

**Arab American University**  
**Faculty of Graduate Studies**  
**Department of Administrative and**  
**Financial Sciences**  
**Ph.D. Program in Accounting and Finance**



**The Dual Impact of Decentralization and Business**  
**Complexity on Corporate Governance Effectiveness**

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**202216563**

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**Palestine, 2/2026**

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**The Dual Impact of Decentralization and Business Complexity on**  
**Corporate Governance Effectiveness**

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## **Declaration**

I declare that, except where explicit reference is made to the contribution of others, this dissertation is substantially my own work and has not been submitted for any other degree at the Arab American University or any other institution.

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## **Dedication**

To... the pillars of my being

To my dear father... the man with a generous heart who taught me the meaning of giving without expecting anything in return. Every word in this dissertation carries a trace of your patience and wisdom.

To my beloved mother... the light of my life. I dedicate this achievement to you, with heartfelt prayers for your speedy recovery and God's protection over you for me and our family. Your strength and patience have been my secret to perseverance.

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# **The Dual Impact of Decentralization and Business Complexity on Corporate Governance Effectiveness.**

**Hilal Nazmat Rabayah**

**Prof. Bahaa Abu Awwad**

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**Dr. Sharif Abukarsh**

## **Abstract**

This study provides a comprehensive empirical investigation into the individual and combined effects of Business Complexity (BC) and Decentralization (DEC) on Corporate Governance (CG) effectiveness within the distinct institutional contexts of two emerging Arab markets.

The study employs a rigorous quantitative methodology, analyzing a sample of 158 non-financial firms (118 from ASE, 40 from PEX) for the fiscal year 2023. It introduces a novel, multi-dimensional Business Complexity Index (BCI) based on the International Standard on Auditing for Less Complex Entities (ISA-LCE, 2024), integrating both qualitative (e.g., organizational structure, nature of activities) and quantitative (e.g., sales volume, fixed assets) dimensions. CG is measured via a composite index of four pillars: Disclosure & Transparency, Board of Directors, Shareholders' Rights, and Permanent Committees. Decentralization is assessed through indicators of geographical dispersion and delegation of authority.

The study concludes that in emerging markets with strong regulatory institutions (like Jordan), external pressures dominate governance outcomes, whereas in weaker institutional settings (like Palestine), internal organizational design, particularly decentralization, becomes a critical lever for enhancing governance.

**Keywords:** Corporate Governance, Business Complexity, Decentralization.

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## List of Definitions of Abbreviations

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Abbreviations	Title
CG	Corporate Governance
BC	Business Complexity
DEC	Decentralization
CGI	Corporate Governance Index
BCI	Business Complexity Index
OECD	Organization for Economic Cooperation and Development
LCE	Leased Complex Entity
ISA	International Standard on Auditing
DT	Disclosure and Transparency
BOD	Board of Directors
SCR	Shareholders Compatible Rights
PC	Permanent Committees
OS	Organizational Structure
NOE	Number of Employees
NOS	Number of Segments
NOA	Nature of Activities
NOP	Number of Projects
NOCU	Number of Customers
NOCR	Number of Creditors
FR	Financial Reporting
VOS	Value of Sales
VOFA	Value of Fixed Assets
DEVO	Devolution
DELE	Delegation
DECO	Deconcentrating
NOB	Number of Branches and Sales of Point
NODC	Number of Different Committees
NOFI	Number of Foreign Investments

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# Chapter One: Introduction

## 1. Introduction:

Corporate governance (CG) is delineated as a framework of standards, regulations, and practices employed to mitigate issues arising from agency theory inside control methods. Agrawal and Knoeber (1996), Makki and Lodhi (2013), Singh et al. (2018) Where since 1999, the Organization for Economic Cooperation and Development (OECD) has achieved significant global acclaim as a premier institution for establishing international standards in effective CG, with revised amendments in 2024. Considering the codes of good governance applicable to the study populations in Palestine and Jordan, which are fundamentally derived from the CG standards promulgated by the OECD Taking into consideration the amendments to some of the main standards of governance to suit the nature of the local economic activities of the study population and any other communities without prejudice to the essence of the main governance standards, the researcher aims to incorporate the good governance codes issued by the Jordan Securities Commission<sup>1</sup> and the Palestinian Capital Market Authority<sup>2</sup> into this study.

Numerous studies conducted in recent decades have focused on examining CG principles and their application in various worldwide financial markets, including the Middle East. The comprehensive examination of this research revealed a lack of consensus about the impact of CG on financial performance. Agrawal and Knoeber (1996), Gruszczynski (2006), Makki and Lodhi (2013), and Kyere and Ausloos (2021) have concluded that a positive link exists whereby financial performance is influenced by governance principles. Aggarwal (2013), Shahwan (2015), Mansur and Tangl (2018): Upon examining CG procedures and their influence on a firm's market value, research suggests a favorable correlation through the application of Tobin's Q profile. Abdelkarim and Alawneh (2009), Singh et al. (2018)

BC and decentralization (DEC) commenced in the mid-nineteenth century, particularly following the French Revolution Chandler (1956), and evolved into a

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<sup>1</sup> <https://www.jsc.gov.jo>

<sup>2</sup> <https://www.pcma.ps>

widespread phenomenon within the business sector. The escalating (BC) within business organizations is necessitating the delegation of significant authority and influencing the CG conditions mandated by legislation and their impact on performance. Hutchcroft (2001) The rising operational BC and advancing technological necessitate that organizations adapt and convert their administrative and financial processes into a technological framework. Institutions may have challenges due to inadequate reactions to modernization and development, particularly as they become more complicated over time; simpler institutions tend to be more responsive and adaptable to such changes. Arteta and Giachetti (2004)

The degree of BC in large organizations is intricately linked to DEC and the delegation of authority, thereby highlighting the agency theory that necessity for its advancement as advocated by the scientists Berle and Means in the early twentieth century and was later developed by Jensen & Mackling in 1976. This can manifest as either the dissemination of information to individuals possessing substantial expertise or the relocation of seasoned professionals to areas where pertinent information is concentrated. Christie et al. (2003)

The significant advancement in fundamental business frameworks necessitated the identification of solutions to empower decentralized administrative authorities; however, numerous challenges will arise concerning the regulation of horizontal relationships between boards of directors and CEOs, as well as the emergence of novel administrative styles. Miles (2012) It is essential to establish fundamental principles for the description and analysis of DEC in management as a mechanism to achieve the intended objectives of this administrative approach, particularly given that the implementation of DEC may yield strategies that are more detrimental than advantageous. Faguet (2014) According to the theory of transaction costs, which assumes that increasing the number of decision-making centers may lead to higher coordination and control costs, which reduces the efficiency of CG, and therefore the impact of DEC may be negative on CG. Rindfleisch (2020)

