing the influence of digital transformation on organizational resilience (Ivanov et al, 2021). Researchers have, however, provided two different perspectives on the issue of the impact of digital transformation (Floetgen et al, 2021). According to the functional school, digitalization is an effective way for enterprises to resist risks (Scholz et al, 2020).

There are two approaches towards paying simultaneous attention to exploration and exploitation (Li, 2020). In one approach, it is emphasized that exploration and exploitation are in the same spectrum and, through creating trade-off, the organization has to choose the optimal boundary between the two ends of the spectrum according to the circumstances, while the second approach emphasizes the combination of the two categories, i.e., in a two-dimensional space, we can have some degrees of exploration and exploitation simultaneously. In ambidexterity literature, the dominant approach, which is somehow agreed upon by mainstream ambidexterity scholars, is the adoption of a hybrid approach. In other words, organizations can and should pursue a combination of exploration and exploitation.In general, having an appropriate balance in exploration

and exploitation capabilities is a key necessity in a business environment varying with rapid technological changes, in which the banking network is no exception.

This research found that the digital transformation of organizations helps to improve organizational ambidexterity (Clauss et al, 2020; Teece et al, 2016). Hence, considering the concept of ambidexterity is novel in Iranian society, it seems essential to understand the importance and necessity of identifying the factors affecting organizational ambidexterity in Saderat Bank of Iran and to study its consequences and strategies in the current and desirable situation.

Literature Review

Digital Transformation

An enterprise's digital transformation involves integrating internal and external resources through information, computing, communication, and connectivity technologies in order to reshape its corporate vision, strategy, organizational structure, processes, capabilities, and culture to adapt to the changing digital world. According to the IS literature, Nwankpa and Roumani (2016), first developed a new scale to capture digital transformation. Items included the following: "our firm is driving new business processes built on technologies such as big data, analytics, cloud, mobile and social media platform"; "our firm is integrating digital technologies such as social media, big data, analytics, cloud and mobile technologies to drive change"; and "our business operations are shifting toward making use of digital technologies such as big data, analytics, cloud, mobile and social media platform" (Chu et al, 2019).

Early research has largely focused on technology applications, proposing that digital transformation alludes to the application of digital technology to business operations. The relationship between digital technology and organizational performance has been scrutinized by scholars (Tan et al, 2010). Researchers typically discuss digital transformation from the perspective of technological change, and they also discuss the impact of digital transformation on organizational vulnerability (Scuotto et al, 2019) and business model transformation. With a deep understanding of digital transformation and the dynamics of the external environment, scholars have begun

calling for the adoption of digital transformation practices to assist firms in achieving sustainable goals (Hanelt et al, 2021).

Ambidextrous Innovation

Many companies and organizations that succeed fail to maintain their shining and successful years, and experience bitter failures later on (Teece et al, 2016). In many cases, such companies are too excited to take advantage of their existing opportunities and to improve their processes, technologies and cost savings that they fail to adapt to the fundamental changes in their surrounding environment (Khan et al, 2019). The major involvement of these companies is their inability to simultaneously operate in a balanced manner while exploiting the existing situation and discovering and developing new products and technologies, which is actually a challenge for organizations due to the opposing nature of the two sides (Holotiuk et al, 2018). Therefore, how will companies be able to succeed in adapting to the changing context through gradual and uninterrupted maintenance and improvement of their current business performance, innovating in products, processes, or technologies, and also gauranteeing their optimal performance in the future? Such a feature is called "ambivalence" in the recent literature of management and the organization enjoying such capability is viewed as an "ambivalent organization" (Lenka et al, 2017). Organizational ambidexterity is stated as the ability to align and succeed in managing today's business demands and, simultaneously, adapting to contextual changes. This capability requires the appropriate adaptation, integration, readjustment of organizational strategy in addition to the internal and external skills and resources needed to adapt to contextual changes (Yao Ping Peng et al., 2019). Resources markets are best allocated for the most efficient, short-term use, whereas, via managerial capacity and competence, the company must transform them into output with the potential to create new long-term values (Leonhardt et al, 2017). Hence, Birkinshaw and Gupta (2013) proposed that firms should seek to achieve some sort of increased capability to manage the tensions and contradictions between the two different exploration and exploitation learning activities. March described these competing activities as self-reinforcing patterns of learning, and stated that while this is not an impossible target, yet it is far difficult to overcome this dependency and keep balance between them. Exploration requires

investigation, discovery, experience, risk-taking, and innovation, while exploitation involves behavior patterns characterized by refinement, implementation, productivity, production, and selection. The key matter has to do with enhancing the quality of management, not its existence, since senior managers are the only decision makers who are able to balance these competing goals and reduce the organization's desire to follow up the simplest path.Exploration and exploitation are two complementary and integrated concepts in organizational learning behavior, and therefore, both activities are associated with various types of tasks (Andriopoulos et al, 2009). Exploration contains such activities as research, exploration, variation, risk taking, experimentation, flexibility, discovery, and innovation. Exploitation comprises activities like refinement and improvement, selection, production and processing, adaptability and efficiency, choice, implementation, and execution (March, 1991). Discussing its typology, the description of ambidexterity types can be summarized in Table 1:

Table1: Ambidexterity types

Reich and Birkinshaw (2008)	**Simsek et al. (2009)**	**O'reily and Tushman (2013)**
Contextual Ambidexterity	Harmonic Ambidexterity	Contextual Ambidexterity
Rather than creating dual structural arrangements, leaders are expected to create a supportive business context. The context refers to systems, processes, and beliefs that shape individual behaviors within an organization. Successful organizations are expected to keep hard balance (i.e., discipline and stretch) and soft balance (i.e., support and trust) between elements in the organizational contexts.	The simultaneous pursuit of harmonic exploitation and exploration within a single organizational unit is inherently challenging; since any competition for hidden resources leads to conflicts, contradictions and inconsistencies. In the absence of segmentation, keeping track of the progress of strategic and operational activities in terms of culture, structure, system, and situation of a reward creates some tension on the members' integrated capabilities.	The contextual ambidexterity is the behavioral capacity of simultaneously exhibiting adaptation and compliance in a business context. The ability that enables the unit / organization to balance the exploration and exploitation in the organizational context via interaction, discipline, and trust.

Reich and Birkinshaw (2008)	Simsek et al. (2009)	O'reily and Tushman (2013)
Structural Ambidexterity	Partitional Ambidexterity	Structural / Simultaneous Ambidexterity
The ambidexterity in organizational structures is the attainment of evolving structural mechanisms in order to meet the organization's competing needs for alignment and adaptation.	From this viewpoint, the pursuit of organizational ambidexterity requires the creation of independent structural units each possessing the strategy, structure, culture, and motivational systems. From the managerial perspective, several features of the senior management team have a significant impact on this type of ambidexterity.	Simultaneous or structural ambidexterity is a way of exploring / exploiting equilibrium through the exchange using distinct but strategically-integrated organizational subunits with various competencies, systems, incentives, processes, and culture, which are internally aligned.
Leadership Ambidexterity	Cyclical Ambidexterity	Sequential Ambidexterity
The ambidexterity is facilitated by the internal processes of the senior management team. Senior executives are important in "building a mutually effective and developing organization context".	Cyclical ambidexterity occurs in organizations that are involved in a prolonged period of exploitation. Such ambidexterity arises not from structural decisions, but from the continued allocation of resources and attention to exploitation and exploration in the organization. Consequently, this type of ambidexterity requires a system of alternative time flows of organizations between a long period of exploitation and a short period of exploration.	Firms evolve through specific changes, where they continually adapt to contextual changes by the reconfiguration of their own structures and processes.

Reich and Birkinshaw (2008)	Simsek et al. (2009)	O'reily and Tushman (2013)
	Reciprocal Ambidexterity	
	The best description for the reciprocal ambidexterity is a synergistic combination of complementary exploitation and exploration available at all times and units.	

Various scholars, in the fields of innovation, learning, entrepreneurship and change, have made use of the concept of "ambidexterity" in order to set the optimal balance between exploration and exploitation activities. Some case studies and empirical studies on organizational ambidexterity are demonstrated in Table 2.

Table2: Concept of ambidexterity

Organizational Ambidexterity (OA)	Historical	Duncan (1976) - First use of OA
		March (1991) - Original article on OA
	Conceptual articles	Smith and O'Reilly (1996)
		Benner and Tushman (2003)
		Holmqvist (2004)
		Gupta, Smith and Shalley (2006)
		Smith & Tushman (2006)
		Raisch and Birkinshaw (2008)
		Judje and Blocker (2008)
		Simsek (2009)
		Lackner, Guttel, Garaus, Konlechner and Muller (2011)
	Case studies	Johnson et al. (2006)
		Raisch et al. (2009)
		Lin and McDonough (2011)
		Li and Huang (2012)
		Junni et al. (2013)
		O'Reilly and Tushman (2013)
		Wang And Rafiq (2014)
		Zelong Wei et al. (2014)
		Hakan Kitapci and Vural Celik (2014)
		Mladenka Popadić (2015)
		Jan Eric et al. (2015)
		Tarody (2016)
		Lin and Ho (2016)

