



The Effect of Dynamic Capabilities on Organizational Performance with the Mediating Role of Ambidexterity and Digital Platforms in Tehran Municipality Sports Organization

Hossein Alimohammadi¹ | Mehdi Jedi² | Javad Adabi Firouzjah³

1. Corresponding author, Associate Professor, Department of Sport sciences, University of Qom. Qom, Iran.

Email: h_alimohamady@yahoo.com

2. MSc, Department of Sport sciences, University of Qom. Qom, Iran. Email: mehdijedi01@gmail.com

3. Assistant Professor, Department of Sport sciences, University of Qom. Qom, Iran. Email: jadabi@gmail.com

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ABSTRACT

Dynamic environments provide sports organizations with various threats and opportunities for optimization and development. This study aims to examine the effect of dynamic capabilities on organizational performance with the mediating role of ambidexterity and digital platforms in the Tehran Municipality Sports Organization. This practical, developmental, and quantitative study was conducted at the Tehran Municipal Sports Organization in Iran. A total of 213 questionnaires were obtained through Google Forms and the data analysis was conducted using SPSS26 and Smart PLS version 4. This study highlights the importance of digital platforms and ambidexterity mediators in the relationship between dynamic capabilities and organizational performance. It also addresses the lack of an effect of technological and market turbulence on the relationship between ambidextrous capabilities and performance. Finally, suggestions for future research are presented.

Introduction

The increase in population in the world, especially in the urbanization sector, has turned the nature of sports into a global network. This global network is also considered an essential factor for societies' health and cities' sustainable development. On the other hand, sport has become a global industry and therefore, governments have considered it for the development of cities and societies. Governments pursue goals such as reducing the country's medical expenses (Szczepaniak, 2020) or increasing national trust and coexistence culture through citizenship sports (Jadidi, Labibi, & ghadimi, 2021).

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Increasing the level of sports participation of citizens can increase the public health of society by 30% (Veisten, Flügel, Ramjerdi, & Minken, 2011). Therefore, the policies and structures of citizen sports of a country play a vital role in the sustainable development of its cities. In different countries, there are organizations and departments, which are responsible for developing citizen sports. In Iran, city councils and municipalities are obliged to provide sports facilities and move towards the development and participation of citizen sports. More precisely, the development of physical education and citizen sports is defined in 23 tasks of the city council, which defines the special place of citizen sports in its development for this council, Tehran Municipality and Tehran Municipality Sports Organization. Tehran Municipality Sports Organization is a public, service, local, and institutional organization under the supervision of Tehran Municipality and Tehran City Council. According to the statutes of this organization, it pursues goals such as managing and developing public sports in the neighborhoods and regions of Tehran, promoting health and wellness, improving the cultural level of sports, creating suitable fields for the participation of citizens in the quantitative and qualitative development of sports activities, and provides standard, cheap and accessible sports facilities and equipment for citizens. Despite such structures and organizations that use city and governmental resources, citizens' participation is not in good condition compared to developed countries (Ehsani, Saffari, Amiri, & Kozechian, 2016). Therefore, studying factors such as what tools and facilities in management processes and models help; improve such organizations' performance can contribute to their scientific knowledge and experience.

An organization like Tehran Municipal Sports Organization faces challenges and sensitivities due to its goals, missions, and social responsibility. In addition, such a sports organization should have the appropriate Dynamic Capabilities (DCs) against environmental changes and Market and Technological Turbulences (MTTs). DCs become more critical in high-intensity changes. These changes in the environment and dynamics of organizations are different and distinct from organization to organization and industry to industry. Moreover, it can face different MTTs. For example, Jadidi et al. (2021) investigated the challenges of the Tehran Municipal Sports Organization during the COVID-19 era, when this organization was facing a rapidly changing environment. Their research shows that in the era of COVID-19, the customers of this organization have been faced with obsessions and overly cautious behaviors in using sports facilities. Meanwhile, at the same time, the electronics industry was facing growth and increased use of digital software and platforms by communities and organizations in other industries such as sports. Against such MTTs, DCs, Digital Platforms Capabilities (DPCs), and exploratory and exploitative capabilities enabled organizations to respond appropriately. For example, the Tehran Municipal Sports Organization invited citizens to sports activities during quarantine by creating campaigns such as exercise at home campaign through social media and television programs. Therefore, sports organizations should not only improve the relationship between DCs and Organizational Performance (OP) (Gerke, Dickson, & Wohlgemuth, 2022) but also should pay more attention to other capabilities such as digital platforms, exploration, and exploitation. In other words, the success and failure of the relationship between DCs and performance is influenced by elements, variables, and interactions between them (Baía & Ferreira, 2019; Teece, 2018a).

In fact, organizations try to improve their DCs to achieve competitive advantage and improve long-term performance sustainability (Barney & Zajac, 1994). An organization that adopts a traditional approach and does not show sufficient dynamics in the face of changes will face problems and even failure in the long run (Witschel, Baumann, & Voigt, 2022). Despite the importance of DCs in all aspects of an organization, its implementation is complicated by turbulence and challenges (Morgan & Piercy, 1998). For example, a sports organization that decides to improve quality and productivity and save costs and time through digitalization and does not have a suitable dynamic culture; it will probably face challenges such as the unwillingness of employees and customers to use new technologies (Rodríguez, Svensson, & Mehl, 2020), or the disappearance of work and non-work boundaries of employees due to digitalization (Chadee, Ren, & Tang, 2021). By strengthening DCs, organizations can improve their competitive advantages, control, value creation, optimization, and autonomous performance (Kohtamäki, Parida, Oghazi, Gebauer, & Baines, 2019) to better respond to threats and take more advantage of opportunities (Teece, 2018a). The research of Nori, Shabani, and Soleymani (2021) on the Tehran Municipal Sports Organization shows that this organization can

promote the dynamic culture and dynamics of its structure and improve its performance with the help of virtualization and digitalization of its structure. Their research also clarifies the importance of addressing the dynamics of sports organizations, specifically the Tehran Municipal Sports Organization. By reviewing the literature (Deng, Liu, Gallagher, & Wu, 2020; Nori et al., 2021; Rialti, Marzi, Ciappei, & Busso, 2019; Teece, 2018a; Zhou, Zhou, Feng, & Jiang, 2019), it is understood that sports organizations have often solved the problems caused by environmental changes by strengthening DCs and increasing their sustainability. As mentioned earlier, although DCs can be considered the key to the success of organizations, this is an idealistic view, and addressing it alone does not guarantee organizational success (Baía & Ferreira, 2019; Witschel et al., 2022). DCs have sensing, seizing, and transforming capabilities that refer to adapting to a dynamic environment (Teece, Pisano, & Shuen, 1997). Also, dynamic environments refer to uncertainties and frequent changes (Herold, Heller, Rozemeijer, & Mahr, 2022); which lead to complexity in our understanding of the environment and decisions (Deng et al., 2020). Therefore, DCs alone are not enough for success, and other factors and variables should also be evaluated and investigated.

