

Regulative institutions, dynamic managerial capabilities, and strategic entrepreneurial performance

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Abstract

Purpose – This study examines firms' strategic entrepreneurial behaviors based on the interaction of regulatory institutions and entrepreneurs' cognition, human capital, and social capital capabilities.

Design/methodology/approach – Data was collected from 450 exporting companies in Türkiye, which is a developing economy. Smart PLS 4.0 and SPSS 24.0 software were used to analyze the data. The data were examined using structural equation modeling, confirmatory factor analysis, average extracted variance, composite reliability, and Cronbach's alpha analyses.

Findings – The findings show that entrepreneurial cognition, social capital, and regulatory institutions influence each other, this relationship is not confirmed in managerial human capital. Moreover, while managerial cognition affects strategic entrepreneurship behavior, this effect was not supported for managerial human capital and managerial social capital. However, it was determined that only entrepreneurial cognition mediates the relationship between regulatory institutions and strategic entrepreneurial behavior.

Originality/value – This research enables entrepreneurs to understand, navigate, and appreciate the significance of the interactions between regulatory institutions and dynamic managerial capabilities in decision-making. Additionally, the study allows policymakers to develop evidence-based policy designs that equip entrepreneurs with the insights needed to succeed in a competitive and regulatory complex environment.

Keywords Regulative institutions, Dynamic managerial capabilities, Strategic entrepreneurship, Entrepreneurial behavior

Paper type Research paper

1. Introduction

Strategic entrepreneurial behavior involves entrepreneurs taking business-related risks, innovating for competitive advantage, aggressively competing with other firms, and exhibiting entrepreneurial behaviors both within and outside the firm (Shirokova *et al.*, 2024; Gölgeci *et al.*, 2017). Firms' strategic entrepreneurial behaviors facilitate a country's economic growth and enhance social welfare. Studies have identified firms' entrepreneurial behaviors as a significant driving force in countries' economic growth (Urbano *et al.*, 2019). Therefore, identifying factors that facilitate and hinder firms' entrepreneurial behaviors is crucial for formulating management practices and policies that encourage entrepreneurship.

Existing research has conceptually explored the effects of institutions (macro) and dynamic capabilities (organizational level-macro) on firms' strategic entrepreneurial activities (Ahlstrom *et al.*, 2020), examining them separately. Furthermore, scholars have adopted a static approach when studying the impact of institutions on entrepreneurship and vice versa, testing only



unidirectional relationships (Bruton *et al.*, 2018; Boudreaux *et al.*, 2023). However, no study has investigated the interplay between institutions and dynamic managerial capabilities and their impact on strategic entrepreneurial behavior, and there is a call for research in this area (Heubeck, 2023). Failing to investigate these relationships will likely lead to several negative consequences. These may include policymakers designing ineffective policies, firms missing out on innovation opportunities, strategic misalignments in response to external developments, reduced resilience, and jeopardized sustainability.

Considering this gap, this research examines the strategic entrepreneurial behaviors of firms in Türkiye, an emerging economy, considering the interaction between regulatory institutions and dynamic managerial capabilities. Regulatory institutions are defined as legal arrangements that shape the behavior of entrepreneurs in markets (Peng *et al.*, 2009). Dynamic managerial capabilities are the capabilities of entrepreneurs to create, integrate, and renew organizational resources and competencies (Teecce, 2007, 2012). In this context, we argue that regulatory institutions (macro) and dynamic managerial capabilities (micro) shape firms' strategic entrepreneurial behavior (meso) at multiple analysis levels.

Quantitative research methods were used in this context, and surveys were collected from 450 firms. The data were tested with a structural equation model through Smart PLS 4 analysis. Findings indicate that managerial cognition, social capital, and regulatory institutions influence each other, but this relationship is not confirmed for managerial human capital. Furthermore, while managerial cognition affects strategic entrepreneurial behavior, this effect was not supported for managerial human capital and managerial social capital. However, it has been found that the relationship between regulatory institutions and strategic entrepreneurial behavior is mediated only by managerial cognition.

This study offers three distinct contributions. *Firstly*, we integrate sociologically-based institutional theory with the approach of dynamic managerial capabilities, considered the micro-foundations of strategic management. In doing so, we expand entrepreneurship theory in an interdisciplinary manner by leveraging the complementarity of two different theoretical frameworks to examine firms' strategic entrepreneurial behaviors. *Secondly*, by providing a dynamic analysis of the interactions between regulatory institutions and dynamic managerial capabilities in the context of emerging economies, we offer insights that can guide policymakers and entrepreneurs regarding firms' strategic entrepreneurial behaviors. These findings could direct governments in developing countries to create policies through regulatory institutions that can enhance and encourage firms' strategic entrepreneurial behaviors. On the other hand, it could assist entrepreneurs in developing strategies and behaviors through dynamic managerial capabilities to influence regulatory institutions. In this context, we contribute evidence from the Turkish context to the calls for the examination of strategic entrepreneurial behaviors in emerging economies (Li *et al.*, 2021). *Finally*, we respond to calls for multi-level analysis in research by addressing the limitations of single-level explanations related to firms' strategic entrepreneurial behaviors (Bjørnskov and Foss, 2016). In doing so, we contribute to creating a research agenda that considers structure and actors in understanding strategic entrepreneurial behavior.

The next section of the research, literature, and hypotheses regarding the effects between regulatory institutions and dynamic managerial capabilities and their effects on strategic entrepreneurial behavior are presented. The third section introduces the study's methodology. The fourth section presents the analyses of the research. Finally, the study concludes with a discussion and conclusion section, offering theoretical and managerial implications, research limitations, and suggestions for future studies.

2. Literature review and hypothesis development

When considered separately, institutional theory and the approach of dynamic managerial capabilities provide valuable insights into firm behavior and performance through their

effects on entrepreneurial decisions (Peng *et al.*, 2009). However, the multilevel nature of strategic phenomena (macro, meso, and micro analysis levels) limits the explanatory power of these theoretical frameworks when used individually. For example, while institutional theory highlights structural factors in explaining the impact of institutions on the behaviors of firms and entrepreneurs about social behaviors, it almost neglects the role of the actor (DiMaggio and Powell, 1983). Conversely, the dynamic managerial capabilities approach focuses on the capabilities of entrepreneurs, primarily overlooking the effects of the institutional context (Teece, 2007; Helfat and Peteraf, 2015). Using only one of these theoretical frameworks in research can lead to missing links in explaining firms' strategic entrepreneurial behaviors. Therefore, this study argues that a better explanation of firms' strategic entrepreneurial behaviors can be achieved by integrating these approaches and including both structure and actor.

2.1 Regulatory institutions and strategic entrepreneurial behavior

Regulative institutions consist of formal and written rules such as laws, regulations, and government policies (Kara *et al.*, 2024; De Clercq *et al.*, 2010; Scott, 1995). Different issues regarding the effects of regulatory institutions on entrepreneurial behavior have been touched upon in the literature. Firstly, studies have shown that sectors' low start-up costs and low corporate taxes encourage initiating innovative ventures (Darnihamedani *et al.*, 2018). Secondly, reducing bureaucratic barriers and time in the business formation, decreasing the required permits or licenses, and setting low minimum capital thresholds increase the number, quality, and efficiency of entrepreneurial activities (Van Stel *et al.*, 2007). Thirdly, it has been identified that the quality, or the weakness and insufficiency, of a country's regulative institutions affect entrepreneurship and economic growth (Guerrero *et al.*, 2021). Based on these studies, we assert that regulative institutions positively influence firms' strategic entrepreneurial behaviors and propose the following hypothesis.

H1. Regulatory institutions positively affect the strategic entrepreneurial behavior of firms.

2.2 Regulatory institutions and dynamic managerial capabilities

Previous research has primarily focused on the effects of institutions on entrepreneurs or the unidirectional, static effects of both variables. However, studies have often neglected the effects between institutions and entrepreneurs, particularly the influence of entrepreneurs on institutions (Sun *et al.*, 2020). In this context, we argue that entrepreneurs' dynamic managerial capabilities can influence regulatory institutions and develop a research agenda focused on the micro-foundations of strategic management (Bağış *et al.*, 2022; Felin *et al.*, 2015). In this framework, it is plausible that entrepreneurs proactively engage with the institutional context, shape it, and utilize their resources and capabilities to modify existing institutions with their advocated alternatives (Su, 2021). Therefore, entrepreneurs are seen not as passive recipients of institutions but as actors who shape them, often referred to as institutional entrepreneur. Institutional entrepreneurs are individuals and organizations that create, maintain, and change institutions (Li *et al.*, 2006; Lawrence and Suddaby, 2006).

Research shows that institutions influence entrepreneurs cognitive capabilities (Shang *et al.*, 2010). Institutions provide a toolkit for entrepreneurs and significantly and often unconsciously influence entrepreneurs' cognition and actions. There are differences in managerial cognition and judgments related to internationalization among entrepreneurs in countries with different institutional regimes (Ding *et al.*, 2014). This indicates that the heterogeneity of the institutional context can influence entrepreneurs managerial cognition regarding internationalization. A study in developing economies found that the regulatory

dimension of the institutional environment is internalized in top management's cognitive understanding, thereby influencing firms' strategic decisions regarding entry into international markets (Meyer *et al.*, 2008). Another study revealed that entrepreneurs and firms encounter constraints stemming from regulative institutions and make cognitively limited rational decisions (Peng *et al.*, 2009). These studies demonstrate that regulative institutions significantly impact entrepreneurs' internationalization-related managerial cognition.

In developing economies, mainly where regulative institutions are weak and have high uncertainty, entrepreneurs, likely cognitively perceive opportunities and threats and engage in strategic actions that influence the institutional context (Battilana *et al.*, 2009). Typically, in environments with institutional pressures, entrepreneurs deal with such environments using strategies like acceptance, compliance, avoidance, challenge, and manipulation (Oliver, 1991). Similarly, entrepreneurs in developing economies also influence the institutional context with strategic responses such as compliance, change, and avoidance (Ewert and Henrekson, 2021). Research confirms that managerial cognition affects entrepreneurs' perceptions of the institutional environment, leads to the development of proactive strategies, and shapes firms' innovation capabilities (Guenduez and Mergel, 2022). Drawing on these discussions, we develop the following hypotheses.

H2a. Regulative institutions positively influence the managerial cognition of entrepreneurs related to internationalization.

H2b. The managerial cognition of entrepreneurs related to internationalization positively influences regulative institutions.

Property rights, laws, rules, regulations, and contracts, which are regulative institutions (Lee and Lin, 2022), can influence a country's human capital. Research shows that maintaining institutional quality facilitates the accumulation of physical and human capital and plays a significant role in explaining economic growth (Dias and Tebaldi, 2012). A study in developed countries found that institutions affect IT professionals' education, experience, and skill capital (Mithas and Krishnan, 2008). Research in transition economies has also revealed findings that the growth of small firms, human capital, institutional quality, and managerial capabilities are influenced by the institutional context (Krasniqi and Mustafa, 2016). Based on these discussions, we acknowledge that regulative institutions will influence the managerial human capital of entrepreneurs.

Entrepreneurs with the power to influence regulative institutions distinguish themselves from other change actors through their competencies in developing a vision for change and mobilizing support for this vision (Battilana *et al.*, 2009). These entrepreneurs are expected to possess more significant political and social skills than traditional entrepreneurs. They can engage with politicians, bureaucrats, and the public and analyze and collaborate. Moreover, they have exceptional business acumen, advanced political instincts, and skills for managing the risks encountered while directing the power that can influence regulative institutions (Li *et al.*, 2006). Research has shown that institutional entrepreneurs desiring to affect change in regulative institutional domains must manage fundamental tensions (McKague, 2011). Based on these discussions, we propose the following hypotheses.

H3a. Regulative institutions positively influence the managerial human capital of entrepreneurs.

H3b. The managerial human capital of entrepreneurs positively influences regulative institutions.

Developing economies are characterized by weak and insufficient institutions supporting the market and by deficiencies in their implementation (Li *et al.*, 2021). Furthermore, such

markets exhibit distinct characteristics regarding variables like social norms, cultural traits, and cognitive institutions. Under these institutional conditions, entrepreneurs will likely rely on their social capital (Batjargal *et al.*, 2013). Indeed, some studies suggest that the relative importance of strong and weak ties in entrepreneurs' social networks is influenced by the country's regulative institutional development (Kiss and Danis, 2008). In this context, entrepreneurs in countries with lower institutional development levels will likely have substantial social capital. Based on these discussions, we propose the following hypotheses.