Method

The approach of the present research is mixed consisting of two phases: qualitative and quantitative. In the qualitative phase, in order to participate in in-depth exploration from the perspective of the participants, conducting individual interviews is considered as an appropriate method. Semi-structured method was adopted based on the purpose of this study. The semi-structured interview is similar to a common conversation driven by a narrative line in the form of research questions. This approach is particularly favored given the adaptability of the interviews and can be employed in order to examine the views of multiple participants in the same situation. Thematic analysis is applied to analyze the data obtained. Thematic analysis is a method of identifying, analyzing, and expressing patterns (i.e., themes) within the data. This method, at its least level, organizes the data and describes it in detail. However, it can go beyond this and interpret various aspects of the issue at hand. The sampling method has deeply promoted from the theoretical qualitative phase to the saturation phase. For this purpose, 4 women and 11 men were interviewed. The interview included participants with 3 to 28 years of work experience. These individuals were selected from employees in organizational posts ranging from delivery men to the branch head, and interviews continued until the data was felt to be duplicated and saturated. In the quantitative phase, the research method is descriptive. The statistical population of the study consists of all employees of Saderat Bank of Iran.

Table3: Coding

Concept	code	Subcode
Causal conditions	Personal factors affectin ambidexterity	- Individual features
		-personality traits
	Group factors affecting ambidexterity	- Leadership
		- Teamwork
		- Communications
		- Conflicts
	Organizational factors affecting ambidexterity	-Organizational Structure
		-Organizational Culture
		- Human Resource Policies and Methods
	Contextual factors affecting ambidexterity	-Political factors
		-Economic factors
		-Social factors

Concept	code	Subcode
		-Technological factors
		-Environment
		-Legal factors
Contextual conditions	Intellectual capital	-Communication capital
		- Human capital
		- Organizational capital
Main phenomenon	Organizational ambidexterity	- Exploitation
		- Exploration
Intervening conditions	Vital condition	- Learning factors
		- Job-related factors
Strategies	guidline	Designing an optimal management system of intellectual capital
		- Designing a skill evaluation system
		- Designing a system of equipping and allocating resources
Consequences	Individual consequences of ambidexterity	Learning improvement
		- Increase in creativity and innovation
		- Increase in job satisfaction
	Group consequences of ambidexterity	Compatibility with others
		- Preventing burnout
		- Increasing Organizational Citizenship Behaviors
		- Reduction in deviant behaviors in the workplace
	Organization consequences of ambidexterity	Performance improvement
		- Managing organizational paradoxes
		- Organizational development

At this stage, a 96-item researcher-made questionnaire was developed based on the designed-model and 380 questionnaires (Morgan's table) were distributed among the staff using clustered sampling method. According to the main themes of the research and sub-themes associated with the factors affecting organizational ambidexterity, the consequences of organizational ambidexterity, strategies, intervening factors and contextual conditions in Saderat Bank of Iran are presented in a conceptual model in Figure 1.