Sports organizations should understand their current and future opportunities and threats simultaneously as they are being exploited and improve their exploration capabilities in this direction. They should be ambidextrous organizations (O'Reilly III & Tushman, 2013). Ambidexterity capabilities (ACs), which are combined by exploratory and exploitative capabilities, try to maintain the exploitation of the organization in the long term, through innovation and learning resulting from the interaction between exploratory and exploitative capabilities (Correia, Dias, & Teixeira, 2020). Therefore, organizations often try to create and obtain value through new resources and capabilities, such as new technologies (Foss & Saebi, 2017; Mariani, Machado, & Nambisan, 2023). In addition, the use of new and up-to-date resources and capabilities, such as new digital technologies, reduces and facilitates costs, information exchange time, and organizational processes, ultimately improving the organization's DCs and ACs (Witschel et al., 2022). ACs and DPs are necessary to ensure the successful implementation of the DCs (Markovich, Raban, & Efrat, 2022; O'Reilly III & Tushman, 2013; Teece, 2017). In addition, the importance of DCs in the organization has been clarified for senior managers and researchers, but it still faces many problems and ambiguities that require more research in this area (Baía & Ferreira, 2019; Teece, 2018a). For example, the failure rate of organizations in changes, such as using technologies to adapt to digital transformations, is high (70%) (de la Boutetière, Montagner, & Reich, 2018). Considering that DCs are strongly dependent on the speed of environmental changes (Deng et al., 2020; Witschel et al., 2022), these statistics and research should be evaluated in each field.

However, Sports organizations such as Tehran Municipal Sports Organization, which has a developmental mission in the field of citizen sports, have social responsibilities and extra-organizational missions are called hybrid organizations that are private, civil, and public organizations (Lucassen & Bakker, 2016). Therefore, although financial profitability is important for these organizations, due to having the facility and financial resources of municipalities and governments merely measuring the financial profitability of calculating their progress, success, and performance cannot be accurately examined (Nowy, Wicker, Feiler, & Breuer, 2015). They may face challenges such as slow administrative bureaucracies in pursuing dynamic policies. Studying such a sports organization, which faces a lack of research in dynamics, digital platforms, and ambidexterity, can provide a more accurate understanding of such environments, structures, and management models. In addition, examining the DCs and organization's performance with the mediating ACs and DPs mediators, by considering market and technological turbulences in the field of sports can contribute to the literature of other industries and other areas of these components (Teece, 2018a). For example, a review of 92 quantitative articles examining mediators between DCs and performance showed that more studies are needed to identify and investigate mediators of DCs in performance (Baía & Ferreira, 2019). Therefore, this research attempts to answer the following questions:

1. Are dynamic capabilities directly related to organizational performance?
2. Are dynamic capabilities indirectly related to an organization's performance through the capabilities of digital platforms?
3. Are dynamic capabilities indirectly related to an organization's performance through ambidexterity in turbulent environments?

Dynamic Capabilities and Performance

Organizations seek to identify and predict changes and adapt to them in the long term by developing DCs (Wetering, 2019). According to Barreto (2010), "A dynamic capability is the firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base." DCs are not just a guide or an indicator of the path for the changing environment but also noticeably cause the evolution of products, services, and organizational processes according to environmental changes (Baía & Ferreira, 2019; Teece, 2017). On the other hand, capabilities that optimize current operations and processes, regardless of future changes, are called normal capabilities (Teece, 2017). Therefore, two variables, environmental changes and time can distinguish DCs from normal capabilities. Teece et al. (1997) segmented DCs into sensing, seizing, and transforming capabilities. Teece (2018a) believed that sensing capabilities are a set of activities for evaluating, analyzing, and classifying information collected from the external environment. Therefore, DCs are based on management knowledge (Deng et al., 2020) obtained through sensing and knowledge exchange. The exchange of knowledge inside and outside the organization and between organizations leads to innovation, especially collaborative innovation based on technology (Jucevičius & Jucevičienė, 2022). It also improves the quality of decisions, particularly in response to turbulence (Markovich et al., 2022). Therefore, organizations examine the environment through sensing in order to identify and prioritize current and future threats and opportunities. Seizing capabilities refer to the speed of action, quality of responding to threats, and use of identified opportunities (Teece, 2018a). These reactions may involve investing in a specific sector or several sectors, developing and updating technologies, or modifying and creating innovation in the organization's architecture (Teece, 2018a). Seizing capabilities are responsible for coordinating different parts and elements of the organization in an appropriate response (Markovich et al., 2022; Zhou et al., 2019). As mentioned earlier, these changes were detected by sensing capabilities. For example, at this stage, an organization that has collected information from the environment and competitors begins to integrate this collected information and internal information (Zhou et al., 2019); Then, according to them, they try to give an innovative and appropriate response to changes such as the use of technologies (Teece, 2017). Transformation capabilities refer to the degree of flexibility and ability of an organization to change its architecture (significant changes) successfully or even in detail (micro changes) (Teece, 2018a). In fact, the organization has reached evolutionary growth through successive reforms and configurations in the long term. This growth results from changes and innovations in minor components to fundamental structural changes (Rialti et al., 2019; Teece, 2007). Due to the perceptibility of changes, having capabilities such as organizational culture or strong technological capabilities (Teece, 2017) is critical for successfully implementing changes. For example, culture and technology may create challenges in changes, such as replacing technology with human resources or changes in routines that some human resources and customers do not show a desire for (Chadee et al., 2021; Rodríguez et al., 2020). Organizations develop their resources and capabilities through DCs, thereby creating a sustainable competitive advantage over time (Barney & Zajac, 1994; Gerke et al., 2022).

Rialti et al. (2019) compare the constituent elements of an organization to the bricks of a structure, believing that all these elements should be dynamic. This means that if the organization only has dynamics in some sectors or elements, it cannot expect to develop and maintain its competitive advantages in the long term. For example, some organizations aim to integrate digital technologies with processes, products, and services only to take advantage of the technologies and not adapt to the dynamic environment (Björkdahl, 2020). On the other hand, DCs are strongly dependent on environmental changes; therefore, the organization must have stronger DCs as the speed of change increases. For example, the rate of change in the electronics industry is much higher than that in organizations active in the field of sports (Gerke et al., 2022; Zhou et al., 2019). However, the study of DCs in the sports industry can contribute to the development of literature in this field (Gerke et al., 2022); It seems that this industry still has gaps in terms of dynamic studies. Harris, Metzger, and Duening (2021) state that how and through what mechanisms can guide the successful implementation of dynamics in sports organizations is still unclear and requires more studies. In another study, Baía and Ferreira (2019) reviewed 92 quantitative research to assess the direct and

indirect relationship of DCs with OP; the results of their research show that although 68 articles examine mediators in this relationship, more mediators and guiding elements should be identified. In addition, the results of this study show that the literature has not yet reached a consensus on whether DCs are directly related to OP. As previously mentioned, an interdisciplinary study of different dynamic industries and the elements that interact with them can lead to a better overview (Teece, 2018a). Sports organizations face different challenges, and paying attention to their DCs is vital. Robinson (2006) considers one of these challenges to be growing beyond the expectations of the organization's customers. Other challenges include the luxury of sports goods and services, customers benefiting from services only in their free time, and the involvement of emotional goals in spending by customers (such as fans of a particular club) (Robinson, 2006). In addition, various researchers use different parameters, usually financial profit, to measure OP. Meanwhile, in some sports organizations such as the Tehran Municipal Sports Organization, citizens' participation is a higher priority than income. Harris et al. (2021) examined their research on sports organizations based on revenue, mass participation, and medaling. Therefore, studying the DCs and performance of sports organizations, which often have long-term missions and goals outside purely financial interests (Nowy et al., 2015), increases our understanding of this relationship (Harris et al., 2021). In this research, in addition to studying the indirect relationship between DCs and the performance of a sports organization, this research directly studied these two components together.