In developing economies, entrepreneurs attempt to influence regulative institutions and achieve their objectives through social networks established with industry associations, political parties, trade organizations, other federations, and government officials (Su, 2021). The social capital arising from these network relationships positively affects firm performance (Acquaah, 2007). Entrepreneurs influence regulative institutions through their social capital by initiating industry standards, supporting the market economy, accessing information, utilizing resources, and developing property rights (Oliver and Montgomery, 2008). In an institutional context where institutions are not sufficiently developed, entrepreneurs take on a catalytic role to benefit from these regimes' inadequacies and become actors capable of bridging various stakeholders. Various studies emphasize the importance of social networks on regulative institutions, supporting the claim that social networks are more critical for new business activities in developing economies than in developed economies (Lu *et al.*, 2010; Danis *et al.*, 2011). Based on these discussions, we propose the following hypotheses.

H4a. Regulative institutions positively influence the managerial social capital of entrepreneurs.

H4b. The managerial social capital of entrepreneurs positively influences regulative institutions.

2.3 Dynamic managerial capabilities and strategic entrepreneurial behavior

Dynamic managerial capabilities have developed as two separate lines of research in the strategic management literature (see Adner and Helfat, 2003; Teece, 2007; Helfat and Peteraf, 2015). The first group of studies classifies these capabilities into managerial human capital, social capital, and cognition (Adner and Helfat, 2003). This classification emphasizes individual capabilities. The second group of studies categorizes them as sensing, seizing, and reconfiguring (Helfat and Peteraf, 2015). The primary concern of this classification is enterprise-level capabilities. Therefore, to avoid possible confusion, this research examines managerial cognition, human capital, and social capital (Mostafiz *et al.*, 2019b, 2021).

Managerial cognition pertains to managerial beliefs and mental models that form the basis of decision-making (Kor and Mesko, 2013; Heubeck, 2023; Karaca and Bağış, 2024). Managerial cognition helps entrepreneurs scan the environment and shape firm resources and capabilities according to their perception of environmental opportunities and threats. Many factors, such as attention, perception, thinking, and problem-solving are within the scope of cognition (Helfat and Peteraf, 2015). Studies linking individual cognition to the field of entrepreneurship emphasize three main themes. First is the relationship between entrepreneurship and the differences in entrepreneurs' cognitive resources, skills, capabilities, schemas, and maps. Second is the relationship and interaction between entrepreneurs' cognitive structures and processes and the environment. Lastly, the emphasis is on conducting cognition-entrepreneurship research at multiple levels of analysis (Sun *et al.*, 2020). Based on these discussions, it can be concluded that entrepreneurs' managerial cognition related to internationalization may be linked to strategic entrepreneurship. Indeed, some studies have highlighted the potential benefit of dynamic managerial capabilities,

especially managerial cognition, in entrepreneurship-related research (George *et al.*, 2022; Cristofaro and Lovallo, 2022). Research on managerial cognition shows entrepreneurs interpret uncertain and complex signals within the firm and in international markets through individual cognitive frameworks (Karhu and Ritala, 2020). Based on these discussions, we propose the following hypotheses.

H5. Entrepreneurs' managerial cognition positively influences the strategic entrepreneurial behaviors of firms.

Managerial human capital consists of the skills, knowledge, abilities, and experiences acquired through education and training by entrepreneurs (Kor and Mesko, 2013). Managerial human capital can be assessed in the context of entrepreneurship, management, and sectoral experience (Amaral *et al.*, 2011). Studies have shown that entrepreneurs with prior firm founding experience are likelier to start a second firm (Ucbasaran *et al.*, 2003). Research on new technology-based firms also found that founders' previous management roles and experience in the same sector positively influence the firm's entrepreneurial behaviors (Colombo and Grilli, 2005). In addition to experience, a manager's expertise, education, knowledge, reputation, and skills are prominent entrepreneurial characteristics and fall within the scope of managerial human capital (Felício *et al.*, 2012). Individuals with entrepreneurship-specific human capital are more prepared to identify and pursue opportunities; thus, this capital positively influences re-engagement in and the sustenance of entrepreneurship (Amaral *et al.*, 2011). In this context, it is logical to assume that managerial human capital will influence firms' strategic entrepreneurial behaviors.

H6. Entrepreneurs' managerial human capital positively influences the strategic entrepreneurial behaviors of firms.

Managerial social capital comprises social networks in a business ecosystem that facilitate sharing of tangible and intangible resources, trust, and values (Adner and Helfat, 2003). Social capital reveals the importance of creating social networks, including political-social, analytical, and collaboration skills with politicians and bureaucrats. Managerial social capital is essential for the strategic entrepreneurial behavior of firms, and the level of institutional development affects this relationship (Jansson *et al.*, 2007; Kiss and Danis, 2008). Indeed, some studies have identified social networks, the institutional environment, and firm resources as the three main factors influencing entrepreneurial behaviors in firms in the automotive sector (Cai *et al.*, 2018). In German-speaking countries, a study determined that high levels of managerial social capital are adequate in more consciously assessing entrepreneurial behaviors in business model innovations (Heubeck and Meckl, 2022). Based on these discussions, we hypothesize that managerial social capital will influence the strategic entrepreneurial behaviors of firms.

H7. Entrepreneurs' managerial social capital positively influences the strategic entrepreneurial behaviors of firms.

2.4 The mediating effect of dynamic managerial capabilities in the relationship between regulative institutions and strategic entrepreneurship

The absence of an actor in the relationship between regulative institutions and firms' strategic entrepreneurial behaviors leaves the explanation of this relationship incomplete. Considering the entrepreneurship of firms, it is conceivable that entrepreneurs' dynamic managerial capabilities could mediate this relationship. Entrepreneurs can respond strategically to opportunities and threats, especially in the face of institutional changes, transformations, and processes (Oliver, 1991). The dynamic managerial capabilities of entrepreneurs play a significant role in formulating these responses. Therefore, dynamic

managerial capabilities lead to the transfer of institutional effects to strategic entrepreneurial behavior. To the authors' knowledge, the mediating role of dynamic managerial capabilities in the relationship between regulative institutions and strategic entrepreneurship has not been explored in the literature. Some studies have investigated the mediating role of dynamic capabilities in the relationship between entrepreneurs structural, relational, and cognitive social capital and firms' entrepreneurial orientations (Rodrigo-Alarcón *et al.*, 2018). However, these studies have been limited to the mediation relationship of organizational-level (macro) dynamic capabilities and have not examined the capabilities of entrepreneurs as actors.

While no study in the literature explicitly demonstrates dynamic managerial capabilities mediating between institutions and strategic entrepreneurial behavior, the mediating role of these capabilities in relationships between different variables has been investigated. For instance, a study examining firms' response strategies to disruptive innovations found that managerial social capital and cognition partially mediated the unlearning of learning. However, managerial human capital had no effect (Madi-Odeh and Obeidat, 2023). Some studies have concluded that dynamic managerial capabilities mediate the relationship between firms' dominant logic (knowledge filter, learning, and routines) and innovation performance (Khan *et al.*, 2021). Similarly, another study reported that managerial human capital, social capital, and managerial cognition mediate the relationship between a firm's dominant logic (i.e. proactiveness and routines) and firm performance (Khan *et al.*, 2020).

Various studies have proposed that dynamic managerial capabilities mediate the relationship between managerial human capital and strategic change (Eggers and Kaplan, 2013). According to the results of a study examining the relationships between the managerial human capital of boards and strategic change, sensing and seizing capabilities mediate this relationship. However, no effect was observed for reconfiguration capabilities (Åberg and Torchia, 2020). In a separate study focusing on IT entrepreneurs, the results showed that managerial capabilities fully mediated the effect of IT governance on corporate alignment and indirectly mediated the effect of business governance on IT governance through its direct effect (Heart *et al.*, 2010). Based on these discussions, we argue that managerial cognition, human capital, and social capital mediate the relationship between regulative institutions and the strategic entrepreneurial behaviors of firms and propose the following hypotheses. The model developed considering all hypotheses is presented in Figure 1.

- H8a.* Entrepreneurs' managerial cognition mediates the relationship between regulative institutions and the strategic entrepreneurial behavior of firms.
- H8b.* Entrepreneurs' managerial human capital mediates the relationship between regulative institutions and the strategic entrepreneurial behavior of firms.
- H8c.* Entrepreneurs' managerial social capital mediates the relationship between regulative institutions and the strategic entrepreneurial behavior of firms.

3. Research method

In this study, causal relationships between various variables were investigated. Hence, a quantitative research method was utilized based on an explanatory research model (Allwood, 2012). Quantitative research is structurally suited for establishing cause-and-effect relationships, testing hypotheses, and determining opinions, attitudes, perceptions, intentions, behaviors, etc., across a broad sample. This method was fundamentally chosen for this research design as it typically generates factual, reliable outcome data that can be generalized to larger populations (Steckler *et al.*, 1992).

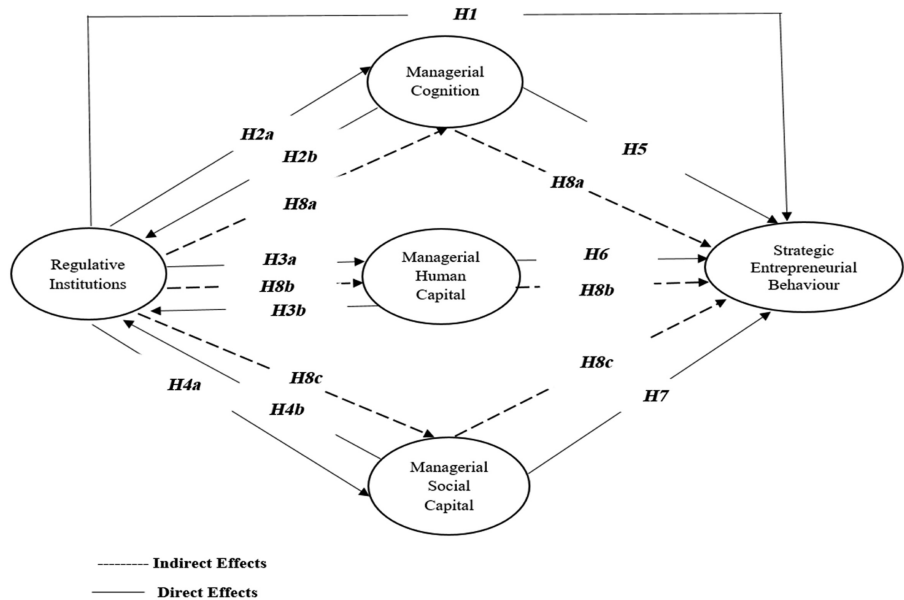


Figure 1.
Research model

Source(s): Authors' own

3.1 Research context

There are two reasons for selecting the research context. Firstly, firms in Türkiye have been vigorously trying to establish their presence in international markets, mainly due to their export-oriented entrepreneurial activities in recent years. This dynamic propels firms to seek new investment opportunities in national markets and encourages entrepreneurial behaviors to find new markets globally (Ilhan-Nas *et al.*, 2018; Demirbag *et al.*, 2007; Ciftci *et al.*, 2019). Secondly, Türkiye signed the Paris Climate Agreement on April 22, 2016, and ratified it on October 7, 2021. This commitment, aligned with the net-zero emission target by 2053, has driven sectors and firms toward more entrepreneurial activities and transformations in environmental sustainability (Tatoglu *et al.*, 2019). In this respect, firms face stakeholder pressures, which causes them to increase their entrepreneurial activities regarding compliance with corporate environmental policies (Tatoglu *et al.*, 2015).

3.2 Measures

This research was conducted using quantitative research methods. The study investigates institutions and dynamic managerial capabilities as determinants of firms' strategic entrepreneurial behaviors. In this regard, the research adopts an explanatory design focusing on cause-and-effect relationships. Additionally, the study has a cross-sectional and correlational structure.

