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The impact of corporate governance and innovative climate on firm performance; A review from the perspective of environmental uncertainty

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Abstract

This study aims to examine the effects of corporate governance practices and innovation climate on firm performance in the context of environmental uncertainty perception. In today's world where globalization, digitalization and technological advancements are accelerating, businesses not only have to manage their internal resources but also have to rapidly adapt to variable and unpredictable environmental conditions. In this context, effective corporate governance practices and a supportive innovation climate stand out as key organizational factors that both increase strategic flexibility and improve firm performance. However, when the impact of these internal structures on performance is evaluated independently of environmental factors, incomplete and context-free results may emerge. Therefore, it is necessary to analyze the mediating or moderating effects of exogenous variables such as the environment on these relationships. The conceptual model was tested using Structural Equation Modeling (SEM). In the conceptual model, corporate governance and innovation climate are considered as independent variables, perception of environmental uncertainty as mediating variable and firm performance as dependent variable. According to the findings of the analysis, corporate governance and innovation climate have direct, significant and positive effects on firm performance. Moreover, the perception of environmental uncertainty plays a significant partial mediating role in the effect of both constructs on performance. The effect of environmental uncertainty on performance is found to be the highest, which reveals the critical role of external environment perception in strategic decision-making processes. The findings of the study both add a multivariate, contextual approach to the literature and provide guidance for managers to redesign organizational structures and develop strategic adaptability.

Keywords: Corporate governance, Environmental uncertainty, Firm performance, Innovation climate, Structural equation modeling.

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1. Introduction

In today's business world where globalization, digitalization and technological transformation are accelerating, the competitiveness of firms is directly related not only to how they manage their internal resources but also to the extent to which they can adapt to variable and unpredictable external environmental conditions [1, 2]. In this context, the effectiveness of corporate governance practices and the existence of an organizational climate that supports innovation have become a strategic necessity for firms seeking to achieve sustainable competitive advantage [3-5]. Corporate governance is a management approach based on the principles of transparency, accountability, responsibility, and fairness that enables firms to establish balanced relationships with all stakeholders [6, 7]. These structures contribute to increasing corporate trust by improving the quality of strategic decision-making processes beyond mere legal compliance [8, 9]. Innovation climate, on the other hand, defines an environment that encourages creativity within the organization, enables experimentation, and supports individual and organizational learning [10, 11]. The coexistence of both elements increases the capacity of firms to respond quickly to change, gain strategic flexibility, and ultimately improve their performance [12, 13].

However, in order to fully evaluate the effects of these internal organizational structures on performance, the context of environmental factors should also be taken into account [14]. At this point, environmental uncertainty stands out as an exogenous factor. Environmental uncertainty is associated with factors such as unpredictability of market conditions, rapid changes in technological developments and economic/political instability [15-17]. Such contextual elements can shape the effectiveness of internal structures and directly or indirectly alter their impact on performance [18, 19]. In the literature, the concepts of corporate governance, innovation climate and environmental uncertainty have been widely discussed in independent forms [20, 21]. However, studies that empirically examine the effects of these three constructs on firm performance through their interactions within the same model are limited [22, 23]. This gap in the literature suggests that these relationships should be evaluated with a more holistic approach. Especially in environments of high uncertainty, it is likely to reach incomplete or misleading conclusions when the effect of internal organizational practices on performance is considered independently of the context [24, 25]. This situation reveals that the understanding of organizational management should be rethought together with environmental conditions [26].

The main purpose of this study is to analyze the effects of corporate governance practices and innovation climate on firm performance in the context of environmental uncertainty perception. In the study, corporate governance and innovation climate are considered as independent variables, environmental uncertainty as a mediating variable and firm performance as a dependent variable. The conceptual model developed in this framework was tested using structural equation modeling (SEM), one of the multivariate analysis techniques. SEM method enables the analysis of direct and indirect relationships and provides the opportunity to evaluate the interactions between variables from a multidimensional perspective [27, 28]. This research aims to contribute to the literature both conceptually and methodologically and reveals that environmental factors should be taken into account in strategic decision-making processes for business managers. Especially for firms operating in complex and uncertain environments, creating structures that are compatible with corporate governance principles and support innovation not only creates competitive advantage but also ensures long-term corporate sustainability [29, 30]. In the following sections of the study, the theoretical framework built in the light of the literature review will be elaborated, followed by a systematic presentation of the research method, findings and conclusions.

2. Literature Review

2.1. Corporate Governance: Conceptual Foundations, Development Process and Implementation

Recent financial crises, privatization movements and investment trends have brought the concept of corporate governance to the center of the business world [31]. Corporate governance is a system that emphasizes basic principles such as transparency, accountability and effective auditing with the aim of securing the continuity of firms. Especially with the clarification of the distinction between ownership and management, the necessity of establishing mechanisms to prevent the misuse of corporate assets has made the understanding of corporate governance compulsory [32]. The fact that the term "corporate governance" is translated into Turkish as "corporate governance" shows that this concept refers to a cooperative,

pluralistic management style. While the concept of management implies unilateral decision-making, governance implies management together with stakeholders and prioritizes the production of social benefits [33, 34]. The Oxford Dictionary defines "governance" as the management of an organization, and this definition explains the scope of governance [35]. Corporate governance is defined as a managerial understanding that ensures the participation of stakeholders in the process and protects the rights of all interest groups, not just shareholders [36]. In this context, corporate governance is the totality of institutional structures, norms and control mechanisms used to ensure the long-term sustainability of businesses. It aims to regulate the distribution of duties and powers among top managers, shareholders, employees and investors within the organization [37].

The development of corporate governance has gained momentum with some global events. Financial scandals experienced by companies such as Enron and WorldCom led to serious reforms in this field. In this process, basic values such as fairness, transparency, accountability and responsibility in line with OECD principles have formed the universal framework of corporate governance [6]. In Turkey, the Capital Markets Board paved the way for institutionalization in this area by publishing the Corporate Governance Principles in 2003; the principles, which were updated in 2005 and 2011, are based on a "comply or explain" approach. These principles helped companies to increase transparency and build investor confidence [38].

The concept of corporate governance has been grounded in many theoretical approaches. Agency theory [39] explains information asymmetry and conflicts of interest. Stakeholder theory emphasizes the importance of balancing the expectations of all stakeholders, while myopic market theory argues that short-term profit pressure prevents long-term corporate value creation [40]. Agency theory [41] argues that managers act in alignment of interests with shareholders. Managerial dominance theory [42] states that professional managers have de facto corporate control. Transaction cost theory [43] emphasizes the management of economic activities at the lowest cost, while resource dependence theory analyzes the effects of strategic relationships with the external environment on corporate performance [24].

The purpose of corporate governance is to establish a transparent structure in firms, to prevent managers from abusing their power, to establish investor confidence and to increase firm performance [44]. In this context, it has multidimensional objectives such as increasing the reliability of financial statements and ensuring that managers focus on firm objectives. At the same time, protecting small investors, fulfilling disclosure obligations and ensuring the traceability of decision-making processes are also sub-components of this objective [45]. The success of corporate governance in practice does not only depend on legal regulations. It is also directly related to internal ethical values, audit culture and leadership structure. Therefore, the effectiveness of governance depends on the extent to which business culture and leadership structures are integrated into this understanding [46].

2.2. Innovation Climate: Conceptual Framework and Implementation Dimensions

Innovation is derived from the Latin word "innovare", which means change and renewal. The concept, which is translated into Turkish as "inovasyon" refers not only to invention or discovery, but also to a transformation process in which new ideas and processes meet with practice [47]. In order to maintain competitive advantage in the ever-changing global markets, organizations have to establish innovative climate conditions [48]. Innovation climate is a psychological and organizational atmosphere that allows employees to put forward, try and implement new ideas [49]. In this climate, it is of great importance that employees are given autonomy, leaders' supportive attitudes and organizational culture encourage innovation [50]. Innovation climate requires not only individuals but also organizations to be open to learning, show flexibility and take risks [51]. Research shows that innovative climate positively affects organizational learning, talent development, idea sharing and innovative behaviors [52]. In this context, organizational memory is also strengthened, individuals can make autonomous decisions and act with intrinsic motivation. As an important component of the innovative climate, an environment of trust and leader support paves the way for employees to take creative risks [53].

Innovation is considered in a broad framework that encompasses both the improvement of existing products and the creation of completely new products and services. Organizations need to adapt to this transformation in the face of increasing population and changing consumer demands [54]. The main purpose of the innovative climate is to enable employees not only to produce their thoughts but also to put these thoughts into practice [55]. Innovative climate depends on employees' intuition, leadership support, resources and the organization's tendency to take risks. In this context, organizational climate is not only a structure that shapes behaviors, but also a dynamic that enables innovation [56]. It has been determined that climate has a positive effect on employees in this respect, and individuals are more committed to the organization and take innovative actions [57]. Innovative climate is an atmosphere that supports creativity and innovation and encourages employees to participate in activities such as brainstorming, training and experience sharing. Creating an environment that is psychologically non-threatening and open to entrepreneurship is critical for the sustainability of this climate [58]. Innovation also depends on the organization's interactions with its external environment. Factors such as shared vision and team solidarity strengthen the culture of innovation [59]. How employees perceive the organizational climate directly affects their intrinsic motivation and thus their innovative behavior. When employees perceive that the organization provides them with sufficient resources and support, they become more prone to innovative behaviors [60]. Key features of this climate include autonomy, collaboration, leadership support, flexibility, performance feedback and encouragement of creative ideas [61].

The existence of an innovative climate positively affects the overall success of organizations. The climate contributes to innovation not only at the individual but also at the organizational level. Employees exhibit creative behaviors in this environment and their organizational commitment increases [62]. Creating such a climate contributes positively to the sustainability of the organization, brand value and resource utilization [63]. Innovative climate helps employees overcome task challenges. Organizations that are tolerant of risk-taking support their employees to produce creative solutions [64]. An encouraging climate enables individuals to reveal their capacities. Providing this atmosphere is essential for the successful implementation of organizational strategies [65].