Hypothesis (H) 1: Dynamic capabilities are directly related to organizational performance.

Mediation Role of Digital Platforms Capabilities

Digital Platform Capabilities (DPCs) have become a critical resource and capability for creating competitive advantages in organizations and companies (Parker, Van Alstyne, & Choudary, 2016). Organizations develop their business through innovation in structures, processes, and services based on DPCs (Jovanovic, Sjödin, & Parida, 2022; Parviainen, Tihinen, Kääriäinen, & Teppola, 2017). Organizations create and capture value through new platforms, such as artificial intelligence, and build an innovative structure (Mariani et al., 2023). Teece (2017) states that a "digital platform provides standards, interfaces, and common tools for the use of core technologies to increase the exploitative and profitability of a company, a set of companies, or users." This is despite the fact that less than 30% of organizations have benefitted from DPCs successfully (de la Boutetière et al., 2018). Organizations need to integrate their processes and architecture with DPCs to develop dynamic structures and capabilities (Tariq, Alshurideh, Akour, & Al-Hawary, 2022; Teece, 2016, 2017). According to Lukito, Suharnomo, and Perdhana (2022), organizations must frequently redesign and update their structure management, monitoring and evaluation, technological capabilities, human resources, and operations to keep pace with digital transformation. On the other hand, DPCs provide the organization with access to the information and knowledge needed for modification and updates (Oduro & Alsharif, 2022). As DPCs have become a source and ability to create a competitive advantage in almost all industries, sports organizations are also looking for their development. Organizations seek to develop entrepreneurship and innovation through technology to take advantage of opportunities and respond to threats (Ratten, 2022). Specifically, one of the challenges sports organizations face, especially those with high internal dynamics, is the increase in customer expectations, which often becomes an anomaly (Robinson, 2006). Correia et al. (2020) and Robinson (2006) believe that the solution to such anomalies is to develop relationships with customers and identify their expectations more precisely. Therefore, technology is an appropriate tool for collecting and managing information and facilitating communication between organizations and customers (Kittikumpanat, 2021; Markovich et al., 2022). For example, using artificial intelligence positively affects all elements related to income generation, monitoring and control, optimization of functions, and development of exploratory capabilities (Burstrom, Parida, Lahti, & Wincent, 2021). Therefore, developing DPCs can help manage changes and create an innovative and dynamic business model (Bashir, Naqshbandi, & Farooq, 2020). Finally, a sports organization can use technology to obtain an accurate and comprehensive picture of what it needs to respond to changes (Harris et al., 2021). This is despite the fact that, although the importance of DPCs has become clear to senior managers and researchers, organizations are very cautious in using them and prefer to use more mature technologies rather than new ones (Herold et al., 2022). A sports organization is actually part of a social institution

(Varmus, Kubina, Boško, & Mičiak, 2022), which has more social responsibilities due to the nature of its relationship with society; with an increase in this responsibility, the learning of the organization should also grow and manifest (Zeimers, Anagnostopoulos, Zintz, & Willem, 2019). Therefore, sports organizations must have dynamic and reliable technology to understand and meet social expectations and even influence them. In addition to making the organization compatible with the environment, DCs provide a basis for influencing the environment (Teece, 2007; Zhou et al., 2019). This does not mean that the organization can impact only by focusing on the DCs. In other words, an organization needs to upgrade and develop a set of resources and capabilities to achieve proper and effective performance (Baía & Ferreira, 2019; Teece, 2018a). Therefore, with the help of digital technology and DCs, organizations can repeatedly use up-to-date platforms to become innovative and sustainable organizations (Teece, 2017, 2018b). Consequently, integrating DPCs with organizational operations leads to the growth and development of exploration and exploitation capabilities (Tariq et al., 2022). Also, in this way, they benefit from sensing, seizing, and transforming capabilities. They save costs and time and optimize their processes and functions accordingly. DPCs can be a suitable and vital tool for collecting information and increasing management knowledge, which consequently leads to organizational learning and improved exploratory capabilities. Finally, DPCs can be a valuable resource and capacity for successfully implementing organizational dynamics.

H2: Digital platforms mediate the relationship between dynamic capabilities and organizational performance.

H2a: Dynamic capabilities have a positive relationship with digital platform capabilities.

H2b: Digital platform capabilities have a positive relationship with organizational performance.

H3: Digital platform capabilities have a positive relationship with ambidexterity capabilities.

Mediation Role of Ambidexterity

The speed of change, lack of synchronization of technological progress, and competitive markets cause a loss of competitive advantage in the organization. Organizations that do not innovate or innovate only in products and services eventually become traditional organizations (Foss & Saebi, 2017; March, 1991). Lukito et al. (2022) and Teece (2010) believe that organizations need change and innovation in structures, monitoring and evaluation processes, technological capabilities, operations, and training of human resources in order to maintain their survival in the long term. In fact, in addition to developing exploitative capabilities, organizations should improve their exploratory capabilities to maintain their competitive advantages in the long term (Tushman & O'Reilly III, 1996). ACs are the balanced and simultaneous performance of exploitative and exploratory capabilities, which ultimately lead to an organization's long-term survival (March, 1991). March (1991) believes exploitative capabilities are the modification and improvement of the organization's existing capabilities, and exploratory capabilities are a set of activities that lead to the development of knowledge and the identification of new capabilities. In addition, these two capabilities strongly depend on the environment and industry dynamics. It is noteworthy that simultaneous performance does not necessarily mean a constant interaction between exploratory and exploitation capabilities. Therefore, organizations may use different strategies to apply these two according to their resources, capabilities, and environmental conditions. In general, three strategies, "sequential," "Simultaneous or Structural," and "contextual," are seen in the research (O'Reilly III & Tushman, 2013). In the sequential strategy, the organization ensures its evolution by switching between exploratory and productive capabilities at different time intervals (between two points) (Tushman & Romanelli, 1985). One of the advantages of using this strategy is the reduction of conflicts between the exploration and exploitation sectors compared with other strategies (Chou, Yang, & Chiu, 2018). However, this switching may challenge organizations with weak dynamics. Therefore, O'Reilly III and Tushman (2013) considered ACs dependent on DCs and emphasized their relationship. In the Simultaneous or Structural approach, the tasks of different organizational sectors can be divided into two groups: exploration and exploitative (O'Reilly III & Tushman, 2013). In other words, it is created to balance exploratory and exploitative capabilities through the efforts of separate but simultaneous departments. Finally, according to the estimates of both departments, senior