In theory, DEC enhances performance by augmenting accountability; however, the literature has predominantly concentrated on strategic policy outcomes rather than equally significant factors such as governance, competition, and the enhancement of

accountability, financial performance, and sustainability. Faguet (2014) Business decentralization is beneficial in enhancing management performance, as business delegation involves the transfer of duties, functions, and tasks from top management to subordinate management. Business Development is crucial due to its dynamic capacity to counsel management in timely and appropriate decision-making, enabling managers to effectively address emerging issues and make swift, precise decisions. Trisnaningsih and Ariadi (2022)

A significant outcome of agency theory is the delineation between management and ownership, which is inherently induced by CG. Agrawal and Knoeber (1996) and Assunção et al. (2017) posited that to mitigate the issues and challenges inherent in that theory, it was essential to establish practices, conditions, and regulations that minimize the complexities of associated relationships, leading to the formulation of CG rules. Williamson, Clarke (1998), Davis (2005), Monks and Minow (2011), Larcker and Tayan (2020), Suwaidan et al. (2021).

Recently, the International Standard on Auditing (ISA) <sup>[3]</sup> promulgated a new standard for Audits of Financial Statements of Less Complex Entities (LCE) <sup>[4]</sup>, which delineates the characteristics of firm complexity. Firstly, it identifies qualitative characteristics, encompassing the nature of activities (assessed by the number of projects, suppliers, and customers) and the organizational structure (pertaining to employee count and departmental divisions). Secondly, it specifies quantitative characteristics directly linked to financial statements, measurable by sales value and fixed asset value.

The circumstances of enterprises in emerging countries, akin to those globally, are always evolving and encounter several problems at both organizational and operational levels, encompassing internal and external factors. Abdelkarim and Alawneh (2009), Makki and Lodhi (2013), Shahwan (2015), and Suwaidan et al. (2021), along with the regions of Palestine and Jordan, serve as authentic representatives of the circumstances faced by developing countries pertinent to the nature and scope of this study. Palestine and Jordan were picked as the study's focus due to their comparable economic conditions,

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<sup>3</sup> <https://www.ifac.org/>

<sup>4</sup> <https://www.iaasb.org/focus-areas/isa-lce-standard-audits-less-complex-entities>

with the Jordanian market exhibiting slightly higher openness. All companies listed on the financial markets of both nations, excluding financial institutions, were chosen because their unique characteristics differ from those of companies in other industrial, service, and investment sectors.

### **1.1 Study Importance and Motivation**

The research holds academic significance, as most prior studies have concentrated on the qualitative aspects of the degree of BC, specifically the organizational structure of institutions and its influence on CG, while neglecting other criteria. Additionally, some studies have examined the standards of activity nature as metrics for BC, disregarding other factors, and others have addressed the quantitative dimension as a criterion for measuring BC, overlooking qualitative elements. Most of these investigations have emphasized the organizational and operational characteristics of complexity degrees.

Conversely, numerous research has examined the correlation between DEC and CG directly, neglecting the intricacies of operations stemming from administrative DEC and its horizontal and vertical impacts on CG criteria.

This study's significance escalates from the researcher's perspective in examining the dual impact of DEC and BC on the principles of CG and investigates whether this dual effect enhances the reciprocal relationships between DEC's impact on CG and BC's impact on CG too.

The researcher discovered that the recent 2024 disclosures by ISA regarding the standards for less complex entities (LCE) may enable the acquisition of a more nuanced and comprehensive index for the degree of BC, provided that its standards and components are utilized as a BC index (BCI) and their influence on CG indicators is assessed.

This study elucidates the degree of differentiation between the Jordanian and Palestinian capital markets, highlighting that the Jordanian financial markets are more expansive, intricate, and abundant in listed companies. This disparity is primarily attributable to the greater openness of the Jordanian market to investment compared to the Palestinian market, which operates within a politically unstable context, despite the proximity and similarities between the two markets.

## **1.2 Study Problem:**

In the contemporary, rapid business environment, plurality, variety, and interconnectedness are essential aspects of company continuity that warrant rigorous examination. Škrinjar et al. (2008) Companies are ever evolving, confronting new difficulties, and seeking novel methods to enhance their operations. Due to heightened complexity, it became essential to examine the interconnections between BC and CG regulations. Cohen and Lou (2012)

The literature increasingly emphasizes the significance of organizational structure within BC for aligning success and assessing the degree of horizontal or vertical adherence, thereby illustrating the impact of administrative DEC on decision-making and its hierarchical execution. Njiru (2014) Consequently, organizational diversity necessitates more dynamic governance. Jackson and Miyajima (2007)

In business research, company size serves as a straightforward metric for BC; yet it is a conventional and unilateral measure that cannot be only dependent upon to elucidate BC. Numerous studies characterized BC as multidimensional; nonetheless, the notion of complexity, including uncertainty and ambiguity, lacked precision. Jacobs and Swink (2011), Lankton et al. (2012) Other studies were constrained by the notion that complexity criteria are intrinsically linked to financial statements, specifically quantitative standards; the extent of the BC of the financial statements and the magnitude of the annual report file serve as significant indicators of the degree of BC due to the elaboration of contents, thereby resulting in an increase in report file size, thus rendering quantitative criteria the sole indicators of the degree of BC. Loughran and McDonald (2023)

Despite numerous local researches examining the correlation between CG and performance requirements, Abdelkarim and Alawneh (2009), and Mansur and Tangl (2018), discrepancies persist, and the findings of these studies are divergent and need to be updated.

Research examining the influence of BC on CG has predominantly concentrated on quantitative factors, neglecting certain qualitative variables pertinent to BC. Some of these variables are localized, as evidenced by studies conducted in the Egyptian market

Shahwan (2015), while others are non-local, exemplified by research in the Brazilian market. Assunção et al. (2017)

The researcher notes that the Palestinian Capital Market Authority last amended the Code of CG in 2009. In contrast, while the Jordanian capital market revised its governance rules in 2021, the OECD updated its Code of Good Governance at the beginning of 2024. Consequently, the researcher suggests that it may be opportune to revise the CG rules to align with contemporary global standards.