2.2.1. Innovation Climate Models

Some of the prominent models developed to explain the innovation climate are as follows:

Ekvall [66] Creative Climate Model considers the innovative climate in 10 dimensions such as challenge, freedom, idea support, trust, dynamism, humor, negotiation, conflict, risk taking and idea time. These dimensions are used to explain the factors that enable or hinder organizational innovation [67].

Siegel and Kaemmerer's model is based on five pillars such as leadership, ownership, norms of difference, continuous improvement and consistency. This structure increases employee participation and authenticity in innovative organizations [68].

The Crespell and Hansen [69] model consists of five dimensions: team cohesion, supervisory incentives, resources, autonomy and openness to innovation. This model explains the basic elements that support employees' innovative behaviors Karaca [70].

Anderson, et al. [4]. Team Climate Inventory provides an assessment of innovation at the team level with the dimensions of vision, participant safety, task orientation and innovation support [71].

2.3. Environmental Uncertainty: Conceptual Foundations, Dimensions and Adaptation Strategies

Unlike risk, uncertainty refers to ambiguous and unpredictable situations where probabilities cannot be predicted. In this context, uncertainty is considered as a reflection of both individual perceptions and cognitive deficiencies Oney and Kaya [72]. Zayadin, et al. [73] define uncertainty as a cognitive state shaped by subjective evaluations about events and resources Zayadin, et al. [73]. Beraha [74] categorize uncertainty into five main categories: environmental, market, governmental, sectoral and technological [74]. Environmental uncertainty is when an organization does not have sufficient information about its external environment or cannot analyze the information correctly [75]. Factors such as supply chain, consumer demands, political fluctuations and technological change are among the main factors that constitute environmental uncertainty Bozalan and Turan [76]. Merdan [77] evaluates uncertainty in three main dimensions: incomplete information, unknown potential losses and unpredictability of environmental impacts Merdan [77]. Inman and Green [78] presents three common definitions of environmental uncertainty: not knowing the probabilities of events, lack of information on cause-effect relationships, and inability to predict decision outcomes Inman and Green [78]. Horasan and Kılıçbey [79] define environmental uncertainty as managers' inability to access information and anticipate changing conditions [79]. This is especially evident in dynamic and complex environments [19]. Knight [80] work distinguishes uncertainty from risk; while risk can be calculated, uncertainty is a situation where the probability of uncertainty cannot be defined, and this requires flexible strategies such as scenario planning [81].

2.3.1. Perceived Environmental Uncertainty

Perceived environmental uncertainty is the individual's inability to foresee environmental conditions and predict the best course of action [77]. This concept directly affects the strategic decisions of managers in the decision-making process. Managers' different perceptions of uncertainty lead to diversification of decisions Ardic, et al. [82]. Oney and Kaya [72] state that this type of uncertainty is caused not only by the speed of changes but also by the inability to make sense of them [72]. Managers who fail to analyze environmental factors correctly may make financial and tactical mistakes. This jeopardizes the strategic success and existence of the organization [83]. Perceived uncertainty is related to many variables such as availability of resources, market competition and organizational structure and affects organizational performance.

2.3.2. Dimensions of Environmental Uncertainty

Dynamism**:** Dynamism is the speed and level of regularity of changes in the environment. Technological developments, consumer trends and sudden changes in market needs lead managers to unplanned strategies [74]. Şener states that under high dynamism, lack of information increases and rational decisions become difficult [84].

Complexity: Complexity is the diversity of environmental factors and their impact on decision-making. The work of Thompson and Duncan is a pioneer in this field. Decision makers need more information when environmental factors are high and heterogeneous [85]. Tümer states that in complex environments, companies try to adapt with strategies such as centralization, fast communication and network structures [86].

Prosperity: Environmental prosperity is related to the abundance of resources an organization needs in the environment. When resources are scarce, the level of uncertainty increases, while when resources are abundant, the organization benefits [87]. Caliskan and Akkoc [88] argue that welfare affects the level of sustainable growth and environmental dependence of organizations [88].

2.3.3. Strategies to Adapt to Environmental Uncertainty

Organizations that want to survive in an uncertain environment benefit from two basic approaches:

The Competition Approach: This approach suggests that organizations that cannot adapt to the environment will be out of competition. Organizations that adapt to change gain competitive advantage [87].

Niche (Gap) Approach: Organizations that evaluate emerging environmental gaps and develop appropriate strategies for these gaps will be successful Horasan and Kılıçbey [79].

Bozalan and Turan [76] state that environmental uncertainties can cause decision delays. Decision makers tend to wait and see in such environments Bozalan and Turan [76]. Burak and Deniz [89] state that decision delays make adaptation difficult and may lead to the withdrawal of the organization from the field of activity [89]. Therefore, strategic management is considered necessary to reduce environmental uncertainty.

Against uncertainty, organizations resort to methods such as increasing communication with the external environment, creating special positions, specializing, and distributing authority to lower levels. Organizations that can manage uncertainty analyze risks correctly, interact quickly with the environment and gain strategic flexibility [90].

2.4. Firm Performance: Conceptual Foundations, Measurement Dimensions and Strategic Approaches

The concept of performance was first evaluated through the results of sports competitions in the 19th century, and over time it has been expanded to mean the degree to which individuals, teams or organizations achieve their goals [91]. Performance is a function that determines the extent to which the behaviors exhibited by the person in business processes overlap with the goals in certain periods Baykal, et al. [92]. Herciu [93] defines performance as the process of reaching the target effectively and efficiently [93]. Today, firm performance has turned into an evaluation system that extends from individuals to the entire sector and has become a necessity to be measured in order for firms to survive [94]. According to Acaray and Savci [95] firm performance is an indicator that covers all activities of the organization and shows its ability to achieve its goals [95]. Performance is not only related to individual achievement but also to efficiency, effectiveness and strategic management [96].

2.4.1. Theoretical Foundations

In the 1980s, industry-based and resource-based approaches developed different perspectives in explaining firm performance. While the industry-based view emphasizes sectoral structure, the resource-based view emphasizes the importance of internal resources and human capital [97]. According to Ormeci and Ocal [98] performance determines whether targeted results are achieved by optimizing outputs with inputs [98]. Firm performance is evaluated in economic, organizational and operational dimensions [99]. This evaluation is made with multidimensional parameters such as profitability, growth and market success [100]. Demirel presents performance as a form of evaluation that includes not only economic but also social indicators [101]. In Murphy, et al. [102] study, performance is explained with six criteria such as efficiency, growth, productivity, profit, market position and indebtedness [98]. Gutterman, on the other hand, emphasizes normative criteria such as efficiency, quality, economy, and behavioral development [103].

2.4.2. Factors Determining Firm Performance

Firm performance is affected by many factors such as organizational culture, strategic goal alignment, employee productivity, efficiency of business processes and leadership [104]. At the same time, developing appropriate strategic responses to environmental variables is also important for performance Imamoglu, et al. [105]. Unsal [106] states that firm performance depends on the organization's ability to use its resources effectively Unsal [106]. Olmez, et al. [107] emphasize that firm performance is based not only on tangible but also on intangible resources, and therefore both types of resources are critical for strategic advantage [107]. Measurement results are used in strategic decisions of organizations and show the effectiveness of the methods applied [108]. When financial and non-financial criteria are used together in the evaluation of firm performance, more accurate results are obtained Altuntas and Donmez [109]. Akpa, et al. [104] argue that both profitability and employee satisfaction should be evaluated holistically [104].

2.4.3. Measuring Performance

Firm performance can be measured with objective (objective) and subjective (subjective) information. Subjective data becomes more useful especially when it is difficult to access objective data in different geographies [110]. Performance evaluation has functions such as identifying strengths/weaknesses, the degree of achievement of goals and shaping decision-making processes [111]. While Oflaz, et al. [112] consider performance in terms of operational, financial and productivity dimensions, Thompson and Stricklan evaluate performance in terms of product, finance, market and employee dimensions [112]. Financial performance is determined by measures such as profit, return on equity and cash flow. These measures offer advantages especially in the decision-making processes of managers due to their objective nature [103]. Non-financial performance includes elements such as customer satisfaction, brand value, sustainable employment, and innovation. These elements enable the measurement of the atmosphere within the firm and provide a holistic assessment [109].

2.4.4. Performance and Strategic Approaches

Freeman [113]. Theory measures firm performance in terms of the total value delivered to all stakeholders, not just shareholders [93]. The Resource-Based View focuses on the firm’s achievement of competitive advantage. The Balanced Scorecard approach proposes performance measurement in four dimensions: financial, customer, internal process, and learning and development [114]. While traditional performance measures are based on financial accounting systems, new systems are shaped by criteria such as flexibility, simplicity, and employee satisfaction. Ghalayini and Noble [115] argue

that traditional measures are limited and lagging, while new generation measures support continuous improvement Ghalayini and Noble [115].

Altindag [116] recommends the integrated use of traditional and new generation performance measurement systems [116]. Researchers such as Keegan, Cross, Fitzgerald and Kaplan-Norton have developed systems that combine internal and external criteria, financial and non-financial indicators. These systems provide not only past performance but also insights that guide future strategies. Imamoglu and Turkcan [100] see performance measurement as a strategic tool in line with the value creation efforts of businesses Imamoglu and Turkcan [100]. Bag, et al. [117] emphasize that performance should be measured not only by current customer loyalty but also by growth in market share [117]. This shows that evaluation should be made with multiple indicators rather than a single performance indicator [118].

3. Methodology

3.1. Purpose and Importance of the Study

The main objective of this study is to examine the effects of corporate governance and innovation climate on firm performance in the context of environmental uncertainty perception. In today's rapidly changing and unpredictable economic environment, firms are evaluated not only by their internal structures but also by their strategic responses to environmental factors, and competitive advantage is shaped by these multidimensional competencies. Accordingly, corporate governance strengthens the corporate structure and increases stakeholder trust through the principles of transparency, accountability and equality. Innovation climate, on the other hand, improves firms' flexibility and adaptability by building a learning organizational structure that encourages creativity. However, the impact of these two constructs on firm performance can be understood more holistically when contextual variables such as the environment are taken into account. Uncertainty is shaped by the unpredictability of market dynamics, technological transformations and fluctuations in competitive conditions. These external factors directly affect strategic decision-making processes and the effectiveness of internal governance mechanisms.