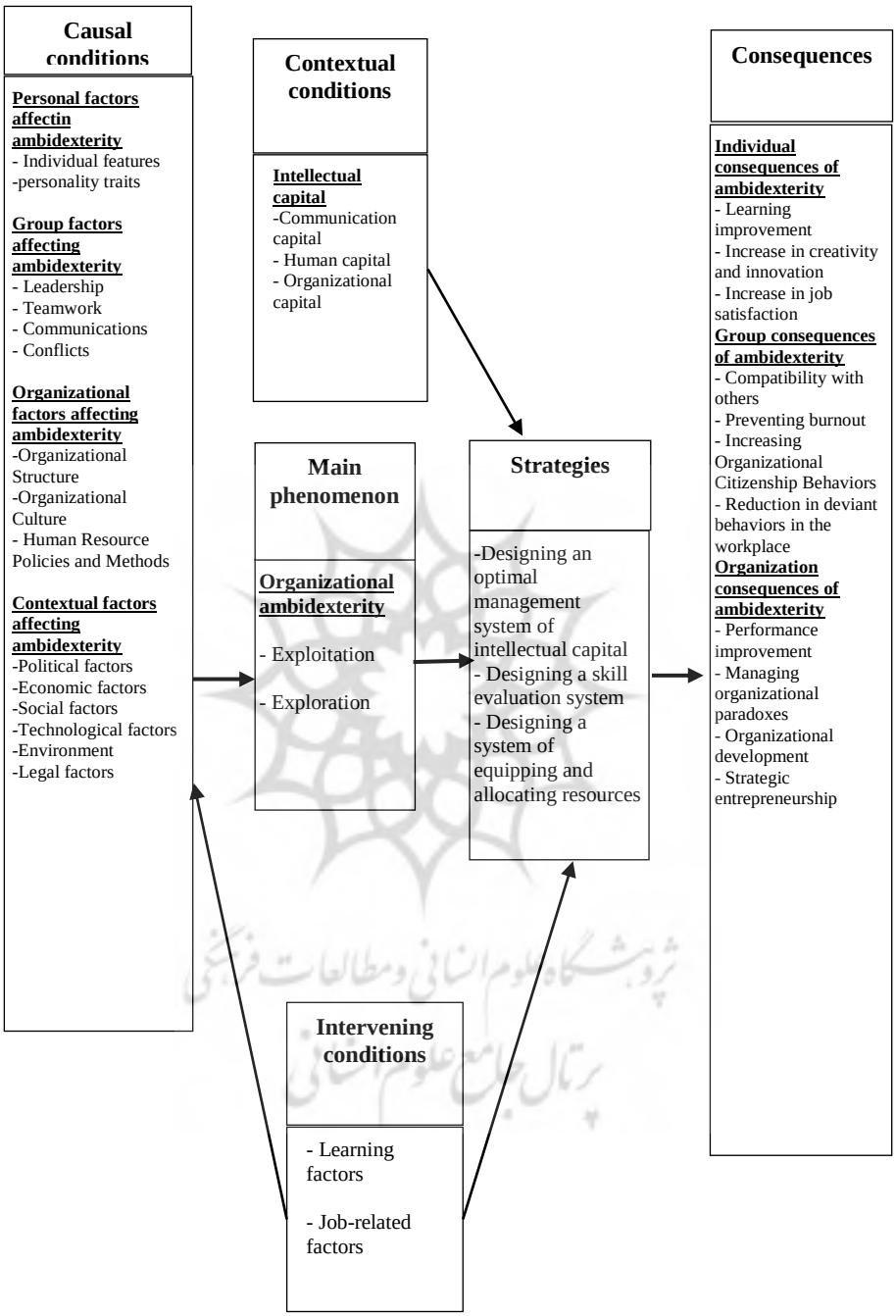

Figure 1 - Research Conceptual Model (Researcher-Made Source)

Findings

The Amos software was used for structural equation modeling to investigate the relationships in the proposed hypothesized model and evaluate the measurement instruments. Amos is a regression-based strategy that has risen as a strong approach to test causal relationships amongst variables. Amos likewise creates path coefficients for the relationships modeled amongst the constructs. The significance of these coefficients was evaluated using the bootstrap system (with 500 sub-samples), which paves the t-values for each path estimate. The questionnaire included three sections. The first section contained demographic information. The second and third sections contained study variables. All items were measured using the nominal polytomous seven-point response scale to reduce non-response and bias in the study. In Table 1 the demographic characteristics of the sample are shown.

Table1. Demographic characteristics of the sample

Demographics	class	n	%
Gender	Male	248	77
	Female	74	23
Age	25-35	64	20
	36-45	206	64
	46 and above	52	16
Education	Bachelors	180	56
	Masters	96	30
	Ph.D	46	14
Total		322	100

To determine to what extent indices are acceptable for measurement patterns, all measurement patterns must first be analyzed independently. On the basis of adopting such a method, five measurement models which are related to the variables are first tested separately. The model's general fit indices for measurement patterns (confirmatory factor analysis) are presented in Table 3.

Table 3. General fit indices for measurement patterns

Variable		CMIN/DF	GFI	IFI	CFI	RAMSE
current situation	Individual factors	1.57	0.96	0.901	0.92	0.3
	Group factors	2.55	0.94	0.93	0.93	0.06
	Organizational factors	2.001	0.97	0.91	0.91	0.05
	Contextual factors	2.37	0.92	0.91	0.91	0.05
	Individual strategies	2.24	0.99	0.91	0.91	0.05
	Organizational strategies	2.14	0.99	0.94	0.93	0.06
	Individual consequences	5.24	0.99	1.000	1.000	0.06
	Group consequences	2.94	0.98	0.91	0.91	0.07
	Organizational consequences	1.76	0.98	0.93	0.93	0.04
	Contextual conditions	1.04	0.99	0.99	0.99	0.01
	Confounding/Intervining conditions	4.49	0.97	0.95	0.95	0.09
	Organizational ambidexterity	4.36	0.904	0.91	0.91	0.09
desirable situation	Individual factors	2.25	0.95	0.91	0.91	0.05
	Group factors	1.93	0.95	0.92	0.91	0.05
	Organizational factors	1.98	0.96	0.94	0.94	0.05
	Contextual factors	2.18	0.96	0.906	0.904	0.05
	Individual strategies	1.71	0.99	1.000	1.000	0.000
	Organizational strategies	1.116	0.99	0.99	0.99	0.1
	Individual consequences	3.79	0.99	0.95	0.95	0.08
	Group consequences	1.98	0.98	0.953	0.953	0.05
	Organizational consequence	2.71	0.96	0.91	0.91	0.06
	Contextual conditions	1.86	0.99	1.000	1.000	0.000
	Confounding/intervining conditions	2.50	0.97	0.96	0.96	0.06
	Organizational ambidexterity	3.77	0.91	0.904	0.903	0.08

The results of the information indicated in the above table are as follows:

In explaining the normal chi-square value (CMIN / DF) of the pattern and its significance level, it should be mentioned that if the normalized chi-square value is between 1 and 5, it can be concluded that the chi-square value is appropriate for the measurement patterns.