This research used a survey comprising characteristics pertaining to firms and three different scales as the data collection tool. The variables of institutions, dynamic managerial capabilities, and strategic entrepreneurial behaviors included in the study are measured using a 5-point Likert scale. The scales used in the research were adapted into Turkish by the researchers. Using the translation-back translation method, they were first translated into the target language, Turkish, by academics proficient in both the source and target languages.

Subsequently, these translations were reviewed by experts in the field (Bouguerra *et al.*, 2023). Considering experts' opinions in the business field, the items were translated back into the source language, English. The items translated into English were then compared with their originals, and their representation was found to be similar.

In the survey, we initially employed six questions to identify the characteristics of firms. These questions cover the number of employees, how many markets (countries) they export to, the duration of their operation, whether they are a family-owned business, the sector in which they operate, and their average export revenue (EURO) for 2022.

Institutions: In order to measure regulatory institutions, Busenitz *et al.* (2000) used a scale that has been tested for validity and reliability in developed economies and Manolova *et al.* (2008) in developing economies. The scale is graded according to a 5-point Likert scale. The regulatory dimension consists of five items. The Cronbach's alpha value of the scale was found to be 0.760 in the study in question (Busenitz *et al.*, 2000). While examining the effects of regulatory institutions on dynamic managerial capabilities, regulatory institutions are used as an independent variable. When examining the impact of dynamic managerial capabilities on regulatory agencies, regulatory agencies are taken as the dependent variable.

Dynamic managerial capabilities: In this study, dynamic managerial capabilities were measured utilizing the work of Mostafiz *et al.* (2019a). A 5-point Likert scale was employed to measure dynamic managerial capabilities. This scale consists of three sub-dimensions: managerial human capital with four items, managerial social capital comprising 13 items, and managerial cognition encompassing seven items. The Cronbach's alpha values for the sub-dimensions of managerial human capital, managerial social capital, and managerial cognition that constitute the original scale of Dynamic Managerial Capabilities are 0.826, 0.922, and 0.869, respectively. Strategic entrepreneurial behavior scale was examined as the dependent variable.

Strategic entrepreneurial behavior: In this study, strategic entrepreneurial behaviors of firms were measured by adapting the scale of Covin and Slevin (1989). The scale is graded according to a 5-point Likert scale. The scale consists of 8 items. The Cronbach's alpha value emerged as 0.870. The items of the scales used in the study are presented in Appendix.

Before proceeding to the final study, expert opinions were sought to assess the face validity of the scale (Edward *et al.*, 2010). In this context, consultations were held with four academicians and three specialists. Subsequently, a pilot study was conducted with firms entrepreneurs as a pre-test to ensure the clarity of the items. Based on the feedback from the pilot study, some modifications were made to improve the clarity of the questions. After these modifications, measurements for institutions, dynamic managerial capabilities, and strategic entrepreneurial behavior variables were conducted.

3.3 Sample and data collection

This study utilized the survey technique as a data collection tool. Considering the research objectives, the survey was administered to 450 firms that voluntarily agreed to answer the questions. Initially, a sample size with a 95% confidence interval was adopted in the study. According to the table of acceptable minimum sample sizes for different universes calculated by Barlett *et al.* (2001), a universe of 250,000 individuals can be represented by a group of 384 individuals at a 95% confidence interval. Therefore, the study reached 450 firms, which seems to be sufficient for the research sample. Only exporting firms were included in the study sample to examine the managerial cognition of entrepreneurs about internationalization.

Moreover, Kline (1998) has argued that the ratio of the number of participants to model parameters should be at least 5:1 to obtain consistent results. In this study, the scales in the research model contain 45 items, and considering the 5:1 ratio, it is seen that the number of

450 participants is sufficient to ensure the consistency of the results. This study employed a random sampling methodology (Mackey and Gass, 2012). The sample consisted of firms that fall under the firms category, engage in international entrepreneurship activities, and conduct exports, regardless of their operating region or city.

Entrepreneurs were provided with information regarding the study. Data was collected in 2023 through face-to-face survey methods. Between February 2nd and June 10th, firms were visited daily, and interviews were conducted with entrepreneurs willing to participate in the study. Due to the busy working conditions of the entrepreneurs, the data collection process took approximately four months. After reviewing the 471 collected surveys, 21 surveys with missing or erroneous data were discarded, leaving 450 surveys for analysis. Responses from participants who met the criteria of “providing correct answers to control questions,” “not having all identical responses in Likert items,” and “having answered all questions in the survey” were considered for evaluation. In this context, the response rate from the requested surveys emerged as 95.5%.

3.4 Sample characteristics

The characteristics of the 450 firms that constitute the sample of the study are presented in Table 1. In the research context, 56% of the firms from which data was collected are family-owned businesses, while 44% are non-family firms. Those operating in the manufacturing sector account for 58%, and those in the service sector represent 42%. Firms with a workforce ranging from 1 to 50 make up 54.9%, those between 51 and 100 constitute 21.3%, and those with 101 and more employees represent 23.6%. Most firms export to 1–5 countries (69.1%),

Variables	Categories	Number	Percentage
Number of employees	1–50	247	54.9%
	51–100	96	21.3%
	101–150	43	9.6%
	151–200	28	6.2%
	201–500	26	5.8%
	501–1,000	7	1.6%
	1,001+	3	0.7%
Number of markets (countries) exported	1–5	311	69.1%
	4–7	65	14.4%
	7–10	34	7.6%
	11–15	14	3.1%
	15 and up	26	5.8%
Firm age (years)	1–5	39	8.7%
	6–10	35	7.8%
	11–15	57	12.7%
	16–20	86	19.1%
	20 and up	233	51.8%
Family business	Yes	252	56.0%
	No	198	44.0%
Sector	Manufacturing	261	58.0%
	Service	189	42.0%
Average export revenue (€)	0–50,000€	365	81.1%
	50,001–250,000€	62	13.8%
	250,001–500,000€	17	3.8%
	500,001–1,000,000€	2	0.4%
	1,000,000€ and up	4	0.9%

Table 1.
Characteristics of
respondents and
responding SMEs

Source(s): Created by authors

those exporting to 4–7 countries comprise 14.4%, and those exporting to 7–10 countries account for 7.6%.

Firms that export to 11 or more countries account for 8.9% of the sample. While 51.8% of the firms have been in operation for 20 years or more, those active for 16–20 years constitute 19.1%, and those active for 11–15 years make up 12.7%. The number of firms operating for 1–5 years (8.7%) and 6–10 years (7.8%) is considerably lower. The fact that 51.8% of firms have operated for over 20 years aligns with the notion that strategic entrepreneurial behaviors are long-term. Most firms (81.1%) have export revenues ranging from 0 to 50,000 €, while 13.8% have export revenues between 50,001 and 250,000€. firms with export revenues between 250,001 and 500,000 € represent 3.8%, those with 500,001–1,000,000 € account for 0.4%, and those with export revenues of 1,000,000 € and above constitute 0.9%.

4. Analysis and results

In data analysis, Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) were used, along with the Average Extracted Variance (AVE), Composite Reliability (CR), and Cronbach's Alpha (α). SmartPLS 4.0 was employed for the SEM analysis, while SPSS 24.0 software was used to analyze the variables constituting the characteristics of the businesses.

4.1 Validity and reliability analyzes of scales

In the research, the construct validity of the scales was analyzed. In the construct validity analysis, it was found that the factor loadings of items MC2, MC3, MC7 (managerial cognition) and MSC3, MSC4, MSC10, MSC11, MSC12, MSC13 (managerial social capital) were below 0.50. These items were removed from the variables in the model, and the analyses were repeated. The analysis results can be seen in [Table 2](#), and all items' factor loadings are above 0.50 ([Hair et al., 2010](#), p. 710). In this context, it is possible to state that the scales are consistent with their originals regarding construct validity.

One of the validity tests used in this study is convergent validity. Convergent validity has been assessed through the average variance extracted (AVE) ([Farrell, 2010](#)). The AVE values of all constructs in [Table 2](#) are above the recommended value of 0.50 ([Fornell and Larcker, 1981](#), p. 46). Additionally, all factor loadings are above 0.50 ([Hair et al., 2010](#), p. 710). According to [Hair et al. \(2017, p. 26\)](#), factor loadings should be higher than 0.70 in PLS-SEM. With CR and $\alpha \geq 0.70$ ([Hair et al., 2010](#), p. 777) and $AVE \geq 0.50$ ([Chin, 1998](#)), variables with factor loadings in the range of 0.40–0.70 do not need to be removed from the measurement model if their AVE and CR values reach the threshold (See [Table 2](#)). From this, it can be seen that convergent validity has been achieved.

The analysis results in [Table 3](#) indicate that for each construct in the model, the AVE values range from 0.517 to 0.687, and the CR values vary between 0.752 and 0.975. Thus, these values are above the recommended thresholds ([Hair et al., 2010](#), p. 710). The analysis results support the reliability and construct validity of the research model. To evaluate the internal consistency of the latent variables constituting the constructs, Cronbach's alpha (α) and composite reliability (CR) were used ([Hair et al., 2010](#), p. 777). The values in [Table 3](#), above 0.70, support the reliability of the scales as derived from the results. Additionally, the model's SRMR (Standardized Root Mean Square Residual) value was found to be 0.079, the Chi-square value was 1721.882, and the NFI (Normed Fit Index) value was 0.705.

Discriminant validity is one of the validity tests used in this study. To establish discriminant validity, the square root of the AVE for each construct should be greater than the correlation between any pair of variables ([Fornell and Larcker, 1981](#), p. 46). The results in [Table 4](#) indicate that the square root of the calculated AVE for each construct is higher than

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Items	SEB	RI	MC	MHC	MSC
SEB1	0.681				
SEB2	0.794				
SEB3	0.787				
SEB4	0.772				
SEB5	0.667				
RI1		0.811			
RI2		0.906			
RI3		0.764			
RI4		0.885			
RI5		0.737			
MC1			0.749		
MC4			0.724		
MC5			0.822		
MC6			0.688		
MHC1				0.652	
MHC2				0.841	
MHC3				0.936	
MHC4				0.860	
MSC1					0.719
MSC2					0.736
MSC5					0.751
MSC6					0.784
MSC7					0.738
MSC8					0.652
MSC9					0.640

Table 2.
Factor loadings of scales

Note(s): SEB: Strategic Entrepreneurial Behaviour, RI: Regulative Institutions, MC: Managerial Cognition, MHC: Managerial Human Capital, MSC: Managerial Social Capital
Source(s): Created by authors

Table 3.
Validity and reliability results of the constructs

Structures	Cronbach's alpha (α) $\alpha \geq 0.70$	Composite reliability (CR) CR ≥ 0.70	Average variance extracted (AVE) AVE ≥ 0.50
SEB	0.795	0.806	0.551
RI	0.879	0.889	0.678
MC	0.736	0.752	0.558
MHC	0.863	0.975	0.687
MSC	0.846	0.852	0.517

Source(s): Created by authors

Table 4.
Correlations of structures and square roots of AVEs

Structures	1	2	3	4	5
SEB	0.742*				
RI	0.309**	0.823*			
MC	0.414**	0.395**	0.747*		
MHC	0.112**	0.145**	0.119**	0.829*	
MSC	0.259**	0.344**	0.276**	0.543**	0.719*

Note(s): *Square root of the average variance extracted ($\sqrt{\text{AVE}}$)

**Correlation coefficient ($p < 0.001$)

Source(s): Created by authors

the correlation between any two latent constructs in the model, thereby confirming discriminant validity. Additionally, the Heterotrait-Monotrait Ratio (HTMT) has been utilized to ensure further the distinction validity between the constructs (Henseler *et al.*, 2014). According to this approach, an HTMT ratio below 0.90 is acceptable for discriminant validity. For higher validity, the ratio should be less than 0.85. The results of the HTMT approach presented in Table 5 also indicate that discriminant validity has been achieved.

Common method bias (CMB): was assessed through the variance inflation factor (VIF) of the inner model. All VIF values in Table 6 were found to be less than 3.33. These results indicate that there is no common method bias in the structural model (Kock, 2015).

4.2 Robustness check

This research's robustness check was conducted using SmartPLS. A three-step process was applied to perform the robustness check. The variables were tested for the linearity assumption with a quadratic effect in the first stage. The results obtained from SmartPLS indicated an understanding of second-order effects, revealing that the significance level was above 0.05 in all results. Therefore, it was found that the relationships between variables did not pose a linearity problem. In other words, a non-significant interaction term provides evidence of the robustness of the linear effect (Sarstedt *et al.*, 2020; Hair *et al.*, 2016). These results support the linearity assumption, indicating that the first stage of robustness has been achieved.