managers facilitate an organization's adaptation to the environment. In the Contextual approach, obviously, all departments and human resources simultaneously explore and exploit at the same time (Möller, Schmid, Seehofer, & Wenig, 2022). Considering that human resources, processes, and structures join both capabilities and systems, and that structures are designed to support people's freedom of action, cooperation and learning between them grows (Gibson & Birkinshaw, 2004). As a result, this approach enables the system to continuously innovate. ACs not only cause innovation in all dimensions of the organization but the dynamics of the organization are created in the long term from the interaction between exploration and exploitation capabilities (Hill & Birkinshaw, 2014). For example, Markovich et al. (2022) show the development of knowledge and exploratory capabilities in four ways: 1) Knowledge of external sources that leads to learning, 2) Integrating internal accumulated knowledge with external knowledge, 3) Using the knowledge that discovers hidden value, and 4) Knowledge that helps the organization understand opportunities; it leads to competitive advantage and DCs. In addition, the interaction between exploration and exploitation, especially with the digitalization approach, leads to learning (Deng et al., 2020). In general, ACs, in addition to providing a deep understanding of the resources and strategic capabilities needed to respond to threats and opportunities, also refer to the method of operational changes and future exploitation (Deng et al., 2020; Trieu, Van Nguyen, Nguyen, Vu, & Tran, 2023). Therefore, the faster the speed of environmental change, the greater the need for interaction with ACs. Environmental changes, such as technological and market changes, create environmental turbulence. These turbulences can have harmful and irreparable effects on the performance and survival of organizations (Morgan & Piercy, 1998). Therefore, ACs can respond appropriately to MTTs by creating dynamism, learning, and innovation, especially technological innovation (Trieu et al., 2023; Tushman & Smith, 2017). On the other hand, DCs can play a stimulating and complementary role in implementing ACs, especially in turbulent environments (O'Reilly III & Tushman, 2013). In addition to these, DCs are a catalyst for implementing processes and discovering solutions and changes (Jucevičius & Jucevičienė, 2022). Some researchers believe that DCs can affect OP only through mediators and complements (Teece, 2018a). In line with this theory, Baía and Ferreira (2019) study showed that most articles (68 out of 92 quantitative articles reviewed) preferred to deal with mediating variables of this relationship. Therefore, it is important to investigate the mediating role of ACs on the relationship between DCs and their performance. ACs, in addition to organizing the organization through the collection of knowledge and learning in dynamic environments, have a facet of mechanizing the organization by influencing efficiency and productivity, which directly improves performance (Burns & Stalker, 1961). Therefore, it seems that DCs and ACs complement and benefit from each other (O'Reilly III & Tushman, 2013). However, research is insufficient to clarify the relationship and interactive strategies between DCs and ACs and their effect on the performance of sports organizations (Deng et al., 2020). Therefore, this research argues that ACs can mediate the relationship between DCs and performance, in addition to using environmental resources and capabilities, such as DPCs.

H4: Ambidexterity capabilities mediate the relationship between dynamic capabilities and organizational performance.

H4a: Dynamic capabilities have a positive relationship with ambidexterity capabilities.

H4b: Ambidexterity capabilities have a positive relationship with organizational performance.

Moderating role of market and technology turbulences

Dynamic environments resulting from changes in the market and technology lead to the creation and spread of disturbances. Dynamic environments are uncertainties and successive changes that complicate our understanding of the environment and our ability to respond to them (Herold et al., 2022). Turbulence resulting from dynamic environments can be divided into three components: competition intensity, market turbulence, and technological turbulence (Abidemi, Halim, & Alshuabi, 2017; Chavez et al., 2015). The intensity of competition refers to the market's level of competitiveness. Market turbulence is a set of changes in the composition and preferences of customers, which requires the organization to change strategies in the face of them (Slater & Narver, 1994). Technological turbulence refers to the speed of technological change in various industries

(Jaworski & Kohli, 1993). Therefore, every organization experiences various turbulences according to the environment in which it is located. For example, Sadeqi-Arani and Alidoust Ghahfarokhi (2022) examined the turbulences that active sports organizations in Iran face due to the COVID-19 crisis and the subsequent economic crisis. This research shows the turbulences on the demand side: 1- change in the expectations and priorities of customers' purchases; 2- decrease in customer demand due to a decrease in purchasing power and an increase in the price of sports goods and services. 3- Decrease in behaviors related to shopping, recreation, and impulsive and enjoyable entertainment 4- Believing that sports goods and services are only recreational and unnecessary (luxuries). 5- Collective use of most sports goods and services. Supply-side turbulence: 1- decrease in liquidity and increase in debt of sports businesses due to decrease in demand and sales; 2- increase in the price of products and services due to the rise in production costs; 3- the instability of the supply chain of raw materials and supply of final goods or services; 4- reducing product production or providing services below actual capacity due to production limitations; and 5) the decreased ability of the government to help businesses, due to reduced government revenues and increased government spending (such as health care and insurance). Although more turbulences can be found, nevertheless, turbulences do not necessarily weaken the organization and may even cause its growth and development. Abidemi et al. (2017)'s study shows that organizations reverse the negative effects of turbulence and develop competitive advantages through technology and promoting market orientation. In this regard, Cai, Wu, and Gu (2021)'s study shows that strong exploratory and exploitation capabilities reduce the impact of market and environmental turbulences and improve resilience. Therefore, a sports organization with a deep understanding of environmental turbulence can become an innovative and sustainable organization by modifying and improving processes and strategies (Harris et al., 2021). Despite such successes in the face of technological and market turbulence, the failure rate of organizations remains very high. For example, the success rate of organizations using new technologies is estimated to be less than 30% (de la Boutetière et al., 2018). One of the reasons for this can be the different challenges and turbulences with unique features that the organization faces at every stage of technological change (Teece, 2017). In another example, the failure rate of organizations seeking an innovative business model to adapt to a dynamic environment and develop a competitive advantage is reported to be 70 to 95 percent (Nebuloni, Hernandez, & Carter, 2019; Patel, 2015). However, although exploration alone may be ineffective and make organizations face challenges, such as increasing harmful ideas, its interaction with exploitation can make the organization resilient to changes and turbulence (O'Reilly III & Tushman, 2013). Therefore, from a more general point of view, digital technologies are a tool for improving exploratory and exploitative capabilities (O'Reilly III & Tushman, 2013; Teece, 2017), and some organizations have been able to improve their operations in turbulent and dynamic environments (Cai et al., 2021); However, MTTs have been able to make most businesses fail.

H5: Technological and market turbulences moderate the relationship between ambidexterity capabilities and organizational performance.