### **1.3 Study Objectives:**

Theories and research contend that no singular, timeless, and universally effective structure can be implemented across all organizations, as each organization possesses distinct situational elements that influence its traits and behavior. The companies are influenced by the geographical location of their beginnings. Donaldson and Walsh (2015) Companies are perpetually evolving and growing more intricate in their structures, necessitating readiness to confront these transformations; consequently, such alterations will generate an escalating demand for innovative and adaptive control systems aligned with these developments. Fama and Jensen (1983)

The study aims to achieve the following objectives:

1. Examine the impact of BC on CG, the horizontal and vertical effects of that impacts at the administrative level of non-financial firms listed in PEX and ASE. Cohen and Lou (2012), Shahwan (2015), Assunção et al. (2017).
2. Examine the impact of DEC on CG of non-financial firms listed in PEX and ASE.
3. Examine the dual impact of BC and DEC on CG, the horizontal and vertical effects of that impacts at the administrative level of firms, and the impact on the policies emanating from decision makers of non-financial firms listed in PEX and ASE.

### **1.4 Study Question:**

Considering the previously mentioned data and the variability in the examination of BC standards and their correlation with CG standards, and the examination of DEC standards, and their correlation with CG standards the researcher concludes that it is valuable to disregard the consensus among researchers regarding BC standards for non-

financial firms listed in the (PEX) and (ASE) markets to investigate the impact of BC on CG principles by posing the following questions:

1. What is the impact of business complexity on corporate governance of non-financial firms listed in PEX and ASE?
2. What is the impact of decentralization on corporate governance of non-financial firms listed in PEX and ASE?
3. What is the dual impact of business complexity and decentralization on corporate governance of non-financial firms listed in PEX and ASE?

## **1.5 Study Hypotheses**

### **1.5.1 The Impact of Decentralization on Corporate Governance**

Numerous theories have addressed DEC in business, notably the emergency theory formulated by Joan Woodward in 1985. This theory posits that no singular organizational structure is universally applicable to all organizations across varying contexts and temporalities, as it is influenced by factors such as technology, organizational size, external environments, and internal information systems. Donaldson (2006), Islam and Hu (2012), Otley (2016).

Economics related to DEC and its relationship to transaction costs are considered alternative ways of organizing transactions. In governance structures, transaction cost theory (Williamson 1979, 1986) assumes that an optimal organizational structure achieves economic efficiency by reducing exchange costs. The theory suggests that each type of transaction produces coordination costs to monitor, control, and manage transactions. Williamson defined transaction costs broadly as the costs of managing the corporate economic system.

#### **The first hypothesis:**

***H1.** There is a negative statistically significant effect of decentralization on corporate governance of the Palestinian and Jordanian firms listed on the PEX and ASE.*

### **1.5.2 The impact of Business complexity on Corporate Governance**

Many studies have examined the correlation between the degree of BC and various variables, identifying factors that serve as indicators of complexity. These studies

conclude that quantitative variables, such as total assets and total sales, are insufficient on their own to gauge the degree of complexity. Läger et al. (2022), Josefy et al. (2015), so there are other factors such as organizational structures that can explain the degree of complexity if they are added to the quantitative variables mentioned above, where the complexity of organizational structures alone is called the fixed complexity factor and is always positively related to the degree of complexity. Capelle-Blancard and Petit (2017), therefore the scholarly literature that the nature of these structures, whether vertical or horizontal, has expanded, resulting in the addition of departments to the organizational frameworks to enhance the level of differentiation within the idea of complexity. Josefy et al. (2015), Capelle-Blancard and Petit (2017), elucidate that a company's complexity is associated with two primary dimensions: organizational structures and the number of various departments, alongside quantitative variables such as total assets and total sales. Läger et al. (2022).

There is a lack of consensus regarding the measurement of complexity and the identification of primary dimensions; thus, this study will concentrate on the most widely accepted models for assessing complexity. The first model examines the organizational and operational dimensions linked to critical factors influencing the sustained market presence and operational advancement of companies. The second model investigates both qualitative and quantitative characteristics.

A significant outcome of agency theory is the delineation between management and ownership, which is inherently induced by CG. Agrawal and Knoeber (1996) and Assunção et al. (2017) posited that to mitigate the issues and challenges inherent in that theory, it was essential to establish practices, conditions, and regulations that minimize the complexities of associated relationships, leading to the formulation of CG rules. Williamson, Clarke (1998), Davis (2005), Monks and Minow (2011), Larcker and Tayan (2020), Suwaidan et al. (2021).

### **The second hypothesis:**

***H2.** There is a negative statistically significant effect of Business complexity on corporate governance of the Palestinian and Jordanian industrial firms listed on the PEX and ASE.*

### 1.5.3 The Dual impact of BC and DEC on CG

BC as a relationship reinforcer: BC can help strengthen the link between DEC and CG if a company has a strong organizational structure and advanced information systems. This is because it encourages the use of more advanced control tools and better ways to make decisions. For example, multinational companies rely on advanced governance systems to maintain coordination between different branches. BC makes governance less effective without proper oversight. If there are strong oversight mechanisms but the business is very complicated, DEC can make governance issues worse by making it easier for corruption and lax accountability to happen. For instance, companies with excessively complex organizational structures often lack adequate governance mechanisms, resulting in disparities in the implementation of policies and decisions across different departments. Supporting Theory: Contingency Theory Contingency theory asserts that context, such as BC, influences organizational variables like DEC.

Thus, there is no single management or organizational model that works in all cases, and the company's organizational structure must match its complexity. In the context of the hypothesis, BC can be a pivotal factor in determining whether DEC will lead to improved or degraded CG. In summary, if a company can manage BC well, DEC may enhance CG by improving accountability and transparency. If the complexity of the business is disorganized, it can lead to poor governance due to difficult coordination and monitoring. Therefore, BC is an important variable in determining the nature of the relationship between DEC and CG.

#### **The Third hypothesis:**

***H3. Business complexity has modified the relationship between decentralization and corporate governance, weakening or reinforcing this impact. Interpretation***

The hypothesis suggests that the relationship between DEC and CG is not just linear or direct but can change based on the level of BC in the organization. If BC is high, it could lead to additional challenges that make DEC's impact either more effective (leverage-boosting) or less effective (weakening) on CG. The direction of the potential impact depends on the level of BC.

## 1.6 Study Limitations

The outcomes of research conducted over the years will inevitably be constrained and require continual updates due to ongoing changes and fluctuations in the regulatory environment and technological advancements. Fama and Jensen (1983), Donaldson and Walsh (2015)

The researcher posits that the potential for generalizing the findings of this study will depend on the criteria of population and sample selection. The researcher selected non-financial firms listed in both the Palestinian Financial Market PEX and the Jordanian Financial Market ASE as a locative limitation, and the findings depend on the year that the data was studied (2023), the characteristics of the data as a temporal limitation, and the employed research methodology.