In the second stage, endogeneity was assessed using Gaussian Copula. The latent variable scores from the original model estimation were used as inputs for endogeneity. The results obtained using the Gaussian Copula approach by Park and Gupta (2012) indicated that none

Structures	1	2	3	4	5
SEB	0.000	0.000	0.000	0.000	0.000
RI	0.361	0.000	0.000	0.000	0.000
MC	0.537	0.480	0.000	0.000	0.000
MHC	0.142	0.151	0.136	0.000	0.000
MSC	0.293	0.387	0.336	0.591	0.000

Source(s): Created by authors

Table 5.
HTMT analysis results

Hypotheses	β	t	p	VIF	f^2	Q^2	R^2	Results
RI → SEB	0.138	1.690	0.091	1.277	0.019	0.078	0.209	H1: Reject
RI → MC	0.395	5.407	0.000	1.000	0.185	0.137	0.156	H2a: Accept
MC → RI	0.323	4.291	0.000	1.084	0.123	0.179	0.217	H2b: Accept
RI → MHC	0.145	1.139	0.255	1.000	0.022	0.002	0.021	H3a: Reject
MHC → RI	-0.044	0.380	0.704	1.421	0.002	0.179	0.217	H3b: Reject
RI → MSC	0.344	5.237	0.000	1.000	0.134	0.959	0.118	H4a: Accept
MSC → RI	0.278	3.337	0.001	1.517	0.065	0.179	0.217	H4b: Accept
MC → SEB	0.325	4.146	0.000	1.217	0.110	0.078	0.209	H5: Accept
MHC → SEB	-0.018	0.222	0.824	1.423	0.000			H6: Reject
MSC → SEB	0.131	1.674	0.094	1.615	0.014			H7: Reject
RI → MC → SEB	0.128	3.090	0.002	-	-			H8a: Accept
RI → MHC → SEB	-0.003	0.170	0.865	-	-			H8b: Reject
RI → MSC → SEB	0.045	1.524	0.128	-	-			H8c: Reject

Source(s): Created by authors

Table 6.
Hypothesis testing
results

of the variables (RI, MC, MHC, and MSC) were significant ($p > 0.05$). Additionally, all Gaussian combinations included in the model were checked, and none were found to be substantial. These results demonstrate the absence of endogeneity in the research and support the robustness of the structural model results (Hult *et al.*, 2018; Sarstedt *et al.*, 2020).

In the third stage, unobserved heterogeneity was tested using the FIMIX procedure. A post hoc power analysis was conducted, assuming an effect size of 0.15 and a power level of 0.95. The G*Power 3.1 software was used to determine the sample size. The results indicated that the minimum sample size should be 89, and since the sample size in this study is 450, this allows for a maximum of 5 segments. Therefore, FIMIX-PLS was repeated for 1 to 5 segments. The results show ambiguous fit indices for solutions with 1–5 segments.

According to Sarstedt *et al.* (2011), the results likely point to the appropriate number of segments when AIC3 and CAIC indicate the same number of segments. In this analysis, AIC3 suggests a five-segment solution, while CAIC suggests a four-segment solution. Sarstedt *et al.* (2011) also mention that AIC4 and BIC criteria generally perform well when determining the number of segments in FIMIX-PLS. AIC4 points to a five-segment solution, while BIC also indicates a five-segment solution. According to the EN criterion, the solution appears to cluster densely around a two-segment solution (Hair *et al.*, 2016). A two-segment solution also meets the minimum sample size requirements for each segment. On the other hand, the minimum description length with MDL5 points to a four-segment solution. This criterion tends to understate the number of segments. In this context, according to Hair *et al.* (2016), researchers should generally extract more segments than indicated by MDL5.

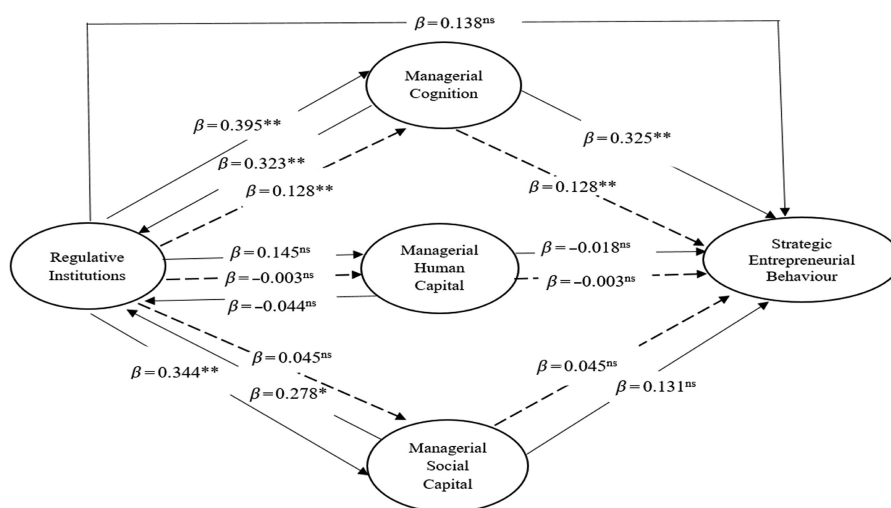
When evaluating all the results: (1) AIC3 and CAIC indicate different numbers of segments. (2) MDL5 and BIC point to the same number of segments. (3) AIC4 indicates a different number of segments. The analyses together do not definitively point to a specific segmentation solution. Therefore, it is assumed that the unobserved heterogeneity is not at a critical level, which supports the analysis results of the entire data set (Sarstedt *et al.*, 2020).

4.3 Structural model and hypothesis testing

Several reasons have motivated the choice of PLS-SEM for this research: The technique's flexibility, lack of distributional assumptions on data, and capability to estimate complex models. Additionally, the research model planned to be tested contains many variables, with the necessary data for uncovering existing relationships collected from entrepreneurs. Hence, the potential for encountering a small sample size and the non-requirement for the collected data to follow a normal distribution have influenced the decision to opt for PLS-SEM. Lastly, PLS-SEM is utilized across various fields of social sciences, especially in areas such as entrepreneurship, marketing research, and business management. Moreover, since 2010, there has been an observed increase in the use of PLS-SEM over CB-SEM in these fields (Hair *et al.*, 2021; Hult *et al.*, 2018). For these reasons, PLS-SEM has been selected for this research.

The Partial Least Squares Method (PLS-SEM) has been used to analyze the structural equation model. To determine if there is any statistical problem in the research model, analyses such as linearity, path coefficients, R² effect size (f²), and predictive relevance (Q²) were conducted. To determine the significance levels of the PLS path coefficients, a resampling (bootstrapping) technique was employed, extracting 5,000 subsamples from the sample (Hair *et al.*, 2017), and the obtained results are presented in Table 6.

The results of the structural equation model analysis are presented in Figure 2. According to the results, regulative institutions do not affect strategic entrepreneurial behaviors ($\beta = 0.138$; $p > 0.05$). Hence, the relationship proposed in the H1 hypothesis is not confirmed. The effect of regulative institutions on managerial cognition is statistically significant ($\beta = 0.395$; $p < 0.001$), indicating support for the H2a hypothesis. Additionally, the effect of managerial cognition on regulative institutions has been found, confirming the H2b



Note(s): $**p < 0.001$, $*p < 0.05$, ns: non-significant

Source(s): Authors' own

Figure 2.
Structural equation
model analysis results

hypothesis ($\beta = 0.323$; $p < 0.001$). When examining the effects proposed in hypotheses **H3a** and **H3b**, both the effect of regulative institutions on managerial human capital ($\beta = 0.145$; $p > 0.05$) and the effect of executive human capital on regulative institutions ($\beta = -0.044$; $p > 0.05$) are found to be statistically insignificant, leading to the rejection of both hypotheses. While regulative institutions influence managerial social capital ($\beta = 0.344$; $p < 0.001$), the effect of managerial social capital on regulative institutions ($\beta = 0.278$; $p < 0.05$) is also observed. These findings confirm the relationships proposed in the **H4a** and **H4b** hypotheses.

The effect of managerial cognition on strategic entrepreneurial behavior is statistically significant ($\beta = 0.325$; $p < 0.001$). However, it has been determined that managerial human capital ($\beta = -0.018$; $p > 0.05$) and managerial social capital ($\beta = 0.131$; $p > 0.05$) do not affect strategic entrepreneurial behavior. In this case, the relationship proposed in the **H5** hypothesis is supported, while the **H6** and **H7** hypotheses are not confirmed. In the research, **H8a**, **H8b**, and **H8c** hypotheses were tested separately, which propose the mediating roles of managerial cognition, managerial human capital, and managerial social capital in the effect of regulative institutions on strategic entrepreneurial behaviors. Analysis results show that managerial cognition has a mediating role in the effect of regulative institutions on strategic entrepreneurial behavior ($\beta = 0.128$; $p < 0.001$), confirming the relationship proposed in the **H8a** hypothesis. On the other hand, the analysis results indicate that neither managerial human capital ($\beta = -0.003$; $p > 0.05$) nor managerial social capital ($\beta = 0.045$; $p > 0.05$) have a statistically significant mediating effect on the impact of regulative institutions on strategic entrepreneurial behavior. Hence, the relationships proposed in the **H8b** and **H8c** hypotheses are not confirmed. The results of the hypothesis tests for the structural equation model are presented in **Table 6**.

In **Table 6**, when examining the R^2 values for strategic entrepreneurial behavior, managerial cognition, managerial human capital, managerial social capital, and regulative institutions, it is observed that the variance of each construct is explained at levels of 20.9, 15.6, 0.2, 11.8, and 21.7%, respectively. **Table 6**'s VIF (Variance Inflation Factor) values being less than the threshold value of 5 indicates no collinearity problem among the variables (**Hair**

et al., 2017). According to Cohen (1988), an effect size coefficient (f^2) of 0.02 and above is considered low; 0.15 and above is medium; and 0.35 and above is high. When examining the effect size coefficients (f^2), the effect of regulative institutions on managerial cognition is found to be medium (0.185), while other effects appear to be low (Cohen, 1988). Additionally, the Q² values, which represent predictive relevance coefficients that are more significant than zero, indicate that the structural model's variables have predictive power for the proposed effects (Hair *et al.*, 2017).

5. Discussion and implications

5.1 Theoretical implications

This study investigates the effects of regulatory institutions and dynamic managerial capabilities in an emerging economy and their impacts on firms' strategic entrepreneurship behaviors. *Firstly*, we found that in the context of an emerging country, regulatory institutions do not influence firms' strategic entrepreneurship behaviors. This finding differs from the results of past research (Van Stel *et al.*, 2007; Acemoglu and Robinson, 2012). A possible reason for this could be the damage caused by earthquakes in many industrial regions of Türkiye during the data collection period, which challenged the business environment (Sagbas *et al.*, 2024). During this period, firms faced difficulties accessing state support, financial resources, and labor due to the allocation of resources to earthquake-affected areas (Dolu and İkizler, 2023). This situation might have made firms feel the impact of regulatory institutions was insufficient. Additionally, political, economic, and social uncertainties in emerging countries, especially those based on institutional voids in the market, pose challenges for firms (Chambers and Munemo, 2019). The political uncertainties caused by elections in Türkiye during the same period and the resulting inflationary pressures may also have contributed to firms perceiving the impact of regulatory institutions as insufficient.

Secondly, we found that regulatory institutions positively influence managerial cognition and social capital but do not affect managerial human capital. In this context, we support previous research findings that have identified the impacts of the overall institutional context, specifically regulatory institutions, on managerial cognition (Meyer *et al.*, 2008; Shang *et al.*, 2010). Additionally, we confirm the findings of previous research that detected the impact of regulatory institutions on managerial social capital (Batjargal *et al.*, 2013; Zhao and Kim, 2011). However, our findings differ from previous research that concluded regulatory institutions impact managerial human capital (Mithas and Krishnan, 2008; Chaudhary and Rubin, 2011). A possible reason for our results regarding managerial human capital could be a lack of awareness or understanding among entrepreneurs in emerging countries about the benefits of investing in human capital or how regulatory institutions can support such investments.