In short, dynamic environments and Industrial Revolution 4.0 are no longer acceptable to traditional companies and demand their adaptation to changes. At the same time as the technological advances, the expectations of sports communities to receive more quality and accessible sports services have increased. This study aims to provide a framework and holistic perspective for the greater effect of DCs through DPCs and ACs in MTTs. Therefore, the model presented in this study develops the ecosystem and literature on dynamics, digital platforms, and ambidexterity in times of technological and market turbulence. According to the stated purpose and hypotheses that are based on the questions mentioned in the previous section, the conceptual model of this study is presented in **Error! Reference source not found.**

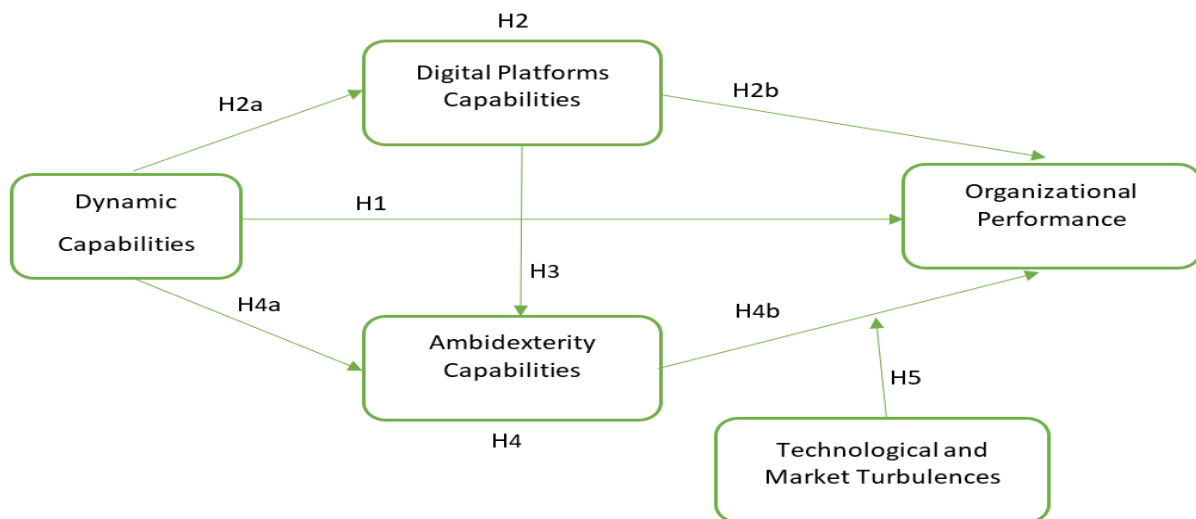


Figure 1. Proposed Research Model

Methodology

The purpose of this research is to provide a model to evaluate and determine the direct and indirect relationship between DCs and OP through the mediators of DPCs and ACs, and also the moderating effect of MTTs on the relationship between ACs and OP of Tehran Municipal Sports Organization in the last three years (Mid-2019 to 2022). Therefore, this study was an applied research study. In addition, considering the increase in knowledge resulting from presenting the model and examining the variables affecting it, this study also had a developmental orientation. The study area of this research was the sports industry, which was conducted on the managers and employees of the administrative department (staff) and the managers of sports facilities (lines) of the Tehran Municipal Sports Organization. The total number of Research populations in this study was 450 of managers and administrative department. According to Cochran's formula, at least 207 responses were required for the statistical analysis. The field method was used to collect data, and the library method was used to compile the theoretical background. For statistical analysis and hypothesis testing, a questionnaire with 46 questions and five Likert scales was used, which was based on Soldatenko (2021) questionnaire, which was redesigned in the form of a sports organization for this research. The questionnaire used in this study consisted of six parts. The first part evaluated the descriptive characteristics and the other five examined the research variables. It was considered that the research questionnaire needed to be translated and localized for a large sports organization; it was approved by five professors in sports management after translation and localization. Then, by collecting 30 physical answer sheets from the employees of the studied organization, its validity and reliability were confirmed using Cronbach's alpha, composite reliability, and Average Variance Extracted (AVE). The results are shown in Table 1.

Table 1. Reliability and validity analysis

	Cronbach's Alpha	Composite Reliability (CR)	The average variance extracted (AVE)
DCs	0.934	0.943	0.513
DPCs	0.867	0.899	0.536
ACs	0.938	0.950	0.761
OP	0.909	0.927	0.624
MTTs	0.926	0.936	0.646

Note: DCs, Dynamic Capabilities (DCs); DPCs, Digital Platform Capabilities (DPCs); ACs, Ambidexterity Capabilities (ACs); OP, Organizational Performance (OP); MTTs, Market and Technological Turbulence (MTTs).

Table 1 shows that Cronbach's alpha and composite reliability were greater than 0.7 (Wasko & Faraj, 2005), and the Average Variance Extracted (AVE) coefficient was greater than 0.5 (Hair, Sarstedt, Pieper, & Ringle, 2012). The answers collected at this stage were removed from the research after verifying the validity and reliability.

By distributing the questionnaire link through SMS to the statistical population and collecting answer sheets using Google Forms, 219 answer sheets were obtained. After removing statistical samples with less than three years of work experience, 213 answer sheets were prepared for data analysis. Data were collected in May and June 2022. Finally, SPSS 26 software was used to analyze the descriptive data of the statistical population, and SmartPLS 4 software with the PLS-SEM technique was used to measure inferential data.

In the Materials and Methods section, all materials used and methods followed throughout the experiment should be reported. This section should be sufficiently clear and include a detailed procedure of how the experiment was performed, both methodologically and statistically, in such a way that another competent researcher can follow and duplicate the experiment. The Materials and Methods section of the paper should be very detailed, but concise

Results

The respondents' demographic characteristics are presented in Table 2.

Table 2. Demographic Information

Item	Characteristics	Frequency	Percentage
Gender	Male	149	70%
	Female	64	30%
Education level	High School	2	1%
	Associate Degree	36	17%
	Bachelor's degree	97	45%
	Master's degree	74	35%
	P.H. D	4	2%
Age	24-31	26	12%
	32-39	70	33%
	40-47	86	40%
	48-56	31	14%
Work section	Administrative Staff	111	48%
	Managers of sports facilities	213	51%
Experience	4-9	56	26%
	10-15	120	56%
	16-21	37	18%

According to the results in Table 2, most of the respondents were male, and most of the respondents had bachelor's and master's degrees. People aged 40 to 47 years comprised the largest share of respondents, and most respondents had between 10 and 15 years of work experience. In addition, the number of respondents who worked in the sports facilities management section was higher than the number of administrative staff.

Reliability and validity analysis

Table 3 presents the results of the validity and reliability evaluations of the research model

Table 3. The outer loadings of all items in the model had a value greater than 0.7 (Vinzi, Chin, Henseler, & Wang, 2010); therefore, all items were retained in the study for further analysis. Cronbach's alpha and Composite Reliability were used to confirm the reliability, and the minimum approved value was 0.7 (Wasko & Faraj, 2005). According to the results shown in

Table 3, all components had good reliability. The convergent validity of the research components was confirmed by (AVE) being more than 0.5, and their values are shown in

Table 3. In addition, the fit of the proposed research model by SRMR showed that it had a value less than 0.08, and for NFI greater than 0.25, the proposed research model was acceptable for PLS-SEM path models (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014).