## 1.7 Study Delimitation

This study examines the impact of DEC and BC on CG of non-financial firms listed on PEX and ASE. Despite the convergence of the selected financial markets, various determinants—both internal and external—related to the economic, investment, and political landscape will be disregarded in this analysis. Although there are notable similarities between the markets under investigation and those in the Middle East, generalizing these findings to other markets remains challenging due to these factors.

## 1.8 Study Definitions

- **Corporate Governance:** Corporate governance is a comprehensive phrase that delineates the methods, structure, and processes by which a firm manages and directs its operations and affairs. CG increases long-term shareholder value through managerial accountability and improved corporate performance. It also resolves the conflict of ownership and control by distinctly delineating the interests of shareholders and managers. Khan (2011)
- **Business Complexity:** The qualitative features include the nature of operations, evaluated by the quantity of projects, suppliers, and clients, as well as the organizational structure, related to personnel count and departmental divisions. The quantitative

attributes immediately are associated with financial statements, quantifiable by sales revenue and fixed asset valuation.<sup>5</sup>

- **Decentralization:** Dissemination of information to individuals possessing substantial experts or the relocation of seasoned professionals to areas where pertinent information is concentrated. Christie et al. (2003)

## 1.9 Study Tentative Outline

The study will comprise five principal chapters, commencing with the introductory chapter that delineates the significance of the study, the research problem, the study objectives, the research questions, the formulation of hypotheses, the study determinants, and the key definitions of relevant terms. The second chapter will address the theoretical framework and literature review, along with the definitions of the theories underpinning the study. The third chapter will focus on the research methodology, the study population and sample, and the statistical tools employed for data analysis. Chapter four presents the study's results and discussions, followed by Chapter five, which addresses the implications of results, and concludes with Chapter six, focusing on the conclusions and suggestions derived from the study's findings.

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<sup>5</sup> <https://www.ifac.org/>

## **Chapter Two: Theoretical Framework & Hypotheses Development**

### **2. Introduction**

This chapter discusses prior research and scholarly materials pertaining to corporate governance, business complexity, and decentralization. It will provide a critical synthesis of the empirical literature on these primary topics, establishing a narrative of previous studies that serves as the foundation for identifying the research gap. Subsequently, the theoretical and conceptual framework of the study will be discussed to delineate scientific contribution with precision.

#### **2.1 Corporate Governance (CG)**

Numerous studies conducted in recent decades have focused on examining governance principles and their application in various worldwide financial markets, including the Middle East. The comprehensive examination of these researches revealed a lack of consensus about the impact of governance on financial performance. Agrawal and Knoeber (1996), Gruszczynski (2006), Makki and Lodhi (2013), and Kyere and Ausloos (2021) have concluded that a positive link exists whereby financial performance is influenced by governance principles. Upon examining governance procedures and their influence on a firm's market value, research suggests a favorable correlation through the application of Tobin's Q profile. Abdelkarim and Alawneh (2009), Singh et al. (2018).

##### **2.1.1 Disclosure and Transparency (DC)**

A fundamental principle of corporate governance is that information and data pertaining to the entity must be highly disclosed, as stakeholders possess the right to readily access this information. Furthermore, to facilitate informed decision-making, this information must be unequivocal and unambiguous, embodying the essence of transparency. Agrawal and Knoeber (1996), Shahwan (2015), Mansur and Tangl (2018).

Numerous studies have examined the levels of disclosure and transparency within corporate governance standards, both globally and locally. One finding indicates that disclosure is predominantly quantitative, lacking qualitative dimensions. Shanikat and Abbadi (2011) Additionally, it has been observed that larger firms tend to exhibit higher levels of disclosure and transparency as a governance standard. Haddad et al. (2017)

Other studies have concluded that increased reforms in financial markets correlate with enhanced degrees of disclosure and transparency.

Research on the composition of the Board of Directors (BOD) reveals a direct correlation with the company's growth, production lines, competitive landscape, operations, and technological advancements. Local, regional, and international studies demonstrate that the size and composition of the BOD are positively influenced by these factors. Suwaidan et al. (2021). The complexity of BOD arises from both external complexities and internal company dynamics; competition, as an external component, contributes similarly. Haija and Alrabba (2017), Lawal et al. (2018), Onuora et al. (2022). External controls deemed crucial to corporate governance encompass mandatory financial statement disclosures, the regulatory and legal framework, financial market operations, and acquisitions. It is important to note that adherence to governance standards and practices aims not to diminish risks but to uphold ethical practices, including transparency and information security. Keay and Zhao (2017), Assunção et al. (2017).

One of the most prevalent disclosure mechanisms is the publication of financial reports, whether annual, semi-annual, or quarterly, which must be audited by accredited auditing firms. These reports encompass the contributions of the boards of directors, their remuneration, and the compensation of executive directors to uphold the principle of transparency. Additionally, this information is made available on the companies' websites, thereby facilitating easy and convenient access for all stakeholders. Collier and Zaman (2005), Bhasin (2016), Assunção et al. (2017), the disclosures must also include ownership and other contributions. Bozec and Bozec (2007). This encompasses data and information pertaining to the shares of individuals, corporations, and other entities, alongside all activities associated with corporate social responsibility contributions and their online disclosure, as well as the impact of these contributions on the local community and other disclosures. Furthermore, it examines the relationship between companies and stakeholders, such as customers and suppliers, as a means of enhancing corporate reputation and competitive advantage, in addition to all technological connections and ESG, involved in the disclosure process. Hahn and Kühnen (2013)

## **2.1.2 General Characteristics (BOD)**

The BOD is regarded as the foundation of corporate governance, as it is the sole entity empowered to safeguard stakeholders, endorse the execution of strategic plans, and ensure accountability among executive directors.

### **2.1.2.1 Dimensions and arrangement:**

- **Composition and Structure:**

Studies have always dealt with the many structures of boards of directors, their diversity, size, number of meetings and the educational level of their members, some of it confirms the positive effects of these variables on financial performance, the more presented within the structure of the BOD, the more positive effects on financial performance. Kanakriyah (2021), Nguyen and Huynh (2023).