In examining the impact of dynamic managerial capabilities on regulatory institutions, we confirmed the effects of managerial cognition and social capital. However, we could not identify the impact of managerial human capital on regulatory institutions. According to these results, we support previous research findings that identified managerial cognition's impact on regulatory institutions (Ewert and Henrekson, 2021; Yang *et al.*, 2019). Additionally, we confirm previous research findings that managerial social capital affects regulatory institutions (Greenwood and Suddaby, 2006; Lu *et al.*, 2010). However, we could not support previous research findings that managerial human capital impacts regulatory institutions (Li *et al.*, 2006; Qi *et al.*, 2020). A possible reason for this might be that in developing economies, managerial social capital may be more dominant than managerial human capital in shaping regulatory institutions. Institutional voids in such countries may allow entrepreneurs to influence legal regulations through social networks rather than managerial human capital, such as education and experience.

From dynamic managerial capabilities, we discovered that entrepreneurs' managerial cognition related to internationalization influences firms' strategic entrepreneurship behaviors. Contrary to our expectations, however, we did not find any effect of managerial human and social capital. In this context, we support previous research findings that managerial cognition affects firms' strategic entrepreneurship behaviors (Heubeck and Meckl, 2022; Mostafiz *et al.*, 2019b). These results suggest that the cognitive frameworks and mental models entrepreneurs use to perceive and interpret their international environments have a more significant impact on strategic decision-making than their skills or networks.

These results indicate that the combined application of institutional theory and the perspective of dynamic managerial capabilities has the potential to provide meaningful, precise, and persuasive explanations for the strategic entrepreneurship behaviors of firms in developing economies. This situation demonstrates that using both approaches in the strategic entrepreneurship literature offers a more logical, consistent, and comprehensive potential than using each approach separately (Su, 2021; Welter *et al.*, 2016; Gölgeci *et al.*, 2017). Furthermore, the findings reinforce the arguments that entrepreneurs' capabilities and decisions cannot be considered independently of regulatory institutions (Peng *et al.*, 2009). Based on this, it is feasible to view regulatory institutions as a set of rules that entrepreneurs with dynamic managerial capabilities must comply with and that provide them with a scope to shape firm behaviors. Indeed, the findings present evidence that firm entrepreneurs are not passive acceptors of regulatory institutions but are institutional entrepreneurs who attempt to influence them, supporting the claims and conclusions of past research (Su, 2021; Li *et al.*, 2006; Greenwood and Suddaby, 2006; Teece, 2007). Therefore, the research results confirm that the interaction between regulatory institutions and dynamic managerial capabilities shapes firms' strategic entrepreneurship behaviors.

Finally, among dynamic managerial capabilities, we found that only managerial cognition mediated the relationship between regulatory institutions and firms' strategic entrepreneurship behaviors. These results support the findings of previous research that suggested managerial cognition mediates the relationships between various variables (Madi-Odeh and Obeidat, 2023; Khan *et al.*, 2020, 2021; Aberg and Torchia, 2020). This evidence highlights the importance of managerial cognition in the relationship between regulatory institutions and firms' strategic behaviors in monitoring the external environment, such as acquiring, interpreting, and utilizing information, identifying opportunities, and assessing risks. It also confirms the role of cognition in guiding decisions on resource allocation and firms' strategic actions (Hodgkinson *et al.*, 2023). Based on these results, we provided evidence at multiple analysis levels for the relationships between regulatory institutions (macro-analysis level), entrepreneurs' managerial cognition (micro-analysis level), and firms' strategic entrepreneurship behaviors (meso-analysis level) (Schade and Schuhmacher, 2022).

5.2 Entrepreneurial and policy implications

We derive several implications for entrepreneurs and policymakers based on the study results. *Firstly*, entrepreneurs should invest in education and training programs to enhance their cognitive capabilities. In this regard, technical training that imparts industry-specific knowledge and skills can be beneficial. Training in critical thinking, problem-solving, decision-making, creative thinking, and leadership skills can further develop entrepreneurs' cognitive capabilities. By doing so, entrepreneurs can carefully monitor regulatory institutions, identify opportunities and threats, and positively steer their strategic entrepreneurial activities. For instance, keeping track of legislative changes related to entrepreneurship and guiding enterprises accordingly could be crucial.

Our results indicate that entrepreneurs can influence regulatory institutions. In this context, we recommend that entrepreneurs participate in lobbying groups and sectoral organizations

and establish mechanisms for direct communication with policymakers and bureaucrats. Furthermore, entrepreneurs can contribute to the construction of regulatory institutions and guide their strategic entrepreneurial behaviors. In this regard, we suggest that entrepreneurs provide data and analyses to support policymakers with evidence during the regulatory institution-building process. Active participation in the regulatory formation process, making suggestions, and generating public opinion are also beneficial for entrepreneurs.

Another important aspect is the reciprocal effects of entrepreneurs' social capital with regulatory institutions. Our findings highlight the importance of entrepreneurs building networks within their current or prospective industries. In this context, we recommend that entrepreneurs develop their social networks within collaborative platforms, chambers of commerce, and organizations that help access critical information, resources, and support. Additionally, strategic connections with policymakers and organizations that shape the business environment are also valuable. Through these connections, entrepreneurs can gain insights into how regulations are shaped and understand the opportunities and threats presented by upcoming regulations.

Secondly, we recommend that policymakers in emerging economies prioritize the design of regulatory institutions that enhance strategic entrepreneurial behaviors. For example, regulatory institutions that incentivize firms to produce innovative products based on green and high technology and that design legal and financial systems to facilitate access to financing can boost strategic entrepreneurship. Additionally, simplifying bureaucratic regulations and protecting property rights for entrepreneurs can improve the innovation climate and increase strategic entrepreneurial behaviors. Furthermore, policymakers can establish innovation hubs and incubators that provide resources, mentorship, and training to encourage entrepreneurial thinking and opportunity recognition.

Furthermore, policymakers can use education as a regulatory institution to build entrepreneurs' dynamic managerial capabilities. For instance, courses on establishing and managing a business could be integrated into primary and secondary school curricula. Additionally, similar training can be utilized within vocational schools, colleges, and business schools to develop entrepreneurs' dynamic managerial capabilities at the higher education level. Another important aspect is the design of training programs that ensure entrepreneurs' dynamic managerial capabilities are aligned with market conditions during the early stages of entrepreneurial activities. This approach can support the capability-building process for firms and entrepreneurs in particular.

5.3 Limitations and future research

This research has some limitations that could motivate future studies. *Firstly*, we are constrained by the limitations of using a cross-sectional research design (Bağış *et al.*, 2024; Kryeziu *et al.*, 2023). We demonstrated the relationships between relevant variables by providing only a snapshot of firms' strategic entrepreneurial behaviors. Considering that the strategic entrepreneurial behaviors of firms are planned in the long term, future research could gain significant insights by utilizing longitudinal analyses and in-depth case studies. Additionally, due to the cross-sectional data, we may not have detected the effects of regulatory institutional changes over time. Therefore, future studies could longitudinally analyze the interaction between regulatory institutions and dynamic managerial capabilities and how this interaction reflects on firms' structure, performance, and behaviors. Moreover, our firm sample does not provide insights into the strategic entrepreneurial behaviors of large firms. Future research could test the relationships between variables in different institutional contexts by using surveys and interviews with CEOs of larger firms.

Secondly, we suggest that future research test the same variables in the context of different developing and transition economies. Specifically, challenges characterized by high

uncertainty, low predictability, political instability, high levels of corruption, lack of public social services, high unemployment, and a fragile financial system are prominent features of the institutional context in many developing and transition economies (Agénor, 2017). These provide a rich source of data and a testing ground for scholars interested in this topic (Gölgeci *et al.*, 2019). Additionally, comparisons with developed economies could provide insights into how the role of regulatory institutions and entrepreneurs' cognition, social capital, and human capital capabilities change according to economic development levels.

Thirdly, future research could explore the effects of normative and cognitive-cultural institutions on strategic entrepreneurial behavior and dynamic managerial capabilities. This would allow for identifying the impact of the institutional context as a whole and broadening the antecedents of strategic entrepreneurial behavior within the framework of institutional theory by including other variables. Additionally, the impact of regulatory institutions, which we examined as a whole, could be investigated in the context of more specific variables. For example, the effects of regulatory institutions and policy arrangements such as governmental policies (support and relevance), taxes, bureaucracy, entrepreneurial finance, commercial and legal infrastructure, government entrepreneurship programs, entrepreneurial education at the school stage and post-school stage, internal market dynamics, and entry regulation (Kara *et al.*, 2024; Urbano and Alvarez, 2014) on dynamic managerial capabilities and strategic entrepreneurial behavior could be examined. This approach would provide a more nuanced perspective on the relationships between institutional theory, dynamic managerial capabilities, and strategic entrepreneurial behavior.

Finally, the research results indicate that managerial human and social capital do not significantly impact strategic entrepreneurial behavior. Future research could investigate why managerial human capital and social capital do not have a significant effect. This could involve examining different types of human capital and social capital such as industry-specific experience or leadership skills, and how these relate to countries' levels of economic development and their impacts on strategic entrepreneurship. Additionally, future studies could delve deeper into behavioral factors such as risk tolerance, risk aversion or risk-taking, decision-making styles, entrepreneurial mindset and how these interact with regulatory institutions to influence strategic entrepreneurial behavior. Moreover, future research could utilize different lenses to better understand institutions' effects on strategic entrepreneurial behavior (Tan and Chintakananda, 2016). For example, the relationships between institutions and dynamic managerial capabilities could be explored in the context of firms' dynamic capabilities, such as business model innovation, foreign direct investment (Wales *et al.*, 2021), organizational learning capability, innovation capability, and firm alliances capability.

References

- Åberg, C. and Torchia, M. (2020), "Do boards of directors foster strategic change? A dynamic managerial capabilities perspective", *Journal of Management and Governance*, Vol. 24 No. 3, pp. 655-684, doi: [10.1007/s10997-019-09462-4](https://doi.org/10.1007/s10997-019-09462-4).
- Acemoglu, D. and Robinson, J.A. (2012), *Why Nations Fail: the Origins of Power, Prosperity, and Poverty*, Crown Business, New York.
- Acquaah, M. (2007), "Managerial social capital, strategic orientation, and organizational performance in an emerging economy", *Strategic Management Journal*, Vol. 28 No. 12, pp. 1235-1255, doi: [10.1002/smj.632](https://doi.org/10.1002/smj.632).
- Adner, R. and Helfat, C.E. (2003), "Corporate effects and dynamic managerial capabilities", *Strategic Management Journal*, Vol. 24 No. 10, pp. 1011-1025, doi: [10.1002/smj.331](https://doi.org/10.1002/smj.331).
- Agénor, R. (2017), "Caught in the middle? The economics of middle-income traps", *Journal of Economic Surveys*, Vol. 31 No. 3, pp. 771-791, doi: [10.1111/joes.12175](https://doi.org/10.1111/joes.12175).