In this context, the importance of this study lies in filling an important gap in the literature by empirically testing the interaction between corporate governance and innovation climate and environmental conditions. Thus, it both contributes theoretically and guides managers in developing more robust organizational structures in uncertain environments.

3.2. Research Model

The model of this research addresses the multidimensional structures affecting firm performance on the axis of corporate governance, innovation climate and environmental uncertainty. In the model, corporate governance and innovation climate are positioned as independent variables, environmental uncertainty as a mediating variable and firm performance as a dependent variable. Thus, the interactions of endogenous and exogenous factors on firm performance are evaluated holistically.

On the theoretical basis, principles of corporate governance such as transparency, accountability and stakeholder participation contribute positively to performance by increasing decision-making efficiency [7, 119]. The climate of innovation, on the other hand, as Amabile, et al. [10] argue, provides a competitive advantage by creating an environment that supports employee creativity [10]. Environmental uncertainty is considered as a contextual condition that can change the effects of these two constructs. Uncertainty affects managerial processes by complicating strategic decisions [15, 80]. Increasing this factor can transform the effects of corporate governance and innovation climate on performance.

The model was tested using structural equation modeling (SEM). SEM allows direct and indirect relationships between variables to be analyzed simultaneously. The model hypothesizes that corporate governance and innovation climate have direct positive effects, while environmental factors play a mediating role in these relationships. As a result, this model contributes to performance management by analyzing the interaction between the internal dynamics of businesses and environmental conditions in a multidimensional way.

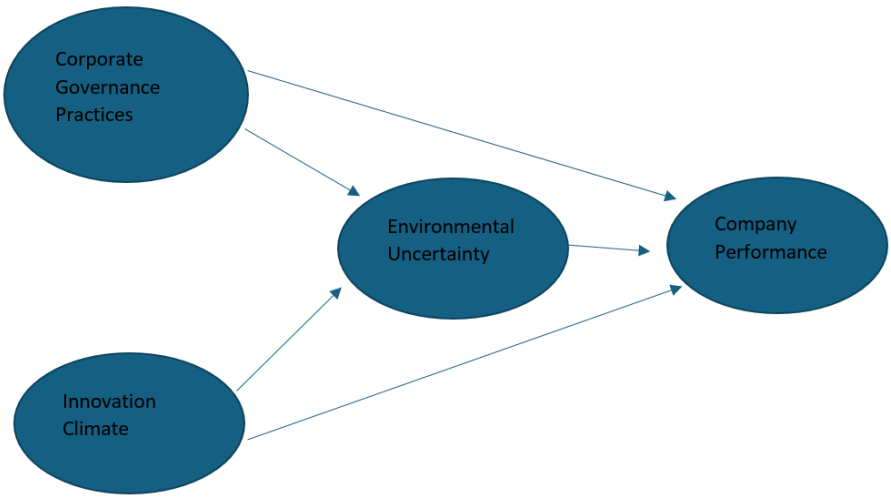

Figure 1.
Research Model.

H_1: Corporate governance practices have a positive and significant effect on firm performance.

H_2: Corporate governance practices have a positive and significant effect on the perception of environmental uncertainty.

H_3: High and accurate perception of environmental uncertainty has a positive effect on firm performance by increasing the firm's adaptive capacity to the environment.

H_4: The innovation climate in the organization positively affects employees' ability to perceive environmental uncertainty.

H_5: The existence of an innovative climate within the organization has a positive and significant effect on firm performance.

H_6: Perception of environmental uncertainty mediates the relationship between corporate governance practices and firm performance; accordingly, the effect of corporate governance practices on firm performance is shaped indirectly through the way managers perceive environmental conditions.

H_7: Perception of environmental uncertainty mediates the relationship between innovation climate and firm performance; accordingly, the effect of innovation climate on firm performance is shaped indirectly through how managers perceive environmental conditions and interpret these uncertainties.

In the model developed in this study, the effects of corporate governance practices and innovation climate on the perception of environmental uncertainty and firm performance are considered multilevel. Hypotheses H1 and H2 hypothesize that corporate governance not only enhances internal performance but also manages the perception of uncertainty in the external environment. Hypothesis H3, on the other hand, suggests that the correct perception of uncertainties and the strategic management of this perception can create positive results on performance. The direct effects of innovation climate on environmental uncertainty perception and firm performance are tested by hypotheses H4 and H5, and this structural interaction is associated with organizational learning and adaptability. Moreover, H6 and H7 hypothesize that perception of environmental uncertainty plays a partial mediating role in the relationships between corporate governance and innovation climate and firm performance. In this way, the model aims to provide a more holistic view by explaining not only direct effects but also interactions in internal processes.

3.3. Research Methodology

This study examines the effects of corporate governance and innovation climate on firm performance in the context of environmental uncertainty. The quantitative method is adopted in the study and a structured questionnaire is used to collect data. The questionnaire is based on scales that have been validated in the literature. The data were collected online via Google Forms in line with the increasing digital access opportunities after the pandemic. Participants consisted of managers and employees working in different sectors, and the sample was limited to more than 400 people who answered the online survey completely. For data analysis, Latent Moderated Analysis (LMA) method was preferred within the scope of structural equation modeling (SEM). LMA is an appropriate technique for analyzing the complex structure of the research model with its capacity to analyze both direct and indirect effects between latent variables. Analyses were conducted only with SmartPLS 4 software.

In the first stage, the reliability and validity of the measurement model were tested, and then the direct and indirect effects and mediation relationships were analyzed in the structural model. The partial mediation effect identified through the environmental uncertainty variable was evaluated using the Bootstrap method with a 95% confidence interval. The results show that there are significant and strong relationships between the variables in the model. Corporate governance and innovation climate significantly affect firm performance directly and through environmental factors. In this respect, the LMA method made a significant contribution to the holistic analysis approach of the study.

3.4. Scales Used in the Study

In the study, scales with proven validity and reliability were used to measure the variables. All scales were structured with a 7-point Likert-type rating system; participants were asked to rate each statement between 1 (Strongly disagree) and 7 (Strongly agree). In this way, perceptions were quantitatively measured and appropriate data were obtained for analysis.

The Corporate Governance variable was adapted from the scale developed by Gabrielsson and Huse [120] which measures the functions, oversight mechanisms and strategic orientation of boards of directors, especially in SMEs [120]. This construct has broad literary support due to its direct and indirect effects on performance.

Innovation Climate was measured based on the scale in Popa, et al. [121]. The scale assesses the encouragement of creative thinking in the organization, leadership styles, openness to innovation, and organizational learning capacity.

Environmental Uncertainty is based on the work of Jaworski and Kohli [122] and Grewal and Tansuhaj [123]. It systematically measures respondent perceptions of external factors such as market instability, economic crises and strategic unpredictability.

Firm Performance is assessed using a multidimensional measurement approach. Indicators such as sales growth, market share, profitability, customer satisfaction, innovation success, and achievement of strategic goals are measured using statements adapted from Antoncic and Hisrich [124]; Zahra, et al. [125]; Chang, et al. [126]; King and Zeithaml [127]; Rosenzweig, et al. [128]; Venkatraman and Ramanujam [129]; Baker and Sinkula [130] and Vorhies, et al. [131].

All scales were modeled as latent variables in accordance with the structure of the conceptual model and evaluated in SEM analyses. Their reliability and validity were tested with confirmatory factor analysis and it was found that they made a significant contribution to the model with high factor loadings. These findings show that the scales are scientifically adequate in answering the research questions.

3.5. Education Levels of Participants

The level of education of the respondents is an important factor in terms of the validity of the data and is evaluated in comparison with Turkey in general. Of the respondents, 70.1% are university/college graduates, 23.8% are master's/doctorate graduates; only 6.1% are high school graduates and there are no primary school graduates. According to Turkish Statictical Institute 2023 data, 30.5% of the population over the age of 25 are university/college graduates, 7.3% have a master's degree or higher, 39.5% are primary school graduates, and 22.7% are high school graduates. This comparison shows that the education level of the research sample is well above the average in Turkey.

This is an expected result since strategic management areas such as corporate governance, innovation and environmental uncertainty, which are the subject of the research, require a high level of knowledge and managerial awareness. Although high education level increases the reliability of the data, it may limit the direct generalization of the results to the general workforce population. In sum, the high level of education in the sample allows for informed assessments of strategic issues, but it should be noted that different results may emerge, especially in sectors with lower levels of education.

4. Findings

4.1. Factor Analysis

Table 1.
Rotated Component Matrix.

	Component			
	1	**2**	**3**	**4**
Your overall level of profitability	0.837			
Average annual increase in your sales	0.794			
Increase in your market share compared to your leading competitors	0.789			
Your position in the competitive environment in the market in general	0.788			
Your overall level of financial success	0.784			
Increase in the number of new products you introduce to the market	0.782			
Your average net profitability relative to your shareholders' equity	0.777			
The financial success of the new products you bring to market	0.774			
Increase in the number of new customers	0.761			
Your average net profitability before tax	0.759			
Net income from your core activities	0.722			
Monitor and evaluate managerial activities and performance		0.800		
Review and formulate the company's long-term strategy		0.792		
Hiring and firing the CEO		0.763		
Serving as an advisory board for management		0.759		
Legitimizing the company to external stakeholders		0.737		
Protecting the interests of shareholders		0.736		
Formulate short-term goals		0.654		
Price competition is the defining characteristic of our industry			0.785	
There is fierce competition in our sector			0.767	
There is competitive movement almost every day			0.757	
There is a lot of promotion (promotional efforts) war in our sector			0.740	
In our industry0. any competitor's offer to the market is immediately and easily responded to by other providers			0.698	
Our employees are recognized and rewarded for their creativity and innovative ideas				0.797
Our company provides time and resources for employees to generate0. share/exchange and experiment with innovative ideas/solutions				0.769
Our employees work in work groups with diverse skills and there is free and open communication between group members				0.746
Our employees often face challenging work that is non-routine and encourages creativity				0.670

According to the results of the factor analysis conducted in the study, four main components (factors) emerged: Firm Performance, Corporate Governance, Environmental Uncertainty and Innovation Climate. The Rotated Component Matrix results show that the variables are grouped significantly under these components and have high factor loadings. The first factor, Firm Performance, is quite consistent with loading values ranging from 0.722 to 0.837. These findings suggest that the variables are strong indicators for measuring firm performance. The statements with high loading values are among the key determinants of organizational success and provide key implications for performance management and strategic planning. The inclusion of dimensions such as effectiveness, efficiency and growth among the performance criteria developed by Murphy, et al. [102] points to the significance of such indicators [102].