- **Key Roles & Responsibilities**

Moderate and realistic shareholder views often tend to have chairmen separate from executives, and this view is consistent with the UK's governance reform document. The argument in separating these two positions from each other is that merging the services of the CEO and the Chairman of the Board of Directors would undermine independence, policy flow, and balance. But from their point of view, they believe that joint leadership of the two positions would provide sufficient focus on strong leaders. and achieve better financial performance. Daily and Dalton (1997), Dey et al. (2011), Chandren et al. (2021).

- **Decision-Making & Meetings**

A study conducted in the United Kingdom by McNulty and Pettigrew (1999) examined the reluctance of non-affiliated or part-time board members to concur with executive management decisions, particularly those made by influential executives regarding strategic matters. The study concluded that to facilitate these approvals, governance standards must be implemented in a manner that enables these members to agree more readily, as these standards are stringent and capable of ensuring the highest levels of legality and credibility among executives. Augmenting board sessions to enhance understanding of the company's operations and ultimately intensifying informal discussions between board members and executives.

### **2.1.3 Shareholder Compatible Rights (SCR)**

The literature investigates whether ownership concentration improves corporate performance and governance practices, independent of the owners. Numerous studies suggest that firms with high ownership concentration exhibit inferior governance practices and reduced disclosures. Furthermore, a higher concentration of ownership generally correlates with enhanced corporate profitability and various performance metrics. Javid and Iqbal (2008), Madhani (2016).

Foreign ownership in domestic companies serves as a significant indicator of both the companies' scale and the robustness of the legal framework. The size of these companies inversely affects ownership concentration, promoting diverse ownership, while a stable legal environment fosters an increase in foreign investment in these entities. Edwards and Nibler (2000), Bozec and Bozec (2007), Wang and Shailer (2015).

An examination of the circumstances in neighboring Arab nations, including Jordan, Egypt, Oman, and Tunisia, reveals that a study of Omran et al. (2008) involving a sample of 304 companies in the capital markets, which emphasized ownership concentration and foreign ownership, concluded that inadequate legal protection for investors is the primary deterrent for foreign investment in these firms, without adversely impacting overall company performance.

### **2.1.4 Permanent Committees (PC)**

The committees established under good governance principles effectively mitigate the weaknesses in corporate management and, at times, the strengths of certain managers, which can occasionally lead to legal and regulatory violations, thereby impacting their performance. Turley and Zaman (2004).

The establishment of permanent audit committees in corporations arose from their inability to enforce and adhere to internal laws and regulations, a phenomenon observed in numerous countries. However, governance standards committees have not delineated the factors that may enhance the efficacy of these committees, such as membership, independence, and financial acumen. Collier and Zaman (2005), Bhasin (2016), Turley and Zaman (2004).

Since the early 1980s, there has been a divergence of opinions regarding the authority of the CEO in establishing their salary, incentives, and annual benefits, as well as differing views on the compensation of boards of directors and the allocation of powers to determine these critical elements. In the early 1990s, governance standards committees resolved to establish a permanent Remuneration Committee within companies to oversee and manage essential issues. This committee is supervised by the Board of Directors and is characterized by having exclusively non-executive members, including a non-executive chairman. The committee, its members, and the functions assigned to it must be revealed in the annual reports. Main and Johnston (1993), Johnston and Main (1999).

## **2.2 Complexity**

Many studies have examined the correlation between the degree of business complexity (BC) and various variables, identifying factors that serve as indicators of complexity. These studies conclude that quantitative variables, such as total assets and total sales, are insufficient on their own to gauge the degree of complexity. Läger et al. (2022), Josefy et al. (2015), so there are other factors such as organizational structures that can explain the degree of complexity if they are added to the quantitative variables mentioned above, where the complexity of organizational structures alone is called the fixed complexity factor and is always positively related to the degree of complexity. Capelle-Blancard and Petit (2017), therefore the scholarly literature that the nature of these structures, whether vertical or horizontal, has expanded, resulting in the addition of departments to the organizational frameworks to enhance the level of differentiation within the idea of complexity. Josefy et al. (2015), Capelle-Blancard and Petit (2017), elucidate that a company's complexity is associated with two primary dimensions: organizational structures and the number of various departments, alongside quantitative variables such as total assets and total sales. Läger et al. (2022).

There is a lack of consensus regarding the measurement of complexity and the identification of primary dimensions; thus, this study will concentrate on the most widely accepted models for assessing complexity. The first model examines the organizational and operational dimensions linked to critical factors influencing the sustained market presence and operational advancement of companies. The second model investigates both qualitative and quantitative characteristics.

### **2.2.1 Qualitative characteristics (QC)**

The qualitative characteristics of business complexity encompass two primary elements: the organizational structure and the nature of business. Each of these aspects will be examined in detail as follows:

#### **2.2.1.1 Organizational Structure (OS)**

The organizational structure is perpetually evolving in response to the company's growing complexity, thereby establishing a multifaceted relationship with corporate governance. Designing an effective organizational structure that facilitates sound governance is crucial; conversely, challenges intensify when the structure fails to adhere to governance principles, potentially resulting in conflicts of interest between management and ownership, as well as inadequate control mechanisms. Continuous evaluation of organizational structures is advisable to enhance efficiency and effectiveness. Sporn (2007), Malenko (2024).

The proliferation of departments within organizations serves as a significant criterion for intricate business environments, as the quantity of managers correlates with the number of departments, thereby escalating the frequency of administrative meetings aimed at resolving conflicts to attain optimal compatibility among various divisions. Queen and Fasipe (2015). Furthermore, the diversification of departments amplifies technical requirements and resource distribution, fostering a competitive atmosphere among managers and human resources overall. Occasionally, the abundance of managers engenders a climate of dominance, allowing the most powerful individuals to make final decisions. It suggests that the senior management team must possess the capability and strength to regulate dominant managers in order to maintain equilibrium, particularly in environments characterized by a swift exchange of information and the necessity for interdepartmental compliance. Arteta and Giachetti (2004), Josefy et al. (2015), Läger et al. (2022). These relationships must be continuously assessed by senior management to attain optimal productivity levels.

#### **2.2.1.2 Nature of Activity (NOA)**

The relationship of companies with their suppliers, customers and other organizations is an important relationship based on partnership and long-term to maintain

their continued survival and success Yli-Renko et al. (2001), The concept of operational complexity, as a subset of corporate complexity, warrants examination in relation to the correlation between indicators of operational complexity and associated costs. The literature delineates two measurement types for customer and supplier systems. Notably, one significant study conducted in the United Kingdom for Wu et al. (2007) addresses the procurement of raw materials, initiating the manufacturing process for customer orders characterized by minimal product variety and substantial demand size. Conversely, the second measurement pertains to customer orders that exhibit a wide array of product types, produced on demand. Products and minimal quantities the research revealed a strong correlation between inventory expenses and operational complexity.