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- Ahlstrom, D., Arregle, L., Hitt, M.A., Qian, G., Ma, X. and Faems, D. (2020), "Managing technological, sociopolitical, and institutional change in the new normal", *Journal of Management Studies*, Vol. 57 No. 3, pp. 411-437, doi: [10.1111/joms.12569](https://doi.org/10.1111/joms.12569).
- Allwood, C.M. (2012), "The distinction between qualitative and quantitative research methods is problematic", *Quality and Quantity*, Vol. 46 No. 5, pp. 1417-1429, doi: [10.1007/s11135-011-9455-8](https://doi.org/10.1007/s11135-011-9455-8).
- Amaral, A.M., Baptista, R. and Lima, F. (2011), "Serial entrepreneurship: impact of human capital on time to re-entry", *Small Business Economics*, Vol. 37, pp. 1-21, doi: [10.1007/s11187-009-9232-4](https://doi.org/10.1007/s11187-009-9232-4).
- Bağış, M., Kryeziu, L., Akbaba, Y., Ramadani, V., Karagüzel, E.S. and Krasniqi, B.A. (2022), "The micro-foundations of a dynamic technological capability in the automotive industry", *Technology in Society*, Vol. 70, 102060, doi: [10.1016/j.techsoc.2022.102060](https://doi.org/10.1016/j.techsoc.2022.102060).
- Bağış, M., Altınay, L., Kryeziu, L., Kurutkan, M.N. and Karaca, V. (2024), "Institutional and individual determinants of entrepreneurial intentions: evidence from developing and transition economies", *Review of Managerial Science*, Vol. 18 No. 3, pp. 883-912, doi: [10.1007/s11846-023-00626-z](https://doi.org/10.1007/s11846-023-00626-z).
- Barlett, J.E., Körtlik, J.W. and Higgins, C.C. (2001), "Organisational research: determining the appropriate sample size in survey research. Information Technology", *Learning, and Performance Journal*, Vol. 19 No. 1, pp. 43-50.
- Batjargal, B.A.T., Hitt, M.A., Tsui, A.S., Arregle, J.L., Webb, J.W. and Miller, T.L. (2013), "Institutional polycentrism, entrepreneurs' social networks, and new venture growth", *Academy of Management Journal*, Vol. 56 No. 4, pp. 1024-1049, doi: [10.5465/amj.2010.0095](https://doi.org/10.5465/amj.2010.0095).
- Battilana, J., Leca, B. and Boxenbaum, E. (2009), "2 how actors change institutions: towards a theory of institutional entrepreneurship", *The Academy of Management Annals*, Vol. 3 No. 1, pp. 65-107, doi: [10.1080/19416520903053598](https://doi.org/10.1080/19416520903053598).
- Bjørnskov, C. and Foss, N.J. (2016), "Institutions, entrepreneurship, and economic growth: what do we know and what do we still need to know?", *Academy of Management Perspectives*, Vol. 30 No. 3, pp. 292-315, doi: [10.5465/amp.2015.0135](https://doi.org/10.5465/amp.2015.0135).
- Boudreaux, C.J., Bennett, D.L., Lucas, D.S. and Nikolaev, B.N. (2023), "Taking mental models seriously: institutions, entrepreneurship, and the mediating role of socio-cognitive traits", *Small Business Economics*, Vol. 61 No. 2, pp. 465-493, doi: [10.1007/s11187-022-00712-8](https://doi.org/10.1007/s11187-022-00712-8).
- Bouguerra, A., Hughes, M., Cakir, M.S. and Tatoglu, E. (2023), "Linking entrepreneurial orientation to environmental collaboration: a stakeholder theory and evidence from multinational companies in an emerging market", *British Journal of Management*, Vol. 34 No. 1, pp. 487-511, doi: [10.1111/1467-8551.12590](https://doi.org/10.1111/1467-8551.12590).
- Bruton, G.D., Su, Z. and Filatotchev, I. (2018), "New venture performance in transition economies from different institutional perspectives", *Journal of Small Business Management*, Vol. 56 No. 3, pp. 374-391, doi: [10.1111/jsbm.12266](https://doi.org/10.1111/jsbm.12266).
- Busenitz, L.W., Gomez, C. and Spencer, J.W. (2000), "Country institutional profiles: unlocking entrepreneurial phenomena", *Academy of Management Journal*, Vol. 43 No. 5, pp. 994-1003, doi: [10.5465/1556423](https://doi.org/10.5465/1556423).
- Cai, L., Peng, X. and Wang, L. (2018), "The characteristics and influencing factors of entrepreneurial behaviour: the case of new state-owned firms in the new energy automobile industry in an emerging economy", *Technological Forecasting and Social Change*, Vol. 135, pp. 112-120, doi: [10.1016/j.techfore.2018.04.014](https://doi.org/10.1016/j.techfore.2018.04.014).
- Chambers, D. and Munemo, J. (2019), "Regulations, institutional quality and entrepreneurship", *Journal of Regulatory Economics*, Vol. 55 No. 1, pp. 46-66, doi: [10.1007/s11149-019-09377-w](https://doi.org/10.1007/s11149-019-09377-w).
- Chaudhary, L. and Rubin, J. (2011), "Reading, writing, and religion: institutions and human capital formation", *Journal of Comparative Economics*, Vol. 39 No. 1, pp. 17-33, doi: [10.1016/j.jce.2010.06.001](https://doi.org/10.1016/j.jce.2010.06.001).
- Chin, W.W. (1998), "The partial least squares approach to structural equation modeling", in George, A. and Marcoulides (Eds), *Modern Methods for Business Research*, Vol. 295, pp. 295-336.

- Ciftci, I., Tatoglu, E., Wood, G., Demirbag, M. and Zaim, S. (2019), "Corporate governance and firm performance in emerging markets: evidence from Turkey", *International Business Review*, Vol. 28 No. 1, pp. 90-103, doi: [10.1016/j.ibusrev.2018.08.004](https://doi.org/10.1016/j.ibusrev.2018.08.004).
- Cohen, J. (1988), *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed., Routledge, New York. doi: [10.4324/9780203771587](https://doi.org/10.4324/9780203771587).
- Colombo, M.G. and Grilli, L. (2005), "Founders' human capital and the growth of new technology-based firms: a competence-based view", *Research Policy*, Vol. 34 No. 6, pp. 795-816, doi: [10.1016/j.respol.2005.03.010](https://doi.org/10.1016/j.respol.2005.03.010).
- Covin, J.G. and Slevin, D.P. (1989), "Strategic management of small firms in hostile and benign environments", *Strategic Management Journal*, Vol. 10 No. 1, pp. 75-87, doi: [10.1002/smj.4250100107](https://doi.org/10.1002/smj.4250100107).
- Cristofaro, M. and Lovallo, D. (2022), "From framework to theory: an evolutionary view of dynamic capabilities and their microfoundations", *Journal of Management and Organization*, Vol. 28 No. 3, pp. 429-450, doi: [10.1017/jmo.2022.46](https://doi.org/10.1017/jmo.2022.46).
- Danis, W.M., De Clercq, D. and Petricevic, O. (2011), "Are social networks more important for new business activity in emerging than developed economies? An empirical extension", *International Business Review*, Vol. 20 No. 4, pp. 394-408, doi: [10.1016/j.ibusrev.2010.08.005](https://doi.org/10.1016/j.ibusrev.2010.08.005).
- Darnihamedani, P., Block, J.H., Hessels, J. and Simonyan, A. (2018), "Taxes, start-up costs, and innovative entrepreneurship", *Small Business Economics*, Vol. 51 No. 2, pp. 355-369, doi: [10.1007/s11187-018-0005-9](https://doi.org/10.1007/s11187-018-0005-9).
- De Clercq, D., Danis, W.M. and Dakhli, M. (2010), "The moderating effect of institutional context on the relationship between associational activity and new business activity in emerging economies", *International Business Review*, Vol. 19 No. 1, pp. 85-101, doi: [10.1016/j.ibusrev.2009.09.002](https://doi.org/10.1016/j.ibusrev.2009.09.002).
- Demirbag, M., Glaister, K.W. and Tatoglu, E. (2007), "Institutional and transaction cost influences on MNEs' ownership strategies of their affiliates: evidence from an emerging market", *Journal of World Business*, Vol. 42 No. 4, pp. 418-434, doi: [10.1016/j.jwb.2007.06.004](https://doi.org/10.1016/j.jwb.2007.06.004).
- Dias, J. and Tebaldi, E. (2012), "Institutions, human capital, and growth: the institutional mechanism", *Structural Change and Economic Dynamics*, Vol. 23 No. 3, pp. 300-312, doi: [10.1016/j.strueco.2012.04.003](https://doi.org/10.1016/j.strueco.2012.04.003).
- DiMaggio, P.J. and Powell, W.W. (1983), "The iron cage revisited: institutional isomorphism and collective rationality in organizational fields", *American Sociological Review*, Vol. 48 No. 2, pp. 147-160, doi: [10.2307/2095101](https://doi.org/10.2307/2095101).
- Ding, Z., Sun, S.L. and Au, K. (2014), "Angel investors' selection criteria: a comparative institutional perspective", *Asia Pacific Journal of Management*, Vol. 31 No. 3, pp. 705-731, doi: [10.1007/s10490-014-9374-z](https://doi.org/10.1007/s10490-014-9374-z).
- Dolu, A. and İkişler, H. (2023), "The effects of major earthquakes on the labor market: evidence from Turkey", *International Journal of Social Economics*, Vol. 50 No. 5, pp. 662-674, doi: [10.1108/IJSE-08-2022-0568](https://doi.org/10.1108/IJSE-08-2022-0568).
- Edward, M., George, B.P. and Sarkar, S.K. (2010), "The impact of switching costs upon the service quality perceived value–customer satisfaction–service loyalty chain: a study in the context of cellular services in India", *Services Marketing Quarterly*, Vol. 31 No. 2, pp. 151-173, doi: [10.1080/15332961003604329](https://doi.org/10.1080/15332961003604329).
- Eggers, J.P. and Kaplan, S. (2013), "Cognition and capabilities: a multi-level perspective", *The Academy of Management Annals*, Vol. 7 No. 1, pp. 295-340, doi: [10.1080/19416520.2013.769318](https://doi.org/10.1080/19416520.2013.769318).
- Elert, N. and Henrekson, M. (2021), "Entrepreneurship prompts institutional change in developing economies", *The Review of Austrian Economics*, Vol. 34 No. 1, pp. 33-53, doi: [10.1007/s11138-020-00501-0](https://doi.org/10.1007/s11138-020-00501-0).
- Farrell, A.M. (2010), "Insufficient discriminant validity: a comment on Bove, Pervan, Beatty, and Shiu (2009)", *Journal of Business Research*, Vol. 63 No. 3, pp. 324-327, doi: [10.1016/j.jbusres.2009.05.003](https://doi.org/10.1016/j.jbusres.2009.05.003).

- Felício, J.A., Couto, E. and Caiado, J. (2012), "Human capital and social capital in entrepreneurs and managers of small and medium enterprises", *Journal of Business Economics and Management*, Vol. 13 No. 3, pp. 395-420, doi: [10.3846/16111699.2011.620139](https://doi.org/10.3846/16111699.2011.620139).
- Felin, T., Foss, N.J. and Ployhart, R.E. (2015), "The microfoundations movement in strategy and organization theory", *Academy of Management Annals*, Vol. 9 No. 1, pp. 575-632, doi: [10.5465/19416520.2015.1007651](https://doi.org/10.5465/19416520.2015.1007651).
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50, doi: [10.1177/002224378101800104](https://doi.org/10.1177/002224378101800104).
- George, N., Karna, A. and Sud, M. (2022), "Entrepreneurship through the lens of dynamic managerial capabilities: a review of the literature", *Journal of Management and Organization*, Vol. 28 No. 3, pp. 605-631, doi: [10.1017/jmo.2022.25](https://doi.org/10.1017/jmo.2022.25).
- Gölgeci, I., Larimo, J. and Arslan, A. (2017), "Institutions and dynamic capabilities: theoretical insights and research agenda for strategic entrepreneurship", *Scandinavian Journal of Management*, Vol. 33 No. 4, pp. 243-252, doi: [10.1016/j.scaman.2017.08.003](https://doi.org/10.1016/j.scaman.2017.08.003).
- Gölgeci, I., Assadinia, S., Kuivalainen, O. and Larimo, J. (2019), "Emerging-market firms' dynamic capabilities and international performance: the moderating role of institutional development and distance", *International Business Review*, Vol. 28 No. 6, 101593, doi: [10.1016/j.ibusrev.2019.101593](https://doi.org/10.1016/j.ibusrev.2019.101593).
- Greenwood, R. and Suddaby, R. (2006), "Institutional entrepreneurship in mature fields: the big five accounting firms", *Academy of Management Journal*, Vol. 49 No. 1, pp. 27-48, doi: [10.5465/amj.2006.20785498](https://doi.org/10.5465/amj.2006.20785498).
- Guenduez, A.A. and Mergel, I. (2022), "The role of dynamic managerial capabilities and organizational readiness in smart city transformation", *Cities*, Vol. 129, 103791, doi: [10.1016/j.cities.2022.103791](https://doi.org/10.1016/j.cities.2022.103791).
- Guerrero, M., Liñán, F. and Cáceres-Carrasco, F.R. (2021), "The influence of ecosystems on the entrepreneurship process: a comparison across developed and developing economies", *Small Business Economics*, Vol. 57 No. 4, pp. 1733-1759, doi: [10.1007/s11187-020-00392-2](https://doi.org/10.1007/s11187-020-00392-2).
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis*, 7th ed., Prentice Hall, NJ.
- Hair, J.F. Jr Sarstedt, M., Matthews, L.M. and Ringle, C.M. (2016), "Identifying and treating unobserved heterogeneity with FIMIX-PLS: Part I – method", *European Business Review*, Vol. 28 No. 1, pp. 63-76, doi: [10.1108/EBR-09-2015-0094](https://doi.org/10.1108/EBR-09-2015-0094).
- Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M. and Thiele, K.O. (2017), "Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods", *Journal of the Academy of Marketing Science*, Vol. 45 No. 5, pp. 616-632, doi: [10.1007/s11747-017-0517-x](https://doi.org/10.1007/s11747-017-0517-x).
- Hair, J., J., Hair Jr, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2021), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage, NY.
- Heart, T., Maoz, H. and Pliskin, N. (2010), "From governance to adaptability: the mediating effect of IT executives' managerial capabilities", *Information Systems Management*, Vol. 27 No. 1, pp. 42-60, doi: [10.1080/10580530903455163](https://doi.org/10.1080/10580530903455163).
- Helfat, C.E. and Peteraf, M.A. (2015), "Managerial cognitive capabilities and the microfoundations of dynamic capabilities", *Strategic Management Journal*, Vol. 36 No. 6, pp. 831-850, doi: [10.1002/smj.2247](https://doi.org/10.1002/smj.2247).
- Henseler, J., Dijkstra, T.K., Sarstedt, M., Ringle, C.M., Diamantopoulos, A., Straub, D.W., Ketchen, D.J., Hair, J.F., Hult, G.T.M. and Calantone, R.J. (2014), "Common beliefs and reality about PLS: comments on Rönkkö and Evermann (2013)", *Organizational Research Methods*, Vol. 17 No. 2, pp. 182-209, doi: [10.1177/1094428114526928](https://doi.org/10.1177/1094428114526928).
- Heubeck, T. (2023), "Looking back to look forward: a systematic review of and research agenda for dynamic managerial capabilities", *Management Review Quarterly*, pp. 1-45, doi: [10.1007/s11301-023-00359-z](https://doi.org/10.1007/s11301-023-00359-z).