Table 3. Measurement model Indicators

Construct	Items	Outer Loadings	Cronbach's Alpha	CR	AVE	Model Fit
SENS	SEN1	0.832	0.872	0.907	0.661	SRMS= 0.065; Chi-square= 754.109; NFI= 0.845
	SEN2	0.856				
	SEN3	0.829				
	SEN4	0.778				
	SEN5	0.767				
SEI	SEI1	0.844	0.904	0.927	0.680	
	SEI2	0.857				
	SEI3	0.861				
	SEI4	0.844				
	SEI5	0.848				
	SEI6	0.679				
TRA	TRA1	0.889	0.913	0.935	0.743	
	TRA2	0.881				
	TRA3	0.835				
	TRA4	0.865				
	TRA5	0.837				
DPCs	DPC1	0.856	0.934	0.946	0.686	
	DPC2	0.711				
	DPC3	0.862				
	DPC4	0.845				
	DPC5	0.857				
	DPC6	0.836				
	DPC7	0.821				
	DPC8	0.827				
Explore	Explore1	0.858	0.798	0.881	0.712	
	Explore2	0.859				
	Explore3	0.813				
Exploit	Exploit1	0.857	0.832	0.899	0.748	
	Exploit2	0.862				
	Exploit3	0.875				
TTs	TT1	0.876	0.865	0.908	0.712	
	TT2	0.818				
	TT3	0.806				
	TT4	0.874				
MTs	MT1	0.828	0.849	0.898	0.688	
	MT2	0.797				
	MT3	0.866				
	MT4	0.825				
OP	OP1	0.688	0.911	0.928	0.621	
	OP2	0.653				
	OP3	0.788				
	OP4	0.860				
	OP5	0.828				
	OP6	0.776				
	OP7	0.848				
	OP8	0.836				
DCs	-	-	0.945	0.951	0.552	
ACs	-	-	0.868	0.901	0.603	
MTTs	-	-	0.894	0.915	0.574	

Note: Exploration (Explore); Exploitation (Exploit), Sensing (SEN), Seizing (SEI), Transforming (TRA), Market Turbulence (MTs), Technological Turbulence (TTs)

Fornell-Larcker's criterion and the Heterotrait Monotrait (HTMT) ratio were used to evaluate the structure's discriminant validity, and the results are shown in

Table 4. Bold numbers on the diagonal in the correlation matrix (shown in italics) of Fornell-Larcker's criterion (

Table 4) indicate the square root of the AVE of the construct, which should be greater than the correlations between the respective constructs (Ali, Rasoolimanesh, Sarstedt, Ringle, & Ryu, 2018; Henseler, Ringle, & Sarstedt, 2015). At the top of

Table 4 is the HTMT ratio, which is critical in PLS-SEM and should show values less than 0.9 (Henseler et al., 2015). The discriminant validity of the structure was confirmed according to the values obtained for these two indicators, as shown in

Table 4.

Table 4. Fornell & Larcker & HTMT Criterion

	DPCs	MTs	SEI	OP	SEN	TTs	TRA	Exploit	Explore
DPCs									
MTs	0.671								
SEI	0.540	0.516							
OP	0.820	0.777	0.535						
SEN	0.657	0.614	0.733	0.682					
TTs	0.664	0.746	0.428	0.721	0.612				
TRA	0.639	0.491	0.786	0.564	0.796	0.476			
Exploit	0.807	0.678	0.625	0.794	0.675	0.689	0.698		
Explore	0.835	0.686	0.558	0.775	0.716	0.658	0.611	0.798	
DPCs	0.828								
MTs	-0.600	0.829							
SEI	0.502	-0.454	0.825						
OP	0.761	-0.688	0.493	0.788					
SEN	0.602	-0.526	0.657	0.610	0.813				
TTs	-0.601	0.640	-0.384	-0.649	-0.532	0.844			
TRA	0.594	-0.437	0.715	0.517	0.714	-0.429	0.862		
Exploit	0.713	-0.577	0.545	0.699	0.580	-0.592	0.610	0.865	
Explore	0.724	-0.569	0.481	0.661	0.604	-0.554	0.526	0.653	0.844

Note: HTMT is above

Higher-order reflective-formative construct

DCs, ACs, and MTTs are higher-order, formative constructs. DCs are based on three lower-order constructs sensing, seizing, and transforming (Teece et al., 1997); ACs are based on two lower-order constructs, exploitation and exploration (Lee, Sambamurthy, Lim, & Wei, 2015); and MTTs are based on market turbulences and technological turbulences. Table 5 presents the analysis of the data obtained for the formative constructs. In this section, the VIF coefficient is used to examine collinearity between the components of each structure. Its value was considered a maximum of 0.5, which was lower than the value for all components (Hair Jr et al., 2014). In addition, considering that the p-value coefficient of the seizing component was greater than 0.05 and the T-value was less than 1.96, this component was not significant in the structure. However, when the outer loading value was greater than 0.7, this component was not removed from the model.

Table 5. Higher Order construct Validity of DCs, ACs, and MTTs

	VIF	Outer Weights	T Statistics	P value	Outer Loading	
DCs	SEN	2.243	0.531	5.859	0.000	0.932

	SEI	2.245	0.154	1.515	0.065	0.797
	TRA	2.605	0.431	4.336	0.000	0.911
ACs	EXPLORE	1.755	0.479	6.547	0.000	0.884
	EXPLOIT	1.745	0.619	8.884	0.000	0.932
MTTs	MT	1.688	0.624	7.865	0.000	0.930
	TT	1.693	0.478	5.428	0.000	0.878

Note: Variance inflation factor (VIF)

Structural Model

The statistical significance of the path coefficients in the structural model was investigated using a bootstrapping approach with 10000 iterations. **Error! Reference source not found.** shows the visual appearance of the structural model.