### **2.2.2 Quantitative characteristics (QC)**

The volume of sales is directly linked to the growth and productivity of corporations, defined as the ratio of revenue to labor across many organizations, all of which constitutes an essential aspect of corporate complexity, Audretsch and Belitski (2021), The decision-making process in sales operations is intricate and requires strategies with substantial administrative components, encompassing market comprehension, competitive analysis, and geographical diversification strategies, thereby rendering the sales volume of these companies a significant indicator of complexity. Loughran and McDonald (2023).

In discussions regarding corporate sales, we initially consider product diversity, geographical context, demographics, consumer demands, product design, sales methodologies, and numerous complexities inherent within organizational operations. Ingram (2004). These factors ultimately culminate in a significant financial metric: total sales. This metric serves as a critical assessment of management efficiency, accountability, transparency, strategic development, coordination levels, contingency planning, the efficacy of internal systems, and the interrelations of these elements with corporate governance. Total sales are a critical metric of complexity across various firms. White (1986), Achtenhagen et al. (2010).

One additional aspect that underscores the significance of sales value as an indicator of corporate complexity is that complexity indicators in sales models escalate from smaller to larger enterprises. This escalation exerts greater pressure on profit margins, as

sales models and procedures may elevate sales and marketing expenditures as a percentage of total sales. This phenomenon is corroborated by a study of Ledingham et al. (2013) conducted on 200 large corporations in the United States, which highlighted these transformations. The increasing complexity of currencies necessitated more sophisticated approaches to customer interactions, resulting in customers developing intricate expectations that service providers should address their issues rather than merely sell products. Furthermore, many customers believe they possess greater expertise in defining specifications than the companies they engage with. Consequently, this has shifted attention towards the quantitative dynamics of customer and supplier relationships, as well as the complexities within organizations, due to their significant impact on overall complexity.

### **2.3 Decentralization**

Administrative decentralization denotes the distribution of decision-making authority from a central authority, typically senior management, to subordinate levels within an organization, allowing small groups of executives, departments, and employees to make decisions. Bogdanor (1999), Ledingham et al. (2013).

Various theories have examined decentralization in business, particularly the emergency theory developed by Joan Woodward in 1985. This theory asserts that no single organizational structure is universally suitable for all organizations across different contexts and time periods, since it is shaped by elements including technology, organizational scale, external settings, and internal information systems. Donaldson (2006), Islam and Hu (2012).

The decentralization of business results in the delegation of responsibilities, referred to as decision-making authority. Zabochnik (2002), it is also shown in the promptness of responding to urgent crises and events requiring swift decisions at any administrative level. Faguet (2014). Scalability is articulated as administrative decentralization, a crucial policy for enhancing business expansion and dissemination. This approach facilitates the management of complexity by segmenting it into manageable components, thereby enabling prompt and highly adaptable management decisions that foster innovation and enhance customer service. Febrero and Pereira (2020).

In conversations regarding decentralization, three principal types inside organizations must be delineated, as follows: Goodwin et al. (2006), James and Van Thiel (2016),

### **2.3.1 Devolution:**

Denotes a permanent delegation of authority, marked by administrative decentralization, wherein particular powers are ceded from individuals inside organizations to others with advanced experience and training to implement them proficiently. Literature sometimes indicates that this delegation of authority acts as a guise for assigning blame to those in power, as they are enabled to execute their roles independently and are entirely responsible for their choices. Therefore, to promote organizational development, innovation, advancement, and success, power must be entrusted to competent, informed, and skilled individuals. Zabochnik (2002), Mudalige (2019).

As a means of devolution, specific agencies—usually independent—cooperate in the comprehensive administration of corporations. Nonetheless, they differ in organizational, legal, and financial autonomy, but the responsibility for their oversight ultimately lies with the company's general management.

### **2.3.2 Delegation:**

This refers to the temporary assignment of authority, wherein a task or a group of attorneys is entrusted to another individual or group within the organization, possessing requisite experience and competence as deemed by the delegator, while the delegator retains full accountability for the task. Delegation does not constitute a relinquishment of responsibilities and authority. Zabochnik (2002)

Numerous factors underpin the safety of this delegation type as mentioned in the study of Mathebula and Barnard (2020), emphasizing accountability and quality. These factors are realized through the selection of competencies and skills, underscoring the importance of monitoring assigned tasks, employing feedback mechanisms, and conducting continuous reviews of organizational structures to ensure successful delegation.

A notable study aimed at ascertaining the direction of delegation and investigating whether organizational complexity prompts the delegation of authority or the reverse, was conducted by Colombo and Delmastro (2004) on factories in Italy. The findings indicated that the size of these factories, the intricacy of their operations, and the diversity of their production lines contributed to significant hesitations in delegating authority to the managers, thereby facilitating production processes and decision-making.

### **2.3.3 Deconcentrating:**

Refers to the semi-permanent distribution of workload to field and geographical branches without relinquishing decision-making authority, while transferring executive authority. This form of decentralization aligns with the geographical expansion of companies.

The internal expansion of production based on geographical market needs surpasses the leading technology in this field and multiplies the gains derived from it, this is what a study of Sampson (2016) concluded that geographical expansion, which is a form of decentralization, achieves gains and profits that exceed those obtained through advanced technology, and from similar studies that focused on Pareto's theory or which is known as the 20/80 rule, a study of Brynjolfsson et al. (2011) that adopted a comparison of the theory, which is based on the concentration of sales geographically where The main criterion here is the good distribution of products in the market and comparing them to the replacement of Internet pages to market products as an alternative option to the theory of sales concentration, and one of its amazing results was also that the traditional options in internal expansion policies and the geographical concentration of sales through points of sale, whether branches of companies or points of sale only, achieve positive results at the level of sales volume that exceed those that are organized through Internet pages, but these methods are still more expensive than their alternatives that depends on technology.