λ Comparative Fit Index (CFI): About this index and its significance level, it should be noted that the closer it is to the value 1, the better it is for the measurement pattern, and since the CFI for measurement patterns is greater than 0.9, it indicates good fit to the data in the model.

The incremental fit index (IFI): Given this index and its significance level, it should be mentioned that the closer it is to the value 1, the more appropriate it is for the measurement pattern, and since the IFI is greater than 0.9, it indicates good fit to the data in the model.

One of the most valid indices used to check pattern fit is GFI or goodness of fit index. The closer the GFI is to 1.00, the better the pattern or data. The GFI for the measurement patterns is greater than 0.9, indicating a good fit to the data from the model.

The Root Mean Square Error of Approximation or RMSEA is based on residual matrix analysis. Acceptable patterns are less than 0.1 for this index. The pattern fit with values above 0.1 is estimated as poor. As seen in the table, the value of this index for measurement patterns is less than 0.1, which also indicates the good pattern fit from the data.

Table 4 demonstrates the structural model fit indices. Hence, by comparing the values of the indices with the appropriate fit, it can be concluded that the indices enjoy acceptable values.

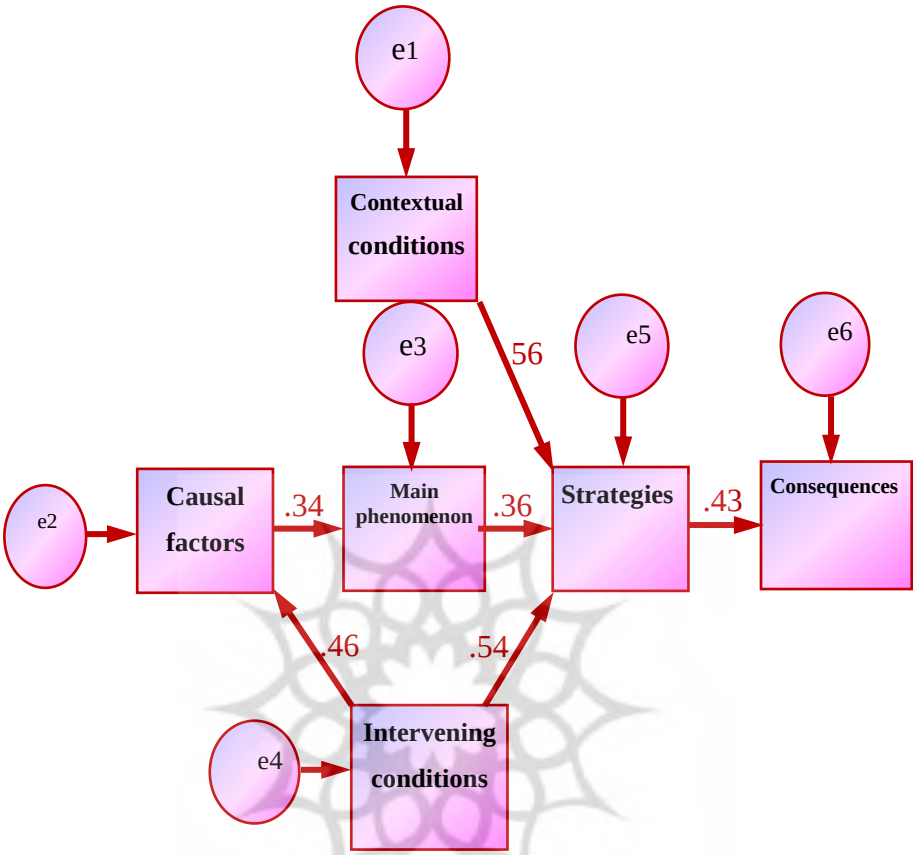

Figure 2.General Research Model (current situation)