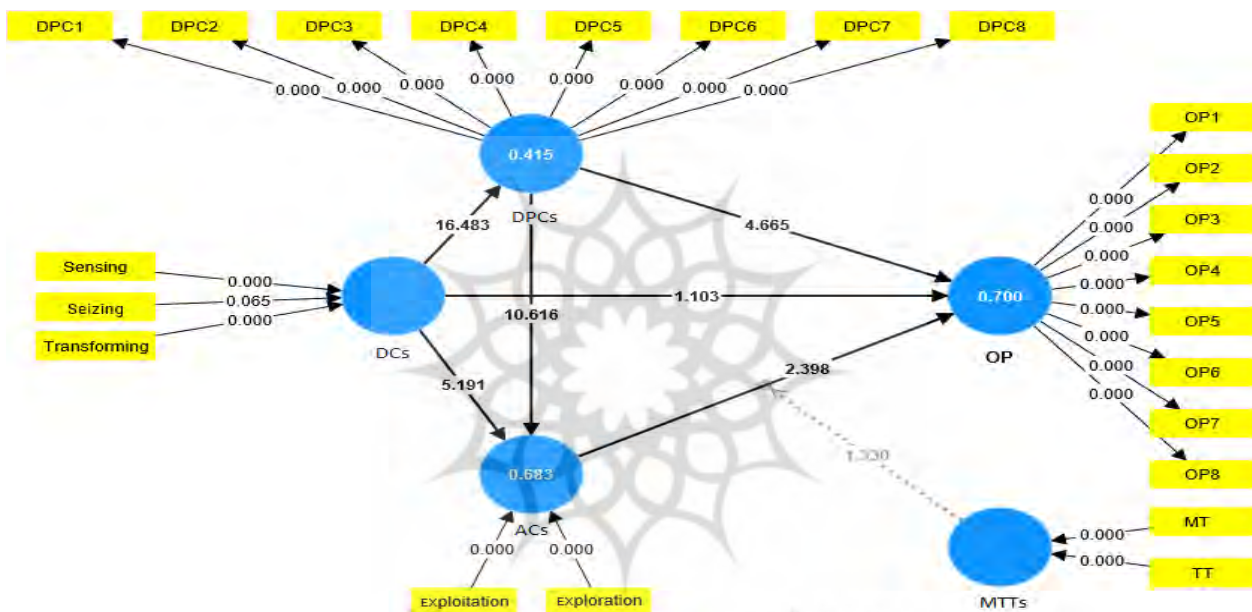


Figure 2. Results of the Structural Model

Model Explanatory power

Table 6 presents the results of the coefficient of determination (R2), effect size (F2), and predictive relevance (Q2) of the endogenous variables. The R-Squares values are 0.75, 0.50, and 0.25, which means that the model is powerful, moderate, and weak; Q2 values indicate that values of 0.02, 0.15, 0.35 represent small, medium, and powerful significant relevance for a specific endogenous latent variable; F2 values of 0.02, 0.15, and 0.35 indicate an exogenous construct's small, medium, or powerful significant effect, respectively, on an endogenous construct (Hair Jr et al., 2014).

Table 6. Explanatory power

Predictors	Outcomes	R-Square	F-Square	Q-Square
DCs	OP	0.700	0.006	0.565
DPCs			0.116	
ACs			0.029	
MTTs			0.183	
MTTs x ACs			0.008	
DCs	DPCs	0.415	0.709	0.402
DPCs	ACs	0.683	0.631	0.470
DCs			0.187	

The purpose of the hypothesis determined in this research is to examine the relationship between DCs and OP directly and indirectly with the help of DPCs and ACs, and examine the moderating effect of MTTs on the relationship between ACs and OP. Therefore, direct, and indirect connections, mediations, and moderating effects were assessed to test the hypotheses. The results of the direct, indirect, and mediation tests are presented in Table 7 and Table 8, and the results of the moderation effect test are discussed. According to Table 7, the p-value for the first research hypothesis was greater than 0.05, and the t-value was less than 1.96; this hypothesis was rejected, which means that there is no direct and significant relationship between DCs and OP. Hence, according to Table 7 and Table 8, the mediation of DPCs and ACs variables in the relationship between DCs and OP is a total indirect effect. In addition, there was a direct and significant relationship between DPCs and OP; as a result, ACs mediation was partial in this relationship.

Table 7. Direct and indirect relationships of DCs on OP

Hypothesis	Beta	SD	T statistics	P values	Decision
H1: DCs -> OP	0.067	0.056	1.191	0.117	Unsupported
H2a: DCs -> DPCs	0.644	0.039	16.483	0.000	Supported
H2b: DPCs -> OP	0.335	0.071	4.748	0.000	Supported
H3: DPCs -> ACs	0.585	0.055	10.616	0.000	Supported
H4a: DCs -> ACs	0.319	0.061	5.191	0.000	Supported
H4b: ACs -> OP	0.179	0.076	2.351	0.009	Supported

Note: Standard deviation (SD)

Table 8. Mediation analysis

Total effect (DCs-> OP)		Direct effect (DCs-> OP)		Indirect effects of DCs on OP						
Beta	P value	Beta	P value	Hypothesis	Beta	SD	T value	P value	BI	Decision
0.408	0.000	0.067	0.117	H2: DCs -> DPCs -> OP	0.216	0.048	4.477	0.000	0.141; 0.300	Supported
				H4: DCs -> ACs -> OP	0.057	0.027	2.133	0.016	0.017; 0.105	Supported
Total effect (DPCs-> OP)		Direct effect (DPCs-> OP)		Indirect effects of DPCs on OP						
Beta	P value	Beta	P value	Hypothesis	Beta	SD	T value	P value	BI	Decision
0.440	0.000	0.335	0.000	H3: DPCs -> ACs -> OP	0.105	0.046	2.264	0.012	0.032; 0.183	Supported

Note: Percentile bootstrap 95% confidence interval (BI)

Moderation analysis

H5: The relationship between ACs and OP is not weakened even in the presence of MTTs. In other words, MTTs are neutralized by ACs and do not moderate the relationship between ACs and OP.

This study assessed the moderating role of MTTs in the relationship between ACs and OP. Without the construct (MTTs) of the moderation effect (ACs*OP), the R-square value for OP was 0.646, and when including the moderating effect (ACs*OP), the R-square value for OP was 0.700. Consequently, including the moderating impact of MTTs on the relationship between ACs and OP, 5.4% positively impacted the dependent variable (OP). Further, after analyzing the significance of the moderating effect, the results showed a positive but insignificant moderating impact of MTTs on the relationship between ACs and OP (beta = 0.078, standard deviation = 0.059, T-value = 1.330, p-value = 0.092, F-

Square = 0.008), supporting H5. This implies that, by increasing the role of MTTs, the relationship between ACs and OP is not weakened.

The Results section is often referred to as the "core" of the scientific paper. The purpose of this section is to present the data and observations clearly. It describes the results obtained, but generally should not interpret the results, discuss their significance, or present conclusions. The Results section should be in paragraph form and concisely report the exact results of the experiment. Figures and tables are numbered separately.

Discussion and Conclusion

This study aimed to examine the direct and indirect relationship between DCs and the performance of the Tehran Municipal Sports Organization in turbulent environments. Therefore, in addition to evaluating the direct relationship between DCs and OP, this study attempted to strengthen the impact of DCs on performance through the mediators of DPCs and ACs. In addition, this research examined the relationship between DPCs and ACs. On the other hand, it discussed the effect of market and technological fluctuations on the relationship between ambidexterity and OP. Our results contribute to the literature on DCs and ACs, which rely on the technologies and environmental turbulence that large sports organizations may face. The literature on DCs shows that this variable is mainly dependent on the environment, and it is necessary to develop the literature in this field by studying different environments and industries. However, the literature on DCs, especially studies examining its mediators with large sports organizations' performance, seems minimal. Therefore, the results of this study provide researchers active in sports and other industries, as well as senior managers of sports organizations, with a more general view of the dynamics of organizations. Our results consisted of five hypotheses, except for the first and fifth hypotheses; the rest were confirmed.