The second factor, the Corporate Governance Scale, is represented by seven variables reflecting corporate governance principles. The loading values range between 0.800 and 0.654. This indicates that dimensions of corporate governance principles such as accountability and transparency are determinant on perceived governance quality. The four core governance principles recommended by the OECD – fairness, transparency, accountability and responsibility – form the theoretical basis of this factor [6]. There are many studies in the literature on the direct impact of corporate governance on firm performance [7, 132]. In addition, in the analysis, the effect of corporate governance practices on firm performance was found to be significant at the level of β=0.658. This result reveals that governance is strongly related to performance and supports the potential of organizational structures to create competitive advantage within the framework of the resource-based approach [133].

The third factor, Environmental Uncertainty Scale, measures the perceived unpredictability of the external environment of organizations. The highest loading value of this factor is 0.785, while the lowest loading is 0.698. This indicates different levels of perception of the unpredictability of environmental factors and their impact on the organization. Milliken defines environmental uncertainty in three main dimensions: situation, impact and response uncertainty [15]. In the literature, many studies on the impact of environmental uncertainty on firm performance show that this uncertainty complicates decision-making processes and complicates strategic orientation [134]. Moreover, according to the hypothesis test results, the effect of environmental uncertainty perception on firm performance is determined as one of the strongest relationships with β=0.726. This finding reveals that effective management of environmental factors is critical for organizational performance.

The fourth factor, Innovation Climate Scale, covers components such as creative thinking, flexibility and supportive leadership within the organization. The loading values of the variables belonging to this factor vary between 0.670 and 0.797. This range supports the homogeneity and internal consistency of the factor structure. Innovation climate has often been conceptualized in the literature with models developed by researchers such as Anderson and West [135]; Ekvall [66]. These models emphasize the existence of environments that encourage innovation through variables such as vision, resource access, risk-taking and supportive climate. The direct effect of innovation climate on firm performance was found to be β=0.700 and found to be significant. This result reveals that innovation climate can increase performance through employee motivation and organizational flexibility.

Finally, the findings regarding the mediation effect reveal that the perception of environmental uncertainty plays a partial mediating role in the relationship between corporate governance practices and firm performance as well as between innovation climate and firm performance. This suggests that the effect of internal variables such as governance and innovation on performance works interactively with the perception of external environmental factors. In this context, the mediating role of the perception of environmental uncertainty highlights the impact of the level of adaptation of organizations to environmental conditions on internal processes. The mediation model proposed by Baron and Kenny is widely used in such analyses and a similar approach was adopted in this analysis [136].

Overall, the results of the factor analysis strongly support the validity of the scales used in the study and their compatibility with the conceptual structure. Each factor consists of sub-variables with high internal consistency and each of these factors is theoretically consistent with the literature. The relationships between firm performance, corporate governance, environmental uncertainty and innovation climate are significant at both theoretical and empirical levels. In this context, the findings suggest that organizations need to manage internal structures and external environment in harmony to ensure sustainable success. The impact of factors such as corporate governance and innovation climate is not only limited to direct performance outcomes, but also affects the way environmental uncertainty is perceived and the strategies developed in the face of this uncertainty.

4.2. Hypothesis Test Results

Table 2.
Table of Hypothesis Test Results.

Hypothesis	Relationship	Beta (β)	p value	R^2	Conclusion
H1	Impact of CGP on FP	0.658	< 0.001	0.433	Supported
H2	Impact of CGP on PEU	0.683	< 0.001	0.466	Supported
H3	Impact of PEU on FP	0.726	< 0.001	0.527	Supported
H4	Impact of the IC on the PEU	0.635	< 0.001	0.404	Supported
H5	Impact of IC on FP	0.700	< 0.001	0.490	Supported

Note: CGP: Corporate Governance Practices, FP: Firm Performance, PEU: Perception of Environmental Uncertainty, IC: Innovation Climate.

The analysis conducted in line with the results of the hypothesis test reveals the relationships between Corporate Governance Practices, Innovation Climate, Perception of Environmental Uncertainty and Firm Performance in a comprehensive manner. The fact that all hypotheses tested in the study are significant and supported shows that the related variables are highly related to each other. Firstly, within the scope of hypothesis H1, the effect of corporate governance practices on firm performance is examined and it is found that this relationship is significant and strong (β=0.658, p<0.001, R^2=0.433). This result reveals that corporate governance principles - such as transparency, accountability, responsibility and fairness - have a direct impact on firm performance. This effect has been widely supported in the literature. For example, Gompers, Ishii and Metrick argue that good corporate governance practices enhance long-term financial success [137].

Secondly, hypothesis H2 examines the effect of corporate governance practices on the perception of environmental uncertainty and significant results are obtained with β=0.683, p<0.001, R^2=0.466. This finding suggests that strong corporate governance structures can reduce the perception of environmental uncertainty. This suggests that governance principles shape not only the internal functioning but also the perceptions of the organization's external environment. Similarly, Milliken argues that lack of information about the organizational environment increases the perception of uncertainty; therefore, informed decision-making processes – which are related to corporate governance – can reduce uncertainty [15].

In the third hypothesis, H3, the effect of environmental uncertainty perception on firm performance was analyzed and the result was β=0.726, p<0.001, R^2=0.527. This finding indicates that environmental uncertainty is a strong determinant of firm performance. Environmental uncertainty can affect firm performance through factors such as dynamism, complexity and resource scarcity.

Within the framework of hypothesis H4, the effect of innovation climate on environmental uncertainty perception is supported with β=0.635, p<0.001, R^2=0.404. This shows that businesses with an innovation climate are more resilient and adaptive to environmental uncertainty. In this context, Crespell and Hansen [69] innovative climate model revealed that factors such as safe environment, autonomy and access to resources enable the development of more flexible strategies against environmental changes [69]. In such an environment, employees are better equipped to develop creative solutions to complexity and uncertainty in the external environment.

Hypothesis H5 focused on the effect of innovation climate on firm performance and this relationship is strongly supported (β=0.700, p<0.001, R^2=0.490). Innovation climate has positive effects especially on non-financial dimensions of performance (innovation, customer satisfaction, employee engagement). Amabile, et al. [10] state that innovative environments positively affect organizational creativity and thus corporate outcomes [10].

Hypotheses H6 and H7, which are evaluated within the scope of hypothesis testing, examine the mediation effects. In hypothesis H6, environmental uncertainty perception is found to partially mediate the relationship between corporate governance practices and firm performance (indirect effect = 0.2706, confidence interval: 0.2400-0.3938). This suggests that corporate governance affects firm performance not only directly but also indirectly by shaping the perception of environmental uncertainty. Similarly, hypothesis H7 confirms the partial mediating role of perception of environmental uncertainty in the relationship between IRP and FCP (indirect effect = 0.3536, confidence interval: 0.2025-0.3327). This result suggests that innovation climate can enhance firm performance through its capacity to manage the perception of environmental uncertainty. This finding is in line with the suggestions in the literature in terms of strategic agility and adaptation to environmental uncertainty [90].

In conclusion, the hypotheses analyzed explain both direct and indirect relationships in a meaningful way and show that there is a holistic interaction between these variables. Corporate governance principles play a fundamental role in firm performance by directly influencing not only internal management quality but also environmental perceptions and strategic decisions. Likewise, innovation climate is a strategic factor that affects performance both directly and through environmental uncertainty. Environmental uncertainty stands out as an intermediate variable that strengthens or weakens the effect of other variables. In line with these findings, firms need to develop a strategy that integrates governance, innovation and environmental sensitivity in order to improve their performance.

4.3. Mediation Hypothesis Test Results

Table 3.
Mediation Effect Hypothesis Results.

Hypothesis	Mediation Relationship	Direct Impact	Indirect Impact	95% Confidence Interval	Conclusion
H6	Mediating effect of PEU between CGP and FP	0.2706 (p <0.001)	0.3151	0.2400- 0.3938	Partial Brokerage (Supported)
H7	Mediating effect of PEU between IC and FP	0.3536 (p <0.001)	0.2654	0.2025- 0.3327	Partial Brokerage (Supported)

Note: PEU: Perception of Environmental Uncertainty, CGP: Corporate Governance Practices, FP: Firm Performance IC: Innovation Climate.

The results of the mediation analysis focus on two main mediation hypotheses within the framework of structural equation modeling: Hypothesis H6 suggests that the perception of environmental uncertainty plays a partial mediating role in the relationship between corporate governance practices and firm performance, while hypothesis H7 suggests that the perception of environmental uncertainty plays a similar partial mediating role in the relationship between innovation climate and firm performance. The direct effect β = 0.3151 and the indirect effect β = 0.2706 observed in hypothesis H6 suggest that part of the effect of corporate governance practices on firm performance is realized indirectly through the perception of environmental uncertainty. In this context, environmental uncertainty functions as a mechanism that strengthens the effect of corporate governance on firm performance. Similarly, according to hypothesis H7, the direct effect of innovation climate on firm performance is β = 0.2654, while the indirect effect is β = 0.3536. This shows that the effect of innovation climate on firm performance is realized indirectly through environmental uncertainty. Both mediation relationships are statistically significant and supported by 95% confidence interval.