Table (0.1) Decentralization Types

<b>Aspect</b>	<b>Devolution</b>	<b>Delegation</b>	<b>Deconcentrating</b>
<b>Permanence</b>	Permanent	Temporary	Semi-permanent
<b>Authority</b>	Full	Limited	None (execution only)
<b>Accountability</b>	To local stakeholders	To delegator	To central authority

<b>Resources</b>	Owned	Borrowed	Allocated by center
<b>Example</b>	Agencies	Internal Committees	Branch Manager

## 2.4 Theories Related to Study

### 2.4.1 Agency Theory

The concept of agency was introduced by Jensen and Mackling (1976) from the perspective of the conflict of interest between shareholders and management, leading to costs known as agency costs. Christie et al. (2003). The theory of agency is predicated on a contract wherein the principal, represented by the shareholders, engages an agent (manager) to act on their behalf in managing the company, in exchange for financial remuneration. This arrangement necessitates that the principal delegates a portion of their decision-making authority to the agent, leading to potential agency difficulties that compel the agent to act in the principal's best interests. Jensen and Meckling (1976) contend that enhancing administrative incentives and privileges for agents is an effective strategy for diminishing inefficiency, and this relationship is unequivocally linear. Larcker and Tayan (2020).

Jensen and Meckling characterized agency costs as the aggregate of monitoring expenses and residual loss costs. Monks and Minow (2011), Suwaidan et al. (2021).

1. Control costs refer to the expenses borne by shareholders (the primary) to assess the performance of managers (the agent), encompassing the costs and burdens associated with oversight and audits by the boards of directors to evaluate performance
2. Engagement costs refer to the expenses incurred by the agent to establish trust with the client, including the fees associated with contracts and guarantees.
3. Residual loss: Loss resulting from persistent deviations notwithstanding the implementation of monitoring and engagement expenses, maybe stemming from ongoing conflicts of interest.

A significant outcome of agency theory is the delineation between management and ownership, which is inherently induced by CG. Agrawal and Knoeber (1996) and Assunção et al. (2017) posited that to mitigate the issues and challenges inherent in that

theory, it was essential to establish practices, conditions, and regulations that minimize the complexities of associated relationships, leading to the formulation of CG rules. Clarke (1998), Davis (2005).

The engagement of an agent (manager) representing the shareholders constitutes a fundamental aspect of administrative decentralization, as it entails a delegation of authority that may result in potential challenges within the agency. To alleviate these challenges, the principles of good governance have established standards and codes. This theory is intricately linked to the notion of broad decentralization, encompassing its three forms: deconcentrating, devolution, and delegation. Furthermore, this theory is closely associated with the concept of business complexity, characterized by the expansion of both horizontal and vertical dimensions of departments and sections, as well as the growth in asset size.

#### **2.4.2 Theory of Transaction Cost**

The theory of transaction costs was formulated by Oliver Williamson, who derived his concepts from Ronald Coase's renowned book, "The Nature of the Firm" (1937). This essay commenced with posing a significant inquiry: What is the purpose of corporate existence? How corporations select their internal systems to achieve their economic objectives. (Englander, 1988). Transaction costs refer to the expenses incurred during the exchange of goods and services, encompassing the costs of identifying new suppliers and customers, negotiating and drafting contracts, monitoring contract execution through quality management units, and enforcing dispute resolution mechanisms, if necessary.

This theory is predicated on the fundamental tenets of bounded rationality, positing that individuals within organizations lack complete information and cannot foresee all potential outcomes; opportunism, wherein certain parties may be misled for personal advantage; and asset specificity, which pertains to investments made for particular transactions. Jones (1999). This theory pertains to business complexity, wherein companies expand their horizontal presence and establish internal departments to engage in direct contracting via the market through third parties when transaction costs are elevated, while opting for direct market contracting when transaction costs are minimal. Wieland and Fischer (2020)

The significance of transaction cost theory arises from its emphasis on organizational management in response to economic fluctuations, both short-term and long-term. Based on this framework, organizations may seek to minimize transaction costs associated with resource acquisition amid rising uncertainty by optimizing asset utilization and investing in long-term contracts that yield lower economic returns and partial ownership agreements. Celtekliligil (2020), Wieland and Fischer (2020).

### **2.4.3 Contingency Theory**

Emergency theory posits that there is no singular optimal method for organization, management, and decision-making, as the internal work environment, the nature of economic activity, and the external business environment dictate the most effective form of administrative organization to achieve desired objectives. Donaldson (2001) Contingency theory offers essential criteria for contemporary organizational structures in large-scale entities, positing that challenges generate possibilities for developing effective regulatory frameworks. Ketokivi (2006)

Theories and research contend that no singular, timeless, and universally effective structure can be implemented across all organizations, as each organization possesses distinct situational elements that influence its traits and behavior. The companies are influenced by the geographical location of their beginnings. Donaldson and Walsh (2015) Companies are perpetually evolving and growing more intricate in their structures, necessitating readiness to confront these transformations; consequently, such alterations will generate an escalating demand for innovative and adaptive control systems aligned with these developments. Fama and Jensen (1983).

The principles and foundations of contingency theory intersect with the notions of administrative decentralization to varying extents, as the nature of a corporate operations may necessitate internal expansion, leading to the establishment of departments and the employment of personnel. This is associated with business complexity and may be aimed at fulfilling its economic objectives. Examining the internal geographical expansion within a country's borders through branches and sales centers, which will confer powers with direct accountability granted by public administrations, or external geographical expansion beyond national borders, thereby bestowing greater authority or alleviating central burdens by establishing subcommittees derived from various organizational

departments to streamline tasks and share expertise. This theory is indirectly associated with the principles of good governance concerning the increased responsibilities of monitoring all variables in administrative decentralization and levels of complexity.

#### **2.4.4 Emergency Management Theory**

Emergency theory examines how organizations prepare for crises and alleviate their consequences and severity, integrating organizational management with risk management. This theory emphasizes proactive resource management, both human and logistical, to ensure immediate response during crises, thereby minimizing subsequent burdens and formulating strategies to mitigate future risks, alongside preventing crises before their occurrence. McEntire (2005), Farazmand (2017).

The administrative organization under the emergency theory is founded on the following principles: mindfulness via constant observation and simplification of complications, flexibility by characterized rapid recovery from errors, and decentralization entails valuing individuals with expertise and fostering horizontal communication during crises, as centralized and conventional management has proven inadequate in high-crisis situations. Adaptive decentralized management consistently yields superior flexible responses. Research on administrative decentralization in the context of Covid-19 concluded that it effectively absorbed shocks and survived by offering diverse solutions, whereas central management faltered due to its reliance on a singular approach. Ughulu and Igabor (2021), Mahmud et al. (2021).

#### **2.5 Discussion and Compendium of previous studies**

One of the most important studies that the researcher has followed, the studies of Assunção et al. (2017), Shahwan (2015), where they determined that companies with superior governance procedures typically generate less intricate and more comprehensible financial reports. Based on financial reporting, enhanced governance fosters transparency and diminishes managers' motivation to obscure inadequate performance through convoluted reporting. The two studies employed quantitative analysis utilizing regression models on a sample of non-financial companies listed in the stock markets.