- Heubeck, T. and Meckl, R. (2022), "More capable, more innovative? An empirical inquiry into the effects of dynamic managerial capabilities on digital firms' innovativeness", *European Journal of Innovation Management*, Vol. 25 No. 6, pp. 892-915, doi: [10.1108/EJIM-02-2022-0099](https://doi.org/10.1108/EJIM-02-2022-0099).
- Hodgkinson, I.R., Hughes, P. and Leite, H. (2023), "The cognitive micro-foundations, and socio-psychological mechanisms, of organizational decision-making in public management", *British Journal of Management*, Vol. 34 No. 2, pp. 787-804, doi: [10.1111/1467-8551.12629](https://doi.org/10.1111/1467-8551.12629).
- Hult, G.T.M., Hair, J.F., Proksch, D., Sarstedt, M., Pinkwart, A. and Ringle, C.M. (2018), "Addressing endogeneity in international marketing applications of partial least squares structural equation modeling", *Journal of International Marketing*, Vol. 26 No. 3, pp. 1-21, doi: [10.1509/jim.17.0151](https://doi.org/10.1509/jim.17.0151).
- Ilhan-Nas, T., Okan, T., Tatoglu, E., Demirbag, M., Wood, G. and Glaister, K.W. (2018), "Board composition, family ownership, institutional distance and the foreign equity ownership strategies of Turkish MNEs", *Journal of World Business*, Vol. 53 No. 6, pp. 862-879, doi: [10.1016/j.jwb.2018.07.006](https://doi.org/10.1016/j.jwb.2018.07.006).
- Jansson, H., Johanson, M. and Ramström, J. (2007), "Institutions and business networks: a comparative analysis of the Chinese, Russian, and West European markets", *Industrial Marketing Management*, Vol. 36 No. 7, pp. 955-967, doi: [10.1016/j.indmarman.2007.05.013](https://doi.org/10.1016/j.indmarman.2007.05.013).
- Kara, O., Altınay, L., Bağış, M., Kurutkan, M.N. and Vatankhah, S. (2024), "Institutions and macroeconomic indicators: entrepreneurial activities across the world", *Management Decision*, Vol. 62 No. 4, pp. 1238-1290, doi: [10.1108/MD-04-2023-0490](https://doi.org/10.1108/MD-04-2023-0490).
- Karaca, V. and Bağış, M. (2024), "Rational versus intuitive cognition and influence of dynamic managerial capabilities on SMEs' perceived international performance: evidence from emerging economy", *Management Research Review*. doi: [10.1108/MRR-06-2023-0440](https://doi.org/10.1108/MRR-06-2023-0440).
- Karhu, P. and Ritala, P. (2020), "The multiple faces of tension: dualities in decision-making", *Review of Managerial Science*, Vol. 14 No. 3, pp. 485-518, doi: [10.1007/s11846-018-0298-8](https://doi.org/10.1007/s11846-018-0298-8).
- Khan, K.U., Atlas, F., Xuehe, Z., Khan, F. and Khan, S. (2020), "The mediating role of dynamic managerial capabilities: the interplay between dominant logic and small- and medium-sized enterprises performance in China", *Journal of Public Affairs*, Vol. 20 No. 2, e2002, doi: [10.1002/pa.2002](https://doi.org/10.1002/pa.2002).
- Khan, K.U., Atlas, F., Ghani, U., Akhtar, S. and Khan, F. (2021), "Impact of intangible resources (dominant logic) on SMEs innovation performance, the mediating role of dynamic managerial capabilities: evidence from China", *European Journal of Innovation Management*, Vol. 24 No. 5, pp. 1679-1699, doi: [10.1108/EJIM-07-2020-0276](https://doi.org/10.1108/EJIM-07-2020-0276).
- Kiss, A.N. and Danis, W.M. (2008), "Country institutional context, social networks, and new venture internationalization speed", *European Management Journal*, Vol. 26 No. 6, pp. 388-399, doi: [10.1016/j.emj.2008.09.001](https://doi.org/10.1016/j.emj.2008.09.001).
- Kline, R.B. (1998), *Principles and Practice of Structural Equation Modeling*, The Guilford Press, NJ.
- Kock, N. (2015), "Common method bias in PLS-SEM: a full collinearity assessment approach", *International Journal of e-Collaboration (IJEC)*, Vol. 11 No. 4, pp. 1-10, doi: [10.4018/ijec.2015100101](https://doi.org/10.4018/ijec.2015100101).
- Kor, Y.Y. and Mesko, A. (2013), "Dynamic managerial capabilities: configuration and orchestration of top executives' capabilities and the firm's dominant logic", *Strategic Management Journal*, Vol. 34 No. 2, pp. 233-244, doi: [10.1002/smj.2000](https://doi.org/10.1002/smj.2000).
- Krasniqi, B.A. and Mustafa, M. (2016), "Small firm growth in a post-conflict environment: the role of human capital, institutional quality, and managerial capacities", *International Entrepreneurship and Management Journal*, Vol. 12 No. 4, pp. 1165-1207, doi: [10.1007/s11365-016-0384-9](https://doi.org/10.1007/s11365-016-0384-9).
- Kryeziu, L., Krasniqi, B.A., Bagis, M., Hajrullahu, V., Zhushi, G., Bytyçi, D. and Ismajli, M. (2023), "The effects of institutions, firm-level factors, and rational decision-making on entrepreneurial behaviors of MSMEs: lessons and opportunities for transition communities", *Journal of Enterprising Communities: People and Places in the Global Economy*, Advance online publication. doi: [10.1108/JEC-05-2023-0075](https://doi.org/10.1108/JEC-05-2023-0075).

-
- Lawrence, T.B. and Suddaby, R. (2006), "Institutions and institutional work", in Clegg, S.R., Lawrence, T.B. and Hardy, C. (Eds), *The Sage Handbook of Organization Studies*, pp. 215-254.
- Lee, J.A. and Lin, L.Y.H. (2022), "Legal institutions of human capital: property, contract, and organisation", *Journal of the Knowledge Economy*, Vol. 13 No. 4, pp. 3326-3344, doi: [10.1007/s13132-021-00858-y](https://doi.org/10.1007/s13132-021-00858-y).
- Li, D.D., Feng, J. and Jiang, H. (2006), "Institutional entrepreneurs", *American Economic Review*, Vol. 96 No. 2, pp. 358-362, doi: [10.1257/000282806777211775](https://doi.org/10.1257/000282806777211775).
- Li, D., Hitt, M.A., Batjargal, B., Ireland, R.D., Miller, T.L. and Cuervo-Cazurra, A. (2021), "Institutions and entrepreneurship in a non-ergodic world", *Global Strategy Journal*, Vol. 11 No. 4, pp. 523-547, doi: [10.1002/gsj.1425](https://doi.org/10.1002/gsj.1425).
- Lu, Y., Zhou, L., Bruton, G. and Li, W. (2010), "Capabilities as a mediator linking resources and the international performance of entrepreneurial firms in an emerging economy", *Journal of International Business Studies*, Vol. 41 No. 3, pp. 419-436, doi: [10.1057/jibs.2009.73](https://doi.org/10.1057/jibs.2009.73).
- Mackey, A. and Gass, S. (2012), *The Routledge Handbook of Second Language Acquisition*, Routledge, Taylor and Francis Group, London, doi: [10.4324/9780203808184](https://doi.org/10.4324/9780203808184).
- Madi-Odeh, R.B. and Obeidat, B.Y. (2023), "Do organisations reflect their upper echelons while responding to disruptive innovation?", *International Journal of Innovation Management*, Vol. 27, 01n02, 2350008, doi: [10.1142/S1363919623500081](https://doi.org/10.1142/S1363919623500081).
- Manolova, T.S., Eunni, R.V. and Gyoshev, B.S. (2008), "Institutional environments for entrepreneurship: evidence from emerging economies in Eastern Europe", *Entrepreneurship Theory and Practice*, Vol. 32 No. 1, pp. 203-218, doi: [10.1111/j.1540-6520.2007.00222.x](https://doi.org/10.1111/j.1540-6520.2007.00222.x).
- McKague, K. (2011), "Dynamic capabilities of institutional entrepreneurship", *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 5 No. 1, pp. 11-28, doi: [10.1108/175062011111119572](https://doi.org/10.1108/175062011111119572).
- Meyer, K.E., Estrin, S., Bhaumik, S.K. and Peng, M.W. (2008), "Institutions, resources, and entry strategies in emerging economies", *Strategic Management Journal*, Vol. 30 No. 1, pp. 61-80, doi: [10.1002/smj.720](https://doi.org/10.1002/smj.720).
- Mithas, S. and Krishnan, M.S. (2008), "Human capital and institutional effects in the compensation of information technology professionals in the United States", *Management Science*, Vol. 54 No. 3, pp. 415-428, doi: [10.1287/mnsc.1070.0778](https://doi.org/10.1287/mnsc.1070.0778).
- Mostafiz, M.I., Sambasivan, M. and Goh, S.K. (2019a), "Psychometric evaluation of dynamic managerial capability scale in the context of early internationalizing firms from an emerging economy, Asia-Pacific", *Journal of Business Administration*, Vol. 11 No. 4, pp. 371-386, doi: [10.1108/APJBA-06-2019-0140](https://doi.org/10.1108/APJBA-06-2019-0140).
- Mostafiz, M.I., Sambasivan, M. and Goh, S.K. (2019b), "Impacts of dynamic managerial capability and international opportunity identification on firm performance", *Multinational Business Review*, Vol. 27 No. 4, pp. 339-363, doi: [10.1108/MBR-09-2018-0061](https://doi.org/10.1108/MBR-09-2018-0061).
- Mostafiz, M.I., Sambasivan, M., Goh, S.K. and Shakil, M.H. (2021), "The mediating role of innovation capabilities in the relationship between dynamic managerial capability and performance of export-manufacturing firms", *International Review of Entrepreneurship*, Vol. 19 No. 2, pp. 169-200.
- Oliver, C. (1991), "Strategic responses to institutional processes", *Academy of Management Review*, Vol. 16 No. 1, pp. 145-179, doi: [10.5465/amr.1991.4279002](https://doi.org/10.5465/amr.1991.4279002).
- Oliver, A.L. and Montgomery, K. (2008), "Using field-configuring events for sense-making: a cognitive network approach", *Journal of Management Studies*, Vol. 45 No. 6, pp. 1147-1167, doi: [10.1111/j.1467-6486.2008.00786.x](https://doi.org/10.1111/j.1467-6486.2008.00786.x).
- Park, S. and Gupta, S. (2012), "Handling endogenous regressors by joint estimation using copulas", *Marketing Science*, Vol. 31 No. 4, pp. 567-586, doi: [10.1287/mksc.1120.0718](https://doi.org/10.1287/mksc.1120.0718).
- Peng, M.W., Sun, S.L., Pinkham, B. and Chen, H. (2009), "The institution-based view as a third leg for a strategy tripod", *Academy of Management Perspectives*, Vol. 23 No. 3, pp. 63-81, doi: [10.5465/amp.2009.43479264](https://doi.org/10.5465/amp.2009.43479264).