These results suggest that environmental uncertainty is not only an external threat but also an influential variable in strategic decision-making processes. While Milliken [15] classic definition of environmental uncertainty states that

organizations experience uncertainty due to lack of information about environmental conditions [90] this study reveals the mediating potential of uncertainty on organizational outcomes. Daft and Weick [134] model of organizational environmental perception emphasizes that the environment is not only a passive context but also an active factor that shapes organizational behavior [134]. In this context, managers' capacity to perceive and process environmental signals directly affects strategic outcomes. In particular, the fact that the impact of endogenous organizational variables such as innovation climate on firm performance is largely mediated through the perception of environmental uncertainty reveals how critical the suitability of environmental conditions is for the success of innovative practices. There are studies supporting this situation in the literature. Based on these studies, it can be argued that environmental uncertainty is effective on firm performance not only as an external factor but also in interaction with internal constructs such as corporate governance practices and innovation climate.

The findings of the mediation analysis are also in line with the basic principles of organizational behavior theories. In particular, Resource Dependence Theory emphasizes the dependence of firms on environmental resources and states that organizational structures and relationships should be reshaped to overcome this dependence [138]. In this context, the finding that the effect of corporate governance practices on firm performance is strengthened through environmental factors is consistent with this theoretical framework. The mediation findings on innovation climate can be traced back to the adaptive organizations literature. Tushman and O'Reilly III [138] ambidexterity theory states that organizations should have the ability to manage both stability and change simultaneously [138]. In this case, the effect of innovation climate on firm performance through the perception of environmental uncertainty suggests that adaptation to environmental factors is an important determinant of success.

The findings also provide important implications for the strategic management processes of organizations. In order for the impact of corporate governance structures on firm performance to be felt more strongly, environmental conditions should be analyzed appropriately and the level of uncertainty should be managed correctly. In this respect, the mediating role of the perception of environmental uncertainty stands out as a critical factor for optimizing the strategic impact of governance practices. On the other hand, it is not enough for the innovation climate to have an impact on firm performance alone; it is important for the applicability and sustainability of innovative ideas that this impact makes sense in the environmental context.

In conclusion, the mediation analysis shows that environmental uncertainty is a significant and statistically strong mediating variable in the relationships between both corporate governance and innovation climate and firm performance. This interactional role of environmental factors is consistent with strategic management theories, organizational environment theories and modern governance approaches. In this context, managers need to shape their policies and practices by taking into account not only internal structures but also the variability of environmental conditions. Such holistic approaches have become inevitable to ensure competitive advantage, especially in sectors where uncertainty is high.

5. Discussion

In this study, corporate governance, innovation climate and environmental uncertainty variables are analyzed as factors affecting firm performance. The findings are generally consistent with the studies in the literature and in some cases offer new insights.

First, a positive relationship is found between corporate governance and firm performance. This result is similar to the findings of Aguilera and Jackson [7] and Bhagat and Bolton [139]. It is consistent with the findings that governance strengthens firm decision-making processes and improves performance through principles such as transparency and accountability. Some studies in the literature have shown that governance quality is directly related not only to financial performance but also to reputation and stakeholder relations [140]. In line with this, our study shows that governance functions not only as a compliance enabler but also as a strategic lever. However, some studies suggest that the relationship between governance and performance differs across sectors [21] since our study does not make such a distinction, this may be explored in future studies.

The positive relationship between innovation climate and firm performance is in line with the findings of the "team climate inventory" developed by Barney [133]. It is frequently emphasized in the literature that performance increases in organizational climates where employees' idea generation, experimentation and risk-taking behaviors are supported [141, 142]. Our finding reveals that the creation of such an innovative climate in the Turkish business world is decisive for organizational performance. However, in some studies, it has been stated that the effect of innovation climate is sensitive to the cultural context [143]. The fact that our study confirms this relationship in the context of local sample fills an important gap in the Turkish context.

A remarkable finding was obtained in the relationship between environmental uncertainty and firm performance: While most of the studies in the literature indicate that environmental uncertainty has negative effects on performance [15, 19] in this study, it is observed that firms consider uncertainty as an opportunity and maintain their performance to the extent that they can develop strategic flexibility. This is in line with the "dynamic capabilities" perspective developed by Teece, et al. [144]. In addition, March [145] balancing of "exploration and exploitation" also supports this perspective. However, some studies suggest that responses to uncertainty vary by industry, firm size, and leadership structure [17] in this context, our study is limited as it does not examine these factors in detail.

When the three variables are considered together, it is observed that the synergistic effect of corporate governance and innovation climate leads to stronger performance outcomes under conditions of environmental uncertainty. This result is in line with Munisi, et al. [146] and Damanpour and Aravind [147] who argue that the quality of governance in combination

with organizational innovation capacity creates strategic value. Moreover, within the framework of Freeman [113] stakeholder theory, this synergy supports the necessity of considering internal structures together with enhanced organizational responsiveness to the external environment. As one of the rare studies testing the simultaneous effect of these three variables, our study empirically confirms these theoretical propositions in the literature.

In conclusion, our study reveals that firm performance depends not only on the strength of internal structures but also on how these structures interact with the environmental context. In this context, a holistic approach to governance, innovation and uncertainty will contribute to more accurate and strategic decisions in performance management. These results, which largely overlap with previous findings in the literature, also offer unique contributions in the local context and form a basis for new research.

6. Conclusion

This study provides a multidimensional assessment by analyzing the effects of corporate governance practices and innovation climate on firm performance through the perception of environmental uncertainty. Analyses using structural equation modeling (SEM) showed that all hypotheses in the research model were supported in a significant and statistically strong manner. Corporate governance practices are found to have a direct impact on firm performance and also significantly affect the perception of environmental uncertainty. This finding reveals that governance principles are not only limited to internal processes but also play a role in shaping perceptions of the external environment. Similarly, innovation climate showed positive effects on both firm performance and environmental uncertainty. This suggests that an innovative organizational culture enhances the capacity to respond more quickly and flexibly to changing and unpredictable environmental conditions. The effect of environmental uncertainty variable on firm performance was measured at the highest level and this factor was found to be central to strategic management processes.

Mediation analyses revealed that the perception of environmental uncertainty plays a partial mediating role in both corporate governance-firm performance (H6) and innovation climate-firm performance (H7) relationships. This finding suggests that strategic interactions between internal structures and external environment shape business success in a decisive way. Environmental uncertainty should be treated not only as a threat but also as a context that supports the development of strategic awareness and agility. In conclusion, this paper shows that corporate performance is not only about governance structures or innovation; how these elements interact with the environmental context is as critical as internal factors. Accordingly, it has become imperative for managers to develop organizational structures that internalize corporate governance principles, are open to innovation, and can transform environmental uncertainty into a strategic advantage for sustainable competitive advantage. The holistic approach offered by the study contributes to the academic literature and serves as a strategic roadmap for practitioners.

Moreover, the results of the study have important implications for the Turkish business world. Increasing the level of compliance with corporate governance principles, especially for firms operating in emerging markets, not only reinforces investor confidence, but also enables the establishment of structures that are more resilient to uncertainties in the external environment. In this context, it becomes clear that firm managements should adopt governance mechanisms not only to meet legal obligations but also as a strategic value creation tool. Likewise, supporting the innovation climate increases the adaptability of organizations against environmental threats and thus increases competitiveness. The mediation relationships tested within the scope of the research model show that environmental uncertainty is not a passive risk factor, but can play an active role as an interaction area of organizational structure and strategies. This makes it necessary for managers to evaluate the perception of uncertainty not as a threat to be suppressed but as a strategic driver. Especially in fast-changing industries, governance practices shaped by environmental awareness and a culture of innovation play a critical role in sustaining performance.

This paper proposes a novel framework that attempts to explain firm performance through the relationships between corporate governance and innovation through the environmental context. Both the findings obtained through structural equation modeling and the theoretical underpinnings support the scientific validity of this approach. In future research, testing this model in different sectors and firms of different sizes will strengthen the generalizability of the findings. It is also suggested that field studies supported by qualitative data can be used to draw more in-depth conclusions about how governance practices are integrated with organizational culture and leadership styles. In this way, the concept of corporate governance can be transformed into a more functional and guiding mechanism not only at the theoretical but also at the practical level.

Although this study is built on a comprehensive theoretical foundation and tested through a quantitative research model, some limitations have the potential to affect the generalizability and interpretability of the findings. First, the research data was collected over a specific time period and in a specific geographical context (i.e. limited to private sector firms in Turkey). This limits the direct generalization of the results to other countries or markets with cultural, sectoral and institutional differences. Second, the data collection method used in this study is a self-report questionnaire. Since such data collection instruments are based on respondents' perceptions and subjective assessments, they may be prone to measurement errors such as social desirability bias and perception errors. Respondents' statements on governance practices, perceptions of uncertainty or performance levels may not always reflect the actual situation. Third, only corporate governance, environmental uncertainty perception and innovation climate variables are considered in the study. Other important variables that may affect firm performance such as leadership style, organizational culture, technological infrastructure, industry competition level and economic conjuncture are not included in the model. This may limit the explanatory power of the model. Finally, although the structural equation modeling used provides powerful statistical analysis, it is not possible to draw firm conclusions about cause and effect relationships. The findings are correlational in

nature; the assumption of causality is made based on theoretical justifications and literature support. Despite these limitations, the study makes important contributions to the literature and provides a solid foundation for future research. Recognizing the limitations, future research with different samples, longitudinal data collection and mixed method designs will allow these findings to be tested in a broader framework.

The research findings have clearly revealed the determinant effect of corporate governance practices and innovation climate on firm performance. Accordingly, it is recommended that managers should consider corporate governance principles (fairness, transparency, accountability and responsibility) not only as formal requirements but also as an integral part of corporate strategies. By integrating these principles into the corporate culture, managers should both strengthen internal audit processes and reinforce trust with external stakeholders. Moreover, in dynamic market conditions with high environmental uncertainties, it is important that governance mechanisms are seen not only as a means of risk mitigation but also as a means of creating strategic awareness and flexibility. In the context of innovation climate, managers are advised to adopt leadership styles that encourage a culture of learning, creativity and experimentation within the organization. A climate where innovative ideas can be freely expressed, where making mistakes is accepted as a learning tool and where continuous improvement is supported will strengthen the capacity to cope with environmental uncertainties and ensure sustainability of performance.