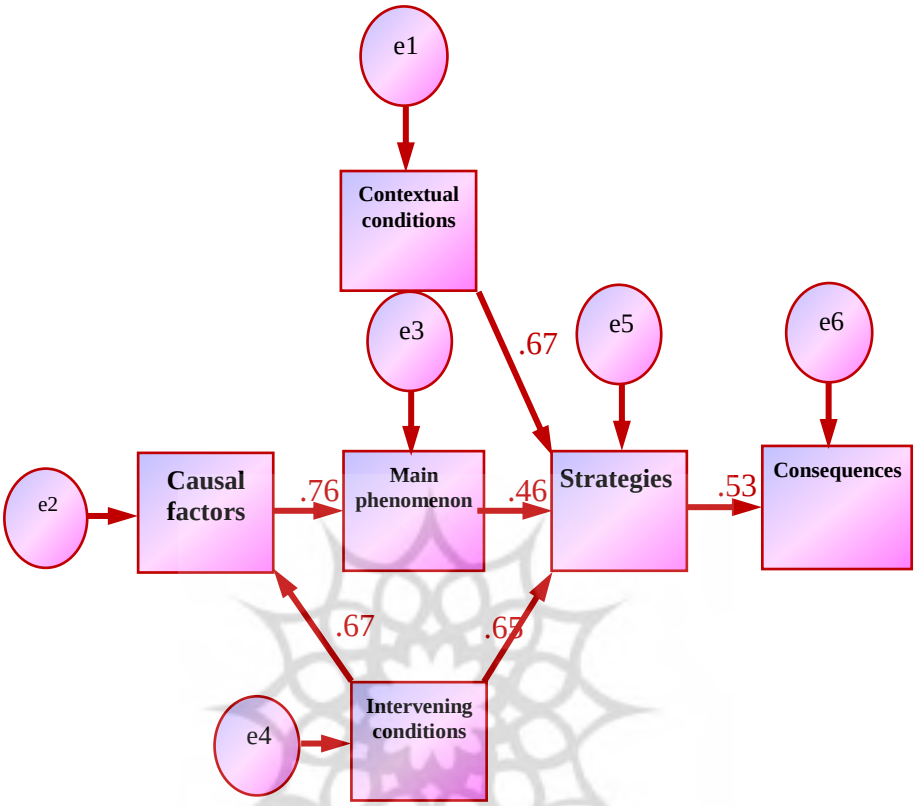

Figure 3. General Research Model (desirable situation)

Table 4 – Fit indices of the General structural model of the research

Fit index / Appropriate Model	CMIN/ DF	PNFI	GFI	RMSEA	RMR
Structural (current situation)	4.82	0.51	0.96	0.09	0.07
Structural (desirable situation)	4.67	0.52	0.94	0.09	0.01
Appropriate Fit	5>	>5/0	>9/0	<1/0	>.08

Given the suitability of the structural fit of the general model, it can be concluded that the organizational ambidextrous pattern in Saderat Bank holds true for the current and desirable situations.

Discussion and Conclusions

Technological advancements have led to the creation of innovative products and services across various industries. This has enabled

extraordinary transformations in business systems to adapt towards rapid changes, increase the capacity to innovate, reduce costs by utilizing knowledge sources across the organization to excel at a competitive rate. This paper investigates the current and desirable situations of organizational ambidexterity in Saderat Bank of Iran. The results obtained from this study stand for an attempt to identify the factors affecting organizational ambidexterity, contextual and confounding factors, strategies and outcomes of organizational ambidexterity in the current and desirable situations in Saderat Bank of Iran. It seems that the managers of the banking system can identify the components and their roles in achieving organizational outcomes by applying this model and take necessary actions in order to implementing them while observing the relationships and interactions between these components. Several studies (e.g., Günther et al., 2017; Svahn et al., 2017) have established positive relationships between the usage of big data, the internet of things (IoT), analytics, and artificial intelligence, and the increased efficiency and adaptability of firms. Thus, balancing traditionally conflicting targets, a vital capability involving the "ambidexterity" of a firm (Gibson & Birkinshaw, 2004), can be empowered by the use of digital technologies (Svahn et al., 2017). Digital transformation, the "transformations in organizations that are driven by new enabling [information technology] IT/ [information systems] IS solutions and trends" (Heilig et al., 2017), is therefore regarded as a key for firms to survive, since it drives operational performance and enables significant business improvements (Hess et al., 2016; Agrawal et al., 2019). Technology applications such as information systems, the internet of things, big data, chatbots, and web interactivity have enabled organizations to outreach customers, expand business operations and gain a competitive advantage (Chen et al., 2019). Especially in the pharmaceutical industry, digital innovation enables virtual checkups, 24/7 access to medical facilities, and develops electronic health records of their patients (Kraus et al., 2020). This study will explore the self-tuning model in terms of organization agility, organization adaptability, organizational ambidexterity, and innovation capability to impact digital innovation which has not been previously explored in literature

The findings of this study, as well as its limitations, can define some future directions for research on this topic. Due to the bias

inherent in self-reported perceptual data, we believe a longitudinal study would be necessary to provide a more in-depth and balanced investigation. Longitudinal studies are especially encouraged given the fact that the outcomes of collaborative innovation activities may be assessed more accurately over the long term.

The results of the present study provide appropriate solutions to Saderat Bank of Iran and the banking network. In this regard, the following suggestions are made:

1. By introducing the factors influencing organizational ambidexterity at four levels of the individual, group, organization and environment, it is suggested to all managers of an organization that they identify and strengthen the factors affecting organizational ambidexterity and take steps in order to create them in their organization.

2. It is recommended that managers gain a better understanding of ambidexterity and how to achieve it by identifying and controlling the factors associated with the job and the learning factors recognized in this investigation as intervening factors.