- Qi, J., Fu, X., Li, J. and Xie, J. (2020), "The co-evolution of institutions and stakeholders in creating new industries", *Asia Pacific Journal of Management*, Vol. 37 No. 4, pp. 1085-1118, doi: [10.1007/s10490-019-09650-8](https://doi.org/10.1007/s10490-019-09650-8).
- Rodrigo-Alarcón, J., García-Villaverde, P.M., Ruiz-Ortega, M.J. and Parra-Requena, G. (2018), "From social capital to entrepreneurial orientation: the mediating role of dynamic capabilities", *European Management Journal*, Vol. 36 No. 2, pp. 195-209, doi: [10.1016/j.emj.2017.02.006](https://doi.org/10.1016/j.emj.2017.02.006).
- Sagbas, G., Sheikhi Garjan, R., Sarikaya, K. and Deniz, D. (2024), "Field reconnaissance on seismic performance and functionality of Turkish industrial facilities affected by the 2023 Kahramanmaraş earthquake sequence", *Bulletin of Earthquake Engineering*, Vol. 22 No. 1, pp. 227-254, doi: [10.1007/s10518-023-01741-8](https://doi.org/10.1007/s10518-023-01741-8).
- Sarstedt, M., Becker, J.M., Ringle, C.M. and Schwaiger, M. (2011), "Uncovering and treating unobserved heterogeneity with FIMIX-PLS: which model selection criterion provides an appropriate number of segments?", *Schmalenbach Business Review*, Vol. 63 No. 1, pp. 34-62, doi: [10.1007/BF03396886](https://doi.org/10.1007/BF03396886).
- Sarstedt, M., Ringle, C.M., Cheah, J.H., Ting, H., Moisescu, O.I. and Radomir, L. (2020), "Structural model robustness checks in PLS-SEM", *Tourism Economics*, Vol. 26 No. 4, pp. 531-554, doi: [10.1177/1354816618823921](https://doi.org/10.1177/1354816618823921).
- Schade, P. and Schuhmacher, M.C. (2022), "Digital infrastructure and entrepreneurial action-formation: a multilevel study", *Journal of Business Venturing*, Vol. 37 No. 5, 106232, doi: [10.1016/j.jbusvent.2022.106232](https://doi.org/10.1016/j.jbusvent.2022.106232).
- Scott, W.R. (1995), *Institutions and Organizations*, Sage, Thousands Oaks.
- Shang, H., Huang, P. and Guo, Y. (2010), "Managerial cognition: the sources of sustainable competitive advantage in hypercompetition: a case study", *Nankai Business Review International*, Vol. 1 No. 4, pp. 444-459, doi: [10.1108/20408741011082589](https://doi.org/10.1108/20408741011082589).
- Shirokova, G., Galieva, N., Doktorova, D., White, J.V. and Marino, L. (2024), "Strategic entrepreneurial behaviors and firm performance: the moderating role of narcissism and Machiavellianism", *Journal of Small Business and Enterprise Development*, Vol. 31 No. 1, pp. 191-225, doi: [10.1108/JSBED-10-2022-0409](https://doi.org/10.1108/JSBED-10-2022-0409).
- Steckler, A., McLeroy, K.R., Goodman, R.M., Bird, S.T. and McCormick, L. (1992), "Toward integrating qualitative and quantitative methods: an introduction", *Health Education Quarterly*, Vol. 19 No. 1, pp. 1-8, doi: [10.1177/109019819201900101](https://doi.org/10.1177/109019819201900101).
- Su, Z. (2021), "The co-evolution of institutions and entrepreneurship", *Asia Pacific Journal of Management*, Vol. 38 No. 4, pp. 1327-1350, doi: [10.1007/s10490-019-09703-y](https://doi.org/10.1007/s10490-019-09703-y).
- Sun, S.L., Shi, W., Ahlstrom, D. and Tian, L. (2020), "Understanding institutions and entrepreneurship: the microfoundations lens and emerging economies", *Asia Pacific Journal of Management*, Vol. 37 No. 4, pp. 957-979, doi: [10.1007/s10490-020-09738-6](https://doi.org/10.1007/s10490-020-09738-6).
- Tan, B.R. and Chintakananda, A. (2016), "The effects of home country political and legal institutions on firms' geographic diversification performance", *Global Strategy Journal*, Vol. 6 No. 2, pp. 105-123, doi: [10.1002/gsj.1117](https://doi.org/10.1002/gsj.1117).
- Tatoglu, E., Bayraktar, E. and Arda, O.A. (2015), "Adoption of corporate environmental policies in Turkey", *Journal of Cleaner Production*, Vol. 91, pp. 313-326, doi: [10.1016/j.jclepro.2014.12.039](https://doi.org/10.1016/j.jclepro.2014.12.039).
- Tatoglu, E., Frynas, J.G., Bayraktar, E., Demirbag, M., Sahadev, S., Doh, J. and Lenny Koh, S.C. (2019), "Why do emerging market firms engage in voluntary environmental management practices? A strategic choice perspective", *British Journal of Management*, Vol. 31 No. 1, pp. 80-100, doi: [10.1111/1467-8551.12351](https://doi.org/10.1111/1467-8551.12351).
- Teece, D.J. (2007), "Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance", *Strategic Management Journal*, Vol. 28 No. 13, pp. 1319-1350, doi: [10.1002/smj.640](https://doi.org/10.1002/smj.640).
- Teece, D.J. (2012), "Dynamic capabilities: routines versus entrepreneurial action", *Journal of Management Studies*, Vol. 49 No. 8, pp. 1395-1401, doi: [10.1111/j.1467-6486.2012.01080.x](https://doi.org/10.1111/j.1467-6486.2012.01080.x).

-
- Ucbasaran, D., Wright, M. and Westhead, P. (2003), "A longitudinal study of habitual entrepreneurs: starters and acquirers", *Entrepreneurship and Regional Development*, Vol. 15 No. 3, pp. 207-228, doi: [10.1080/08985620210145009](https://doi.org/10.1080/08985620210145009).
- Urbano, D. and Alvarez, C. (2014), "Institutional dimensions and entrepreneurial activity: an international study", *Small Business Economics*, Vol. 42 No. 4, pp. 703-716, doi: [10.1007/s11187-013-9523-7](https://doi.org/10.1007/s11187-013-9523-7).
- Urbano, D., Aparicio, S. and Audretsch, D. (2019), "Twenty-five years of research on institutions, entrepreneurship, and economic growth: what has been learned?", *Small Business Economics*, Vol. 53 No. 1, pp. 21-49, doi: [10.1007/s11187-018-0038-0](https://doi.org/10.1007/s11187-018-0038-0).
- Van Stel, A., Storey, D.J. and Thurik, A.R. (2007), "The effect of business regulations on nascent and young business entrepreneurship", *Small Business Economics*, Vol. 28 Nos 2-3, pp. 171-186, doi: [10.1007/s11187-006-9014-1](https://doi.org/10.1007/s11187-006-9014-1).
- Wales, W., Shirokova, G., Beliaeva, T., Micelotta, E. and Marino, L. (2021), "The impact of institutions on the entrepreneurial orientation-performance relationship", *Global Strategy Journal*, Vol. 11 No. 4, pp. 656-685, doi: [10.1002/gsj.1418](https://doi.org/10.1002/gsj.1418).
- Welter, C., Mauer, R. and Wuebker, R.J. (2016), "Bridging behavioral models and theoretical concepts: effectuation and bricolage in the opportunity creation framework", *Strategic Entrepreneurship Journal*, Vol. 10 No. 1, pp. 5-20, doi: [10.1002/sej.1215](https://doi.org/10.1002/sej.1215).
- Yang, D., Wang, A.X., Zhou, K.Z. and Jiang, W. (2019), "Environmental strategy, institutional force, and innovation capability: a managerial cognition perspective", *Journal of Business Ethics*, Vol. 159 No. 4, pp. 1147-1161, doi: [10.1007/s10551-018-3830-5](https://doi.org/10.1007/s10551-018-3830-5).
- Zhao, H. and Kim, S.H. (2011), "An exploratory examination of the social capital and FDI linkage and the moderating role of regulatory quality: a cross-country study", *Thunderbird International Business Review*, Vol. 53 No. 5, pp. 629-646, doi: [10.1002/tie.20439](https://doi.org/10.1002/tie.20439).

Regulative institutions

RI1 Government institutions in our country help individuals start their own businesses [Busenitz et al. \(2000\), Manolova et al. \(2008\)](#)

RI2 The government provides the necessary flexibilities for the establishment of new and small businesses

RI3 Local and national governments provide specific support for individuals looking to start a new business

RI4 Governments support organizations that help new businesses develop

RI5 The government helps entrepreneurs start over, even if they have failed in previous attempts

Dynamic managerial capabilities

Managerial cognition

[Mostafiz et al. \(2019a\)](#)

MC1 It is important for our company to internationalize rapidly

MC2 Internationalization is the only way to achieve our growth objective

MC3 We will, have to internationalize in order to succeed in the future

MC4 The growth we are aiming at can be achieved mainly through internationalization

MC5 The entrepreneur of the company is willing to take the company to the international markets

MC6 The company's management uses a lot of time in planning international operations

MC7 The company's management sees the whole world as a one big marketplace

Managerial human capital

MHC1 Prior entrepreneurial experiences: number of years you had spent working for start-up firms

MHC2 Prior managerial experiences: years spent managing others business as a manager prior to starting the current company

MHC3 Prior academic education: level of educational qualification achieved by your own prior to starting the current company

MHC4 Training experiences: number of training activities obtained by your own: (such as legal, marketing, sales, strategy, etc.) which is related with your current company, prior to starting and during the position as CEO of your company

Managerial social capital

MSC1 Top manager at buyer firms

MSC2 Top manager at supplier firms

MSC3 Top manager at competitor firms

MSC4 Political leader in various levels of the government

MSC5 Officials in industry bureaus

MSC6 Officials in regulatory and supporting organizations such as tax bureaus, state banks, commercial administration bureaus, and the like

MSC7 I assumed that he or she would always look out my interest

MSC8 I assumed that he or she would go out of his or her way to make sure I was not adversely affected

MSC9 I felt like he or she cared what happened to me

MSC10 I believed that this person approached his or her job with professionalism and dedication

MSC11 Members of my business network believe that the needs of the whole network should take priority over personal needs

MSC12 Members of your business network accept decisions taken within the network even when they have different opinions

MSC13 Problem-solving by many members of a business network give better results that those by individuals

(continued)

Table A1.
Measures (scales)

JSBED

Strategic entrepreneurial behavior

SEB1 The managers of our company support the marketing of products or services Covin and Slevin (1989)

SEB2 Our company's managers invest strongly in technology and innovation

SEB3 Our company responds to the entrepreneurial behavior of competitors

SEB4 Our company is successful in introducing new products/services, administrative techniques, information technologies to the market

SEB5 Our company is highly competitive and aims to leave other companies behind

SEB6 Our company is willing to invest in high-risk projects

SEB7 The managers of our company act courageously to achieve the objectives

SEB8 When faced with uncertainty, the managers of our company act very quickly (aggressively) to take advantage of potential opportunities

Table A1.

Source(s): Created by authors

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