For academics, this study provides a unique model explaining the dynamic relationship between corporate governance, perception of uncertainty and innovation climate. Future research is recommended to test this model in different sectors, countries and cultural contexts. Furthermore, creating more holistic data sets through secondary performance data, in-depth interviews with managers and longitudinal designs, rather than being limited to self-report-based data, will increase the conceptual depth of the field. The re-discussion of corporate governance in the academic community together with sustainability, ethical leadership, digitalization and artificial intelligence-based management processes will provide original contributions to the literature.

References

[1] D. J. Teece, "Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance," *Strategic Management Journal*, vol. 28, no. 13, pp. 1319-1350, 2007. https://doi.org/10.1002/smj.640

[2] R. A. D'Aveni, G. B. Dagnino, and K. G. Smith, "The age of temporary advantage," *Strategic Management Journal*, vol. 31, no. 13, pp. 1371-1385, 2010.

[3] S. Zahra and J. Pearce, "Board of director involvement in restructuring: Effects on extra-role behaviors in strategic decision making," *Academy of Management Journal*, vol. 32, no. 3, pp. 554-576, 1989.

[4] N. Anderson, K. Potočnik, and J. Zhou, "Innovation and creativity in organizations," *Journal of Organizational Behavior*, vol. 35, no. S1, pp. S129–S144, 2014.

[5] M. Ararat and G. Dallas, "Corporate governance in emerging markets," OECD Corporate Governance Working Papers, No. 1, 2011.

[6] OECD, *G20/OECD principles of corporate governance*. Paris: OECD Publishing, 2015.

[7] R. V. Aguilera and G. Jackson, "The cross-national diversity of corporate governance: Dimensions and determinants," *Academy of Management Review*, vol. 28, no. 3, pp. 447-465, 2003. https://doi.org/10.5465/amr.2003.10196772

[8] S. L. Gillan, "Recent developments in corporate governance: An overview," *Journal of Corporate Finance*, vol. 12, no. 3, pp. 381-402, 2006.

[9] B. Tricker, *Corporate governance: Principles, policies, and practices*. Oxford: Oxford University Press, 2019.

[10] T. M. Amabile, R. Conti, H. Coon, J. Lazenby, and M. Herron, "Assessing the work environment for creativity," *Academy of Management Journal*, vol. 39, no. 5, pp. 1154-1184, 1996.

[11] J. J. Jansen, F. A. Van Den Bosch, and H. W. Volberda, "Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators," *Management Science*, vol. 52, no. 11, pp. 1661-1674, 2006. https://doi.org/10.1287/mnsc.1060.0576

[12] K. M. Eisenhardt and J. A. Martin, "Dynamic capabilities: What are they?," *The SMS Blackwell Handbook of Organizational Capabilities*, vol. 21, no. 10-11, pp. 341-363, 2017.

[13] M. R. González-Rodríguez, M. C. Díaz-Fernández, and M. Pawlak, "Analysis of the influence of corporate governance on environmental performance," *Sustainability*, vol. 11, no. 18, p. 4909, 2019.

[14] P. R. Lawrence and J. W. Lorsch, *Organization and environment: Managing differentiation and integration*. Boston, MA: Harvard Business School Press, 1967.

[15] F. J. Milliken, "Three types of perceived uncertainty about the environment: State, effect, and response uncertainty," *Academy of Management Review*, vol. 12, no. 1, pp. 133–143, 1987.

[16] B. K. Boyd and J. Fulk, "Executive scanning and perceived uncertainty: A multidimensional modela," *Journal of Management*, vol. 22, no. 1, pp. 1-21, 1996. https://doi.org/10.1177/014920639602200010

[17] J. P. Davis, "A model of uncertainty, performance and adaptation," *Academy of Management Journal*, vol. 53, no. 3, pp. 502–521, 2010.

[18] G. G. Dess and D. W. Beard, "Dimensions of organizational task environments," *Administrative Science Quarterly*, vol. 29, no. 1, pp. 52-73, 1984.

[19] H. E. Aldrich, *Organizations and environments*. Stanford, CA: Stanford University Press, 2008.

[20] S. G. Scott and R. A. Bruce, "Determinants of innovative behavior: A path model of individual innovation in the workplace," *Academy of Management Journal*, vol. 37, no. 3, pp. 580-607, 1994.

[21] L. D. Brown and M. L. Caylor, "Corporate governance and firm valuation," *Journal of Accounting and Public Policy*, vol. 25, no. 4, pp. 409-434, 2006.

[22] A. Engelen, V. Gupta, L. Strenger, and M. Brettel, "Entrepreneurial orientation, firm performance, and the moderating role of transformational leadership behaviors," *Journal of Management*, vol. 41, no. 4, pp. 1069-1097, 2015.

[23] Y. Zhang, F. Wei, and J. M. Sun, "How leaders shape the impact of HR practices on employee performance," *Human Resource Management*, vol. 60, no. 3, pp. 367–382, 2021.
[24] J. Pfeffer and G. R. Salancik, *The external control of organizations: A resource dependence perspective*. New York: Harper & Row, 1978.
[25] J. Child, "Organizational structure, environment and performance: The role of strategic choice," *Sociology*, vol. 6, no. 1, pp. 1-22, 1972.
[26] O. S. Agyemang and M. Castellini, "Corporate governance and performance of small and medium enterprises," *Journal of Corporate Governance*, vol. 15, no. 5, pp. 693–707, 2015.
[27] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate data analysis*, 7th ed. Upper Saddle River, NJ: Pearson Education, 2010.
[28] R. B. Kline, *Principles and practice of structural equation modeling*. New York: The Guilford Press, 2015.
[29] D. J. Teece, "The foundations of enterprise performance: Dynamic and ordinary capabilities in an (economic) theory of firms," *Academy of Management Perspectives*, vol. 28, no. 4, pp. 328-352, 2014.
[30] K. Kostopoulos, Y. E. Spanos, and G. Prastacos, "The resource-based view of the firm and innovation: Identification of critical linkages," *R&D Management*, vol. 41, no. 3, pp. 280–300, 2011.
[31] Ş. Arikboga and S. A. Mentes, "Corporate governance: Conceptual framework and practices," *Journal of Business Research*, vol. 2, no. 2, pp. 85–98, 2010.
[32] S. Ocak and Z. A. Ariboga, "The relationship between corporate governance principles and business sustainability," *Journal of Management and Economics Research*, vol. 15, no. 3, pp. 200–218, 2017.
[33] A. Sakli, "Governance and transformation in public administration," *Journal of Academic Inquiries*, vol. 7, no. 1, pp. 97–116, 2012.
[34] M. Sancar, *Democratic governance and political participation*. Ankara: İmge Publishing, 2013.
[35] Oxford University Press, *Oxford english dictionary*. Oxford: Oxford University Press, 2012.
[36] Ö. F. Iscan and E. Kaygin, "Corporate governance and ethics: A conceptual evaluation," *Ataturk University Journal of Economics and Administrative Sciences*, vol. 23, no. 3, pp. 123–138, 2009.
[37] A. Coskun and H. Akcan, "The effects of corporate governance principles on business success: A theoretical approach," *International Journal of Economics and Innovation*, vol. 4, no. 1, pp. 45–60, 2018.
[38] S. Ocak, "Corporate governance practices and regulations in Turkey," *Journal of Finance*, vol. 165, pp. 264–281, 2013.
[39] M. C. Jensen and W. H. Meckling, "Theory of the firm: Managerial behavior, agency costs and ownership structure," *Journal of Financial Economics*, vol. 3, no. 4, pp. 305–360, 1976.
[40] S. Tenteriz and B. Akkaya, "Theoretical approaches in corporate governance and their reflections on business management," *Business & Management Studies: An International Journal*, vol. 9, no. 3, pp. 866–885, 2021.
[41] K. Keasey and M. Wright, "Corporate governance: Responsibilities, risks and remuneration," *Long Range Planning*, vol. 30, no. 2, pp. 309–318, 1997.
[42] H. Hung, "A typology of the theories of the roles of governing boards," *Corporate Governance*, vol. 6, no. 2, pp. 101-111, 1998.
[43] O. E. Williamson, *The economic institutions of capitalism: Firms, markets, relational contracting*. New York: Free Press, 1985.
[44] S. Ayhun and S. Kose, "The impact of corporate governance practices on firm performance: A study on BIST companies," *Suleyman Demirel University Visionary Journal*, vol. 9, no. 22, pp. 27–43, 2018.
[45] A. T. Vural and M. Bat, "Corporate governance approach and the relationship with accounting information system," *Journal of Accounting and Finance*, vol. 49, pp. 103–116, 2011.
[46] A. Kara and M. Genc, "The effect of ethical leadership on corporate governance: A conceptual evaluation," *Journal of Business Ethics*, vol. 14, no. 1, pp. 89–106, 2021.
[47] F. Cetin and Y. Mohan Bursali, "Innovation: A conceptual review," *Journal of Management and Organization*, vol. 29, no. 2, pp. 154–170, 2023.
[48] A. Biricik, B. Yildiz, and C. Demir, "The effect of innovative climate on competitive advantage: A conceptual framework," *Journal of Business Research*, vol. 14, no. 1, pp. 101–112, 2022.
[49] Ö. Ç. K. Bozkurt, Ö., "The relationship between organizational innovation climate and employee performance," *Journal of Work and Human*, vol. 8, no. 2, pp. 235–251, 2021.
[50] E. Cobanoglu, "Innovation climate: A conceptual approach," *Journal of Organizational Behavior Research*, vol. 21, no. 1, pp. 45–58, 2020.
[51] B. Yildiz, S. Sezgin, and A. Arslan, "The relationship between innovation climate and organizational learning," *Suleyman Demirel University Journal of Graduate School of Social Sciences*, vol. 27, pp. 321–334, 2017.
[52] E. Kalaycioglu, "The effect of innovation climate on employee behaviors: A qualitative analysis," *Journal of Management and Economics Research*, vol. 21, no. 1, pp. 74–92, 2023.
[53] I. Furuseth and E. Leknes, "Creating a climate for innovation: Trust and leadership in creative teams," *Nordic Journal of Innovation*, vol. 10, no. 2, pp. 115–132, 2022.
[54] Ş. Aslan and S. Yildiz, "Innovation and organizational change: Business strategies in the face of changing demands," *Journal of Business Research*, vol. 11, no. 1, pp. 73–86, 2019.
[55] H. Aksoy and S. Yildiz, "The effect of innovation climate on employee performance: The case of the banking sector," *Journal of Entrepreneurship and Development*, vol. 10, no. 2, pp. 15–34, 2015.
[56] R. Shanker, R. Bhanugopan, B. I. Van der Heijden, and M. Farrell, "Organizational climate for innovation and organizational performance: The mediating effect of innovative work behavior," *Journal of Vocational Behavior*, vol. 100, pp. 67-77, 2017.
[57] H. Ren and Z. Zhang, "The role of organizational climate in the relationship between leadership and innovation: Evidence from China," *Journal of Managerial Psychology*, vol. 30, no. 3, pp. 251–265, 2015.
[58] Q. H. Vuong, "Entrepreneurial resilience and psychological safety in innovative teams," *Journal of Innovation & Knowledge*, vol. 7, no. 1, pp. 12–20, 2022.
[59] M. Tajpour, H. M. Salim, and A. A. Rosmini, "Shared vision, team solidarity and innovative work behavior: A study on small and medium enterprises," *European Journal of Innovation Management*, vol. 26, no. 4, pp. 921–938, 2023.