3. Organizational managers are suggested to pay particular attention to intellectual capital_ in three dimensions of communication capital, human capital, and organizational capital_ as the organization's share from knowledge of the individuals, groups, and networks, as well as the organizational practices, processes, and systems identified in this study as the contextual conditions in organizational ambidexterity.

4. It is proposed that managers of an organization, consider and implement the strategies of this model, especially in the process of recruitment and training of human resources management and maintenance, take a huge step towards making the organization ambidextrous. It seems that changing the way employees evaluate performance as well as formulating the assessment of organizational ambidexterity are of particular significance.

5. Due to the fierce competition of banks in the country's banking system as well as the shift from traditional to electronic banking, the need for simultaneous exploration and exploitation is increasingly perceived. All managers of the country's banking network are recommended to pay attention to the outcomes resulting from organizational ambidexterity identified at the three individual, group, and organization levels in this study and to try their best in order to

lead the organization towards ambidexterity.

6. Managers of Saderat bank are suggested and encouraged to move towards the success of the organization via innovation in achieving success, investing in the new technology, development of strategic relationships with key external stakeholders, and funding internal investment activities.

References

Agrawal, P., Narain, R., & Ullah, I. (2019). Analysis of Barriers in Implementation of Digital Transformation of Supply Chain Using Interpretive Structural Modelling Approach. *Journal of Modelling in Management*, 15(1): 297-317.

Andriopoulos, C., & Lewis, M. W. (2009). Exploitation-exploration tensions and organizational ambidexterity: Managing paradoxes of innovation. *Organization science*, 20(4), 696-717

Benner, M. J., & Tushman, M. L. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited. *Academy of management review*, *28*(2), 238-256.

Birkinshaw, J., & Gupta, K. (2013). Clarifying the distinctive contribution of ambidexterity to the field of organization studies. *Academy of Management Perspectives*, *27*(4), 287-298.

Chen, X., Wei, S., Sun, C., & Liu, Y. (2019). How technology support for contextualization affects enterprise social media use: A media system dependency perspective. *IEEE Transactions on Professional Communication*, 62(3), 279-297.

Chu, Y., Chi, M., Wang, W., & Luo, B. (2019). The impact of information technology capabilities of manufacturing enterprises on innovation performance: Evidences from SEM and fsQCA. *Sustainability*, *11*(21), 5946.

Clauss, T., Kraus, S., Kallinger, F. L., Bican, P. M., Brem, A., & Kailer, N. (2021). Organizational ambidexterity and competitive advantage: The role of strategic agility in the exploration-exploitation paradox. *Journal of Innovation & Knowledge*, *6*(4), 203-213.

Duncan, R. B. (1976). The ambidextrous organization: Designing dual structures for innovation. *The management of organization*, *1*(1), 167-188.

Floetgen, R. J., Strauss, J., Weking, J., Hein, A., Urmetzer, F., Böhm, M., & Krcmar, H. (2021). Introducing platform ecosystem resilience: leveraging mobility platforms and their ecosystems for the new normal during COVID-19. *European Journal of Information Systems*, *30*(3), 304-321.

Gibson, C.B., & Birkinshaw, J. (2004). The Antecedents, Consequences, And Mediating Role of Organizational Ambidexterity. *Academy of Management Journal*, 47(2): 209-226

Günther, W.A., Mehrizi, M.H.R., Huysman, M., & Feldberg, F. (2017). Debating Big Data: A literature review on realizing value from big data. *The Journal of Strategic Information Systems*, 26(3): 191-209.

Gupta, A. K., Smith, K. G., & Shalley, C. E. (2006). The interplay between exploration and exploitation. *Academy of management journal*, 49(4), 693-706.

Hanelt, A., Firk, S., Hildebrandt, B., & Kolbe, L. M. (2021). Digital M&A, digital innovation, and firm performance: an empirical investigation. *European Journal of Information Systems*, 30(1), 3-26.

He, Z. L., & Wong, P. K. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization science*, 15(4), 481-494.

Heilig, L., Schwarze, S., & Voß, S. (2017). An Analysis of Digital Transformation in The History and Future of Modern Ports. *In Proceedings of the 50th Hawaii International Conference on System Sciences.*

Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for Formulating a Digital Transformation Strategy. *MIS Quarterly Executive*, 15(2): 123-139

Holmqvist, M. (2004). Experiential learning processes of exploitation and exploration within and between organizations: An empirical study of product development. *Organization science*, 15(1), 70-81.

Holotiuk, F., & Beimborn, D. (2018). Organizational Ambidexterity for Digital Innovation: The Approach of Digital Innovation Labs. *Academy of Management Global Proceedings, Surrey* (2018), 22.