First, the results of the data analysis showed no significant direct relationship between DCs and OP. Although this result was not surprising by reviewing the literature in this field, it helps to clarify the ambiguity of how, directly and indirectly, it can affect OP from DCs (Baía & Ferreira, 2019; Helfat & Peteraf, 2009). This result is in line with the statements of some researchers such as (Teece, 2017; Zhou et al., 2019). Some researchers have pointed out that this relationship is weakened in environments and industries with quieter dynamics (such as sports organizations) (Deng et al., 2020; Witschel et al., 2022). Although there is no direct relationship between DCs and OP, failure to pay attention to this component, in the long run, will cause the organization to face problems and even failure. Therefore, some researchers believe that when an organization has a strong dynamic structure, it is ready for changes and increasing competitive capabilities when necessary (Hazen, Bradley, Bell, In, & Byrd, 2017; Korhonen & Halén, 2017; Wetering, 2019). In this regard, Barreto (2010) believes that the relationship between DCs and performance should be strengthened and made meaningful through mediators. DCs are undoubtedly both capable and competitive. Developing capabilities and resources leads to organizational development, especially in turbulences (Barney & Zajac, 1994). In this regard, this research suggests that organizations can indirectly improve their performance through DCs. For example, Zhou et al. (2019) show that DCs enable organizations to use and benefit from opportunities through innovation. Additionally, sports organizations can achieve innovative leadership, organizational learning, market orientation, and the acquisition and mobilization of resources by developing DCs (Harris et al., 2021). In this regard, Teece (2018a) with a systemic approach in his research believes that the organization must pay attention to all elements related to DCs with OP and the interactions between them in order to achieve successful performance. Therefore, an organization with a dynamic structure can implement its goals and organizational plans through DCs (Allahyari, Mirzazadeh, Keshtidar, & Malekzadeh, 2022).

The second and third results showed that DPCs mediated the relationship between DCs and OP and drove ACs. In this regard, Helfat and Raubitschek (2018) and Teece (2017) believe that organizations can succeed in using mature and new technologies through dynamics and improving DPCs. Organizations attempt to improve their DCs by changing their structures, business models, processes, and services (Lukito et al., 2022; Okano, Santos, & Ursini, 2022). DPCs help them adapt to their environment and optimize their processes (Jovanovic et al., 2022; Parviainen et al., 2017). In addition, DPCs have increased the integration of knowledge and information, as well as improved

and increased the exploitation of the capabilities of internal and external resources (Helfat & Raubitschek, 2018; Teece, 2018b). Considering that DPCs are the foundation of technological innovations, Zhou et al. (2019) show that technology-based innovations mediate the relationship between DCs and OP. Therefore, confirming the mediation of DPCs and their stimulating role in ACs aligns with the literature in this field. Thus, by improving technological capabilities, organizations can enhance their exploration capabilities in addition to improving their exploitation capabilities. In addition, DPCs are a facilitating tool for achieving a deeper understanding of environmental changes, such as changes in customer expectations, by exchanging information between organizations and the environment. Thus, it helps the organization in optimization and financial and time savings. Finally, DPCs provide long-term organizational competitive advantages and adaptability by mediating between DCs and OP.

Fourth, the results showed that ACs improved the relationship between DCs and OP. However, Teece (2014) and O'Reilly III and Tushman (2013) prefer to examine ACs through the lens of DCs and consider ACs as part of DCs. However, in this research, authors agree with Jurksiene and Pundziene (2016), who consider ACs to balance radical and progressive innovations that lead to competitive advantage and stability through optimization of exploitation and exploration capabilities. In addition, researchers such as (Birkinshaw, Zimmermann, & Raisch, 2016; van Lieshout, van der Velden, Blomme, & Peters, 2021) also distinguish between DCs and ACs. van Lieshout et al. (2021) Believe that DCs create a feedback loop and that the organization can achieve an efficiency agility strategy through ACs and this feedback loop. Therefore, organizations, especially in turbulent environments, can achieve balanced changes and a feedback loop that stabilizes them by promoting ACs and DCs. Moreover, as mentioned in the previous sections, although organizations prefer to use mature technologies or show little interest in new technologies, improving DPCs can help organizations achieve balanced dynamism and innovation in exploration and exploitation activities.

Fifth, MTTs did not have a moderating effect on the relationship between ACs and OP. This hypothesis's results align with Van de Wetering and Dijkman (2021), who examined the opinions of IT managers and consultants in 19 different industries in the Netherlands. Van de Wetering and Dijkman (2021) Believe that the reason for the lack of effect of market and technology disturbances on the relationship between DCs and OP is that large organizations have more facilities and resources, such as expert human resources and technological resources. Therefore, the organization can predict and find appropriate solutions to neutralize the negative effects of turbulence. It is noteworthy that the sports organization of Tehran municipality, as mentioned earlier, is a hybrid organization. Therefore, such organizations can receive the information, experiences, experts, and facilities needed from the government and foreign organizations to face turbulences, which can be one of the reasons for the lack of effect of MTTs. O'Reilly III and Tushman (2013) believe that organizations with strong dynamism and ambidexterity can identify turbulence and reverse their negative effects through innovations. Therefore, not only can organizations make DCs effective through ACs, but they can also identify MTTs. Sports organizations should identify and respond appropriately to market fluctuations, such as changes in customer expectations, by improving their exploration capabilities. In addition, exploratory capabilities, primarily based on technologies, enable organizations to collect big data about the market, competitors, and other organizations besides customer information. In addition, productivity capabilities can make organizations more resilient to turbulence by creating more agility and efficiency.

In summary, the literature review in this field showed that the statistical findings of this study were consistent with the existing literature. Although there was no direct relationship between DCs and OP, DCs were indirectly related to OP through ACs and DPCs. By enhancing these mediators, organizations can achieve more integrated information, innovation, and better efficiency in business models, processes, and services. The results showed that strong ACs can increase resilience to MMTs. In addition, having appropriate DPCs or upgrading them, in addition to improving exploitative capabilities, strengthened the organization's exploratory capabilities.

Limitations and future research

This study also has some limitations that future research could focus on. First, this case study was conducted in a large organization that obviously has sufficient resources and capabilities. Considering

that such organizations can be more resilient against turbulences with the help of their facilities, more organizations with different capacities can provide a deeper understanding of this area. Second, to investigate OP, this research examined the variables of profitability and customer participation from the perspective of the administrative staff and managers of sports clubs. However, there are more variables to measure the performance of a sports organization that must be evaluated. Therefore, evaluating more variables, such as service quality or customer satisfaction, and using other employees, such as sports coaches, is suggested. Third, this study examined only the mediators of ACs and DPCs in the relationship between DCs and OP. Meanwhile, the first theory was rejected because of the lack of a direct connection between DCs and OP. This demonstrates the importance of mediators in this relationship. Therefore, more mediators should be investigated to influence DCs on performance.

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