[60] Z. Su, E. Xie, D. Wang, and D. Lin, "How perceived organizational support motivates innovative behavior: The role of psychological empowerment and innovation climate," *Personnel Review,* vol. 51, no. 6, pp. 1458–1476, 2022.
[61] P. Bibi, J. Karim, and S. Ud Din, "Innovation climate and employee innovative behavior: A moderated mediation model," *Current Psychology,* vol. 39, no. 5, pp. 1683–1694, 2020.
[62] A. Sarwar, M. I. Abdullah, and M.I. Ishaq, "How innovative climate and organizational commitment affect job performance? Evidence from the education sector of Pakistan," *Global Business Review,* vol. 21, no. 6, pp. 1400–1416, 2020.
[63] T. Erkmen, E. Sezgin, and E. Aksoy, "The effects of innovation climate on brand value and organizational sustainability," *Journal of Marketing and Marketing Research,* vol. 13, no. 2, pp. 37–56, 2020.
[64] E. Baykal, "The effect of innovative climate on employees' creative problem-solving skills," *Journal of Humanities and Social Sciences Research* vol. 8, no. 3, pp. 2452–2466, 2019.
[65] A. Waheed, J. Yang, and D. J. Webber, "An investigation of the effects of organizational climate on employees' innovative work behavior: The mediating role of work motivation," *Journal of Strategy and Management,* vol. 12, no. 3, pp. 372–388, 2019.
[66] G. Ekvall, "Organizational climate for creativity and innovation," *European journal of work and organizational psychology,* vol. 5, no. 1, pp. 105-123, 1996. https://doi.org/10.1080/13594329608414845
[67] G. Bayhan, "Organizational climate supporting creativity: An evaluation on Ekvall's creative climate model," *Journal of Social Sciences Research,* vol. 7, no. 3, pp. 211–225, 2018.
[68] Z. Ozdemir, "Leadership and diversity norms in innovative organizations: Siegel and Kaemmerer model," *Journal of Management and Organization,* vol. 31, no. 1, pp. 134–149, 2023.
[69] P. Crespell and E. Hansen, "Managing for innovation: Insights into a successful company," *Forest products journal,* vol. 58, no. 5, pp. 6–17, 2008.
[70] T. Karaca, "Factors supporting employees' innovative behaviors: A conceptual review on crespell and hansen model," *Journal of Humanities and Social Sciences,* vol. 13, no. 2, pp. 78–93, 2024.
[71] H. Turgut, "Measuring innovative climate in organizations with the Team Climate Inventory (TCI): A conceptual and practical evaluation," *Turkish Journal of Psychology,* vol. 28, no. 72, pp. 56–69, 2013.
[72] M. Oney and B. Kaya, "Perception of uncertainty and decision-making: A cognitive-based approach," *Journal of Management Research,* vol. 22, no. 1, pp. 34–49, 2024.
[73] A. Zayadin, M. U. Hossain, and K. H. Lee, "Understanding environmental uncertainty: A cognitive perspective," *Journal of Environmental Management,* vol. 327, p. 116839, 2023.
[74] C. Beraha, "The concept of environmental uncertainty and its relation to strategic management," *Journal of Business and Economic Research,* vol. 11, no. 3, pp. 89–104, 2020.
[75] M. Turkoglu, N. Sahin, and S. Aytekin, "The effect of external environmental uncertainty on business strategies," *Journal of Business Science,* vol. 13, no. 1, pp. 55–68, 2024.
[76] M. Bozalan and F. Turan, "Supply chain management and strategies under conditions of uncertainty," *Journal of Logistics and Supply Chain,* vol. 8, no. 2, pp. 112–128, 2022.
[77] M. Merdan, "Dimensions of uncertainty in the strategic decision-making process," *Journal of Management and Strategy,* vol. 5, no. 2, pp. 42–58, 2022.
[78] R. Inman and K. W. Green, "Managing uncertainty: Revisiting Milliken's environmental uncertainty model," *Journal of Management Policy and Practice,* vol. 22, no. 4, pp. 71–84, 2021.
[79] H. Horasan and F. Kılıçbey, "Managers' perceptions of environmental uncertainty and their strategic responses," *Journal of Management and Economics Research,* vol. 21, no. 1, pp. 105–122, 2023.
[80] F. H. Knight, *Risk, uncertainty, and profit*. Boston: Houghton Mifflin, 1921.
[81] W. Ao, W. Yu, and M. Li, "Strategic responses to uncertainty: The role of scenario planning," *Long Range Planning,* vol. 56, no. 1, p. 102232, 2023.
[82] K. Ardic, A. Gunes, and A. Yalcin, "Managers' perception of uncertainty and decision diversity: A qualitative analysis," *Journal of Strategic Management,* vol. 14, no. 1, pp. 58–73, 2024.
[83] S. Ozgener and O. Bozkurt, "Strategic error tendencies under conditions of environmental uncertainty," *Journal of Business and Economics Research,* vol. 17, no. 2, pp. 103–117, 2019.
[84] I. Sener, "Strategic decision-making challenges in dynamic environmental conditions," *Journal of Management Sciences,* vol. 9, no. 2, pp. 33–47, 2011.
[85] K. Y. Wong and E. W. T. Ngai, "Environmental complexity and information requirements in managerial decision-making," *Journal of Business Research,* vol. 157, p. 113675, 2023.
[86] M. Tumer, "Strategic adaptation mechanisms in complex environments," *Journal of Business and Economic Research,* vol. 2, no. 3, pp. 45–59, 2011.
[87] B. Yesilkus, "The effects of environmental welfare on organizational sustainability," *Journal of Sustainability and Development,* vol. 5, no. 1, pp. 88–102, 2022.
[88] E. Caliskan and I. Akkoc, "The relationship between organizations' environmental welfare level and sustainable growth," *Journal of Management Research,* vol. 4, no. 2, pp. 65–81, 2012.
[89] B. Burak and A. Deniz, "Strategic agility in complex and dynamic environments," *Journal of Business and Management Sciences,* vol. 9, no. 3, pp. 147–162, 2021.
[90] R. L. Daft, *Organization theory and design*. Boston: Cengage Learning, 2015.
[91] G. Acikgoz, "The historical development of the performance concept and its current reflections," *Journal of Management Sciences,* vol. 15, no. 1, pp. 12–27, 2024.
[92] H. Baykal, S. Kilic, and M. Yilmaz, "The effect of employee behaviors on performance in business processes," *Journal of Organization and Management Research,* vol. 7, no. 2, pp. 88–104, 2018.
[93] M. Herciu, "A model of firm performance evaluation based on intelligent systems," *Procedia Engineering,* vol. 181, pp. 635–641, 2017.
[94] N. Arslanturk, "Evaluation of firm performance at the sectoral level: A proposed measurement model," *Journal of Business and Finance,* vol. 38, no. 4, pp. 133–151, 2023.