Ivanov, D., Dolgui, A., & Sokolov, B. (2019). The impact of digital technology and Industry 4.0 on the ripple effect and supply chain risk analytics. *International Journal of Production Research*, *57*(3), 829-846.

Junni, P., Sarala, R. M., Taras, V. A. S., & Tarba, S. Y. (2013). Organizational ambidexterity and performance: A meta-analysis. *Academy of Management Perspectives*, *27*(4), 299-312.

Khan, S. J., & Mir, A. A. (2019). Ambidextrous culture, contextual ambidexterity and new product innovations: The role of organizational slack and environmental factors. *Business Strategy and the Environment*, *28*(4), 652-663.

Lenka, S., Parida, V., & Wincent, J. (2017). Digitalization capabilities as enablers of value co- creation in servitizing firms. *Psychology & marketing*, *34*(1), 92-100.

Leonhardt, D., Haffke, I., Kranz, J., & Benlian, A. (2017, June). Reinventing the IT function: The Role of IT Agility and IT Ambidexterity in Supporting Digital Business Transformation. In *ECIS* (p. 63).

Li, Y. H., & Huang, J. W. (2012). Ambidexterity's mediating impact on product development proficiency and new product performance. *Industrial Marketing Management*, *41*(7), 1125-1132.

Li, F. (2020). The Digital Transformation of Business Models in the Creative Industries: A Holistic Framework and Emerging Trends. Technovation 2020, 23, 92–93

Linking Organizational Ambidexterity and Performance: The Drivers of Sustainability in High-Tech Firms. Sustainability, 11, 3931.

March, J. G. (1991). Exploration and exploitation in organizational learning. Organization science, 2(1), 71-87.

Nwankpa, J.K.; Roumani, Y. (2016). IT Capability and Digital Transformation: A Firm Performance Perspective. In Proceedings of the 37th International Conference on Information Systems, Dublin, Ireland, 11–14.

O Reilly, C. A., & Tushman, M. L. (2004). The ambidextrous organization. Harvard business review, 82(4), 74-83.

O'Reilly, Charles A., Tushman, Michael L. (2008) "Ambidexterity as a dynamic capability: Resolving the innovator's dilemma", Research in Organizational Behavior, Vol. 28, p.p. 185-206.

Raisch, S., & Birkinshaw, J. (2008). Organizational ambidexterity: Antecedents, outcomes, and moderators. Journal of Management.

Raisch, S., Birkinshaw, J., Probst, G., & Tushman, M. L. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. Organization Science, 20(4), 685-695.

Scholz, R.W., Czichos, R., Parycek, P. (2020). Organizational Vulnerability of Digital Threats: A First Validation of an Assessment Method. Eur. J. Oper. Res. 282, 627–643.

Scuotto, V., Arrigo, E., Candelo, (2019). E. Ambidextrous Innovation Orientation Effected by the Digital Transformation: A Quantitative Research on Fashion SMEs. Bus. Process. Manag. J. 26: 1121–1140

Simsek, Z., Heavey, C., Veiga, J. F., & Souder, D. (2009). A typology for aligning organizational ambidexterity's conceptualizations, antecedents, and outcomes. *Journal of management studies*, *46*(5), 864-894.

Smith, W. K., & Tushman, M. L. (2005). Managing strategic contradictions: A top management model for managing innovation streams. *Organization science*, *16*(5), 522-536.

Svahn, F., Mathiassen, L., & Lindgren, R. (2017). Embracing digital innovation in incumbent firms: How Volvo cars managed competing concerns. *MIS Q.*, *41*(1), 239-253.

Tan, B. C., Pan, S. L., & Hackney, R. (2009). The strategic implications of web technologies: A process model of how web technologies enhance

organizational performance. *IEEE Transactions on Engineering Management*, *57*(2), 181-197.

Taródy, D. (2016). Organizational ambidexterity as a new research paradigm in strategic management. *Vezetéstudomány-Budapest Management Review*, *47*(5), 39-52.

Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California management review*, *58*(4), 13-35.

Tushman, M. L., & O'Reilly III, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California management review*, *38*(4), 8-29.

Tushman, M., Smith, W. K., Wood, R. C., Westerman, G., & O'Reilly, C. (2010). Organizational designs and innovation streams. *Industrial and corporate change*, *19*(5), 1331-1366.

Velu, S. R., Al Mamun, A., Kanesan, T., Hayat, N., & Gopinathan, S. (2019). Effect of information system artifacts on organizational resilience: A study among Malaysian SMEs. *Sustainability*, *11*(11), 3177.

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The journal of strategic information systems*, *28*(2), 118-144.

How to Cite: Mottaghi, M., Dalavi, MR., Shirani, A. (2022). Organizational Ambidexterity Model for Digital Innovation in the Banking Industry, *International Journal of Digital Content Management (IJDCM)*, 2(4), 113-135.
DOI: 10.22054/DCM.2022.14023