[95] A. Acaray and M. Savci, "Analysis of corporate performance indicators and their strategic importance," *Journal of Strategic Research and Management*, vol. 10, no. 1, pp. 56–73, 2024.
[96] F. Karahan and Z. Gumus, "The contribution of performance management systems to the strategic management process," *Journal of Management and Organization*, vol. 20, no. 3, pp. 92–108, 2023.
[97] H. Allaham, "Sectoral vs. internal dynamics: A comparative view on firm performance," *Journal of Strategic Management Research*, vol. 12, no. 1, pp. 45–61, 2024.
[98] M. Ormeci and A. Ocal, "Comparison of alternative criteria in measuring business performance," *Journal of Management Sciences*, vol. 21, no. 2, pp. 72–89, 2023.
[99] O. Erdil and H. Kitapci, "A study on the multidimensional evaluation of business performance," *Journal of Business Administration Faculty*, vol. 8, no. 2, pp. 57–68, 2007.
[100] S. Imamoglu and E. Turkcan, "The role of economic indicators in firm performance: A conceptual review," *Journal of Economics and Management Research*, vol. 16, no. 1, pp. 23–40, 2024.
[101] B. Demirel, "Performance evaluation approaches with social indicators," *Journal of Social Sciences Research*, vol. 9, no. 3, pp. 101–118, 2023.
[102] G. B. Murphy, J. W. Trailer, and R. C. Hill, "Measuring performance in entrepreneurship research," *Journal of business research*, vol. 36, no. 1, pp. 15-23, 1996. https://doi.org/10.1016/0148-2963(95)00159-X
[103] A. Gutterman, "Normative criteria in business performance: A behavioral perspective," *Journal of Organizational Performance*, vol. 18, no. 4, pp. 201–216, 2023.
[104] V. Akpa, O. Obiekwe, and A. Okoro, "Organizational culture and firm performance: The mediating role of employee productivity," *Journal of Business Management*, vol. 13, no. 2, pp. 45–58, 2021.
[105] S. Imamoglu, E. Turkcan, and A. Sevim, "Environmental variables and strategic responses: Impacts on firm performance," *Journal of Strategic Management*, vol. 11, no. 3, pp. 72–89, 2022.
[106] R. Unsal, "Evaluation of firm performance in terms of resource utilization," *Journal of Management Science*, vol. 9, no. 1, pp. 33–49, 2024.
[107] H. Olmez, I. Kocabas, and A. Sayin, "The effects of tangible and intangible resources on strategic advantage," *Journal of Economics and Strategy Research*, vol. 6, no. 2, pp. 119–133, 2021.
[108] A. Ogut and S. Tarhan, "The impact of performance measurement results on strategic decision-making processes," *Journal of Business Research*, vol. 14, no. 4, pp. 67–81, 2022.
[109] G. Altuntas and M. Donmez, "Performance evaluation with financial and non-financial indicators," *Journal of Accounting Science World*, vol. 12, no. 3, pp. 41–56, 2010.
[110] M. Ozdemir and V. Bozkurt, "The importance of subjective performance measurement in different geographies," *International Journal of Business Research*, vol. 9, no. 3, pp. 114–128, 2022.
[111] H. Keskin, E. Yilmaz, and T. Karaca, "The role of measurement functions in evaluating business performance," *Journal of Management and Economics Research*, vol. 14, no. 2, pp. 59–74, 2016.
[112] A. Oflaz, L. Veliu, and M. Manxhari, "Evaluation of business performance in different dimensions: A conceptual approach," *International Journal of Economics and Management*, vol. 11, no. 1, pp. 33–50, 2024.
[113] R. E. Freeman, *Strategic management: A stakeholder approach*. Boston, MA: Pitman Publishing, 1984.
[114] R. Charles and F. Ochieng, "Modern perspectives on Balanced Scorecard and its multidimensional approach to performance," *Journal of Strategic Management Studies*, vol. 18, no. 2, pp. 88–103, 2023.
[115] A. M. Ghalayini and J. S. Noble, "The changing basis of performance measurement," *International journal of operations & production management*, vol. 16, no. 8, pp. 63-80, 1996. https://doi.org/10.1108/01443579610125787
[116] E. Altindag, "Integrated use of traditional and new generation performance measurement systems," *Journal of Business Research*, vol. 3, no. 4, pp. 87–99, 2011.
[117] S. Bag, J. H. C. Pretorius, and S. Gupta, "Role of innovation and supply chain resilience in firm performance: A study of emerging markets," *Benchmarking: An International Journal*, vol. 27, no. 3, pp. 843–864, 2020.
[118] A. F. Yaylaci, S. Demirel, and N. Karahan, "Strategic evaluation with multiple performance indicators," *Journal of Management and Organization Research*, vol. 15, no. 1, pp. 42–59, 2024.
[119] OECD, *OECD principles of corporate governance*. Paris: OECD Publishing, 2004.
[120] J. Gabrielsson and M. Huse, "The board's role in small firms: Findings of a board survey," *Entrepreneurship & Regional Development*, vol. 14, no. 4, pp. 311–330, 2002.
[121] S. Popa, A. Soto-Acosta, and I. Martinez-Conesa, "Performance and innovation in SMEs: The role of the innovation climate," *Journal of Business Research*, vol. 70, pp. 179–188, 2017.
[122] B. J. Jaworski and A. K. Kohli, "Market orientation: antecedents and consequences," *Journal of marketing*, vol. 57, no. 3, pp. 53-70, 1993. https://doi.org/10.1177/002224299305700304
[123] R. Grewal and P. Tansuhaj, "Building organizational capabilities for managing economic crisis: The role of market orientation and strategic flexibility," *Journal of marketing*, vol. 65, no. 2, pp. 67-80, 2001. https://doi.org/10.1509/jmkg.65.2.67.18259
[124] B. Antoncic and R. D. Hisrich, "Intrapreneurship: Construct refinement and cross-cultural validation," *Journal of business venturing*, vol. 16, no. 5, pp. 495-527, 2001. https://doi.org/10.1016/S0883-9026(99)00054-3
[125] S. A. Zahra, R. D. Ireland, and M. A. Hitt, "International expansion by new venture firms: International diversity, mode of market entry, technological learning, and performance," *Academy of Management journal*, vol. 43, no. 5, pp. 925-950, 2000. https://doi.org/10.5465/1556420
[126] S. J. Chang, A. van Witteloostuijn, and L. Eden, "From the editors: Common method variance in international business research," *Journal of International Business Studies*, vol. 34, no. 4, pp. 361–376, 2003.
[127] A. W. King and C. P. Zeithaml, "Competencies and firm performance: Examining the causal ambiguity paradox," *Strategic management journal*, vol. 22, no. 1, pp. 75-99, 2001. https://doi.org/10.1002/1097-0266(200101)22:1<75::AID-SMJ145>3.0.CO;2-I
[128] E. D. Rosenzweig, A. V. Roth, and J. W. Dean Jr, "The influence of an integration strategy on competitive capabilities and business performance: an exploratory study of consumer products manufacturers," *Journal of operations management*, vol. 21, no. 4, pp. 437-456, 2003. https://doi.org/10.1016/S0272-6963(03)00037-8

[129] N. Venkatraman and V. Ramanujam, "Measurement of business performance in strategy research: A comparison of approaches," *Academy of management review*, vol. 11, no. 4, pp. 801-814, 1986. https://doi.org/10.5465/amr.1986.4283976

[130] W. E. Baker and J. M. Sinkula, "Learning orientation, market orientation, and innovation: Integrating and extending models of organizational performance," *Journal of market-focused management*, vol. 4, no. 4, pp. 295-308, 1999. https://doi.org/10.1023/A:1009830402395

[131] D. W. Vorhies, M. Harker, and C. Rao, "The capabilities and performance advantages of market-driven firms," *European journal of marketing*, vol. 33, no. 11/12, pp. 1171-1202, 1999. https://doi.org/10.1108/03090569910292339

[132] L. A. Bebchuk and M. S. Weisbach, "The state of corporate governance research," *The review of financial studies*, vol. 23, no. 3, pp. 939-961, 2010. https://doi.org/10.1093/rfs/hhp121

[133] J. Barney, "Firm resources and sustained competitive advantage," *Journal of management*, vol. 17, no. 1, pp. 99-120, 1991. https://doi.org/10.1177/014920639101700108

[134] R. L. Daft and K. E. Weick, "Toward a model of organizations as interpretation systems," *Academy of management review*, vol. 9, no. 2, pp. 284-295, 1984. https://doi.org/10.5465/amr.1984.4277657

[135] N. R. Anderson and M. A. West, "Measuring climate for work group innovation: development and validation of the team climate inventory," *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, vol. 19, no. 3, pp. 235-258, 1998. https://doi.org/10.1002/(SICI)1099-1379(199805)19:3<235::AID-JOB837>3.0.CO;2-C

[136] R. M. Baron and D. A. Kenny, "The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations," *Journal of personality and social psychology*, vol. 51, no. 6, pp. 1173–1182, 1986. https://doi.org/10.1037/0022-3514.51.6.1173

[137] P. Gompers, J. Ishii, and A. Metrick, "Corporate governance and equity prices," *The quarterly journal of economics*, vol. 118, no. 1, pp. 107-156, 2003.

[138] M. L. Tushman and C. A. O'Reilly III, "Ambidextrous organizations: Managing evolutionary and revolutionary change," *California management review*, vol. 38, no. 4, pp. 8-29, 1996. https://doi.org/10.2307/41165852

[139] S. Bhagat and B. Bolton, "Corporate governance and firm performance," *Journal of corporate finance*, vol. 14, no. 3, pp. 257-273, 2008. https://doi.org/10.1016/j.jcorpfin.2008.03.006

[140] M. Ararat, B. S. Black, and B. B. Yurtoglu, "The effect of corporate governance on firm value and profitability: Time-series evidence from Turkey," *Emerging Markets Review*, vol. 30, pp. 113-132, 2017. https://doi.org/10.1016/j.ememar.2016.10.001

[141] T. M. Amabile, *Creativity in context*. Boulder, CO: Westview Press, 1996.

[142] U. R. Hülsheger, N. Anderson, and J. F. Salgado, "Team-level predictors of innovation at work: a comprehensive meta-analysis spanning three decades of research," *Journal of Applied psychology*, vol. 94, no. 5, pp. 1128–1145, 2009. https://doi.org/10.1037/a0015978

[143] J. Zhou and J. M. George, "When job dissatisfaction leads to creativity: Encouraging the expression of voice," *Academy of Management journal*, vol. 44, no. 4, pp. 682-696, 2001. https://doi.org/10.5465/3069410

[144] D. Teece, M. Peteraf, and S. Leih, "Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy," *California management review*, vol. 58, no. 4, pp. 13-35, 2016. https://doi.org/10.1525/cmr.2016.58.4.13

[145] J. G. March, "Exploration and exploitation in organizational learning," *Organization science*, vol. 2, no. 1, pp. 1-147, 1991. https://doi.org/10.1287/orsc.2.1.71

[146] G. Munisi, N. Hermes, and T. Randøy, "Corporate boards and ownership structure: Evidence from Sub-Saharan Africa," *International Business Review*, vol. 23, no. 4, pp. 785-796, 2014. https://doi.org/10.1016/j.ibusrev.2013.12.001

[147] F. Damanpour and D. Aravind, "Managerial innovation: Conceptions, processes and antecedents," *Management and organization review*, vol. 8, no. 2, pp. 423-454, 2012. https://doi.org/10.1111/j.1740-8784.2011.00233.x