The researchers assessed various fundamental corporate governance mechanisms: Dimensions of the Board: Quantity of Board Members. Board of Directors Composition:

Proportion of non-executive (external) members. CEO duality: The situation in which the CEO concurrently serves as the chairman of the board. Institutional Ownership: The proportion of shares held by institutional investors. Administrative Ownership: The proportion of shares held by the company's executives and board members.

The findings of the study of Assunção et al. (2017) revealed a statistically significant inverse relationship between corporate governance levels and the complexity of financial statements, corroborating theoretical results that robust governance serves as a mechanism to mitigate information asymmetry between managers and shareholders. Transparency is fostered by discouraging practices that render financial information needlessly complex. The study determined that the implementation of enhanced corporate governance measures, especially those mandated by the Novo Mercado Listing Rules, effectively mitigates the complexity of financial reporting in Brazilian public businesses. This improves the quality of information accessible to investors, analysts, and other stakeholders, therefore augmenting market efficiency and safeguarding minority shareholders.

The findings of Shahwan (2015) study presented a nuanced and precise depiction of the effects of corporate governance in Egypt; The size of the board had a negative and statistically significant correlation with both performance metrics. Extensive boards have been linked to suboptimal performance, indicating their potential ineffectiveness and inefficiency in decision-making. The duality of the CEO exhibited a favorable and statistically significant correlation with performance. The makeup of the board, corporate ownership, and management ownership have not demonstrated a substantial effect on financial performance. The dimensions of the painting were, once more, significant. More extensive boards correlated with diminished Z scores, indicating an increased probability of financial trouble. Institutional ownership had a positive and statistically significant correlation with a Z score. Increased institutional ownership correlated with a diminished probability of financial trouble, indicating its role in effective oversight. The makeup of the board, CEO duality, and managerial ownership exerted minimal influence.

In an examination of a market analogous to the researcher's market, a study of Abdelkarim and Alawneh (2009) was presented the statistically significant correlation between the implementation of corporate governance principles and the financial

performance of companies listed on the Palestine Stock Exchange. It encompasses all 34 public shareholding companies listed on the exchange at that time, utilizing data from 2007 obtained from two primary sources: published annual reports for financial performance metrics and a specifically crafted questionnaire distributed to board members to gather information on corporate governance practices. The research assessed various essential governance structures, while performance was evaluated by two prevalent financial metrics: Return on Assets (ROA), a metric of profitability in relation to total assets. Return on Equity (ROE), An indicator of profitability in relation to shareholders' equity. The researchers employed statistical regression analysis to examine the correlation between governance variables and performance metrics.

The study's findings indicated a mixed yet predominantly significant relationship between the extent of corporate governance implementation and firm performance, suggesting that companies with superior governance practices are generally more profitable. Consequently, the results align with the two previously mentioned studies for Shahwan (2015), Assunção et al. (2017), while differing in their conclusions concerning board independence. A greater share of independent non-executive directors correlated favorably with enhanced performance, whereas independent oversight facilitated improved decision-making. Additionally, a robust positive link was identified between ownership concentration and business performance. The authors propose that in the Palestinian context, significant shareholders possess enhanced motivation and capability to effectively oversee management, thereby mitigating agency issues. The research offers empirical evidence from a developing economy indicating that robust corporate governance is positively associated with enhanced financial performance.

Abdelkarim and Alawneh (2009) study conclusions contradict those of another study of Bozec and Bozec (2007) regarding robust endorsement of the expropriation hypothesis. The principal finding is that majority-controlled enterprises exhibit significantly inferior governance standards compared to mostly held organizations. The controlling shareholder seems to be intentionally circumventing the implementation of optimal governance mechanisms that would enhance scrutiny and transparency. This aligns with the notion that inadequate governance enables the expropriation of minority shareholders.

Agrawal and Knoeber (1996) paper are a seminal work in corporate governance that investigates the interplay of various mechanisms addressing the agency problem between directors and shareholders. The study focuses on distinct governance mechanisms and their individual effects on company performance, measured by Tobin's Q. The seven mechanisms analyzed include: the percentage of shares owned by directors, the presence of external directors, board size, the level of debt in the capital structure, the proportion of shares held by significant non-managerial shareholders, and the involvement of an external director who also serves as an executive in another firm. The study stated that corporate governance systems must be examined as a system of interrelated choices rather than in isolation and advocated for the adoption of more advanced econometric tools to address internal uniformity. There exists no singular "ideal" board composition or uniform debt ratio. The significance lies in the integration of the complete array of mechanisms within the company's strategy and context. The study contends that comprehending effective governance necessitates an examination of the comprehensive interplay of all control mechanisms, rather than concentrating on any singular "silver bullet."

One significant study was the study of Omran et al. (2008), by examining the correlation between corporate governance, particularly ownership concentration, and its effects on firms within the Arab stock markets. This study is significant as it investigates this dynamic in a region marked by inadequate legal safeguards for minority shareholders and highly concentrated ownership structures, unlike the extensively researched markets in Europe and the Americas. The analysis encompasses data from 255 companies between 2001 and 2003 across six Arab nations: Egypt, Jordan, Oman, Saudi Arabia, Tunisia, and the United Arab Emirates.

The study's most significant findings revealed a nonlinear correlation between ownership and performance. The results best depicted it as an inverted letter U. As the proportion of shares held by shareholders increases, their interests increasingly align with the company's success, resulting in enhanced oversight and decision-making. The study also revealed that large shareholders do not exhibit complete uniformity; the identity of the controlling owner is crucial for performance, particularly in cases of family control at elevated concentration levels. Furthermore, the findings indicated a negative and statistically significant correlation with the company's performance. This indicates that

state-owned enterprises in the Arab area frequently experience inefficiencies, political objectives that supersede commercial reasons, and inadequate governance. Institutional and foreign ownership: The prevalence of these owners was typically restricted, and the findings were neither robust nor consistent, indicating the underdevelopment of these investor categories in the region at that time. The study concentrated solely on individual, family, governmental, and foreign ownership, omitting numerous other governance criteria. Furthermore, it failed to incorporate variables such as company size, complexity, and the influence of management centralization on performance.

The study of Chandren et al. (2021) findings analogous to the preceding research investigated the separation of the roles of chairman and CEO as a standard governance metric within the Malaysian context, marked by substantial family business presence. It was determined that the efficacy of the board chairman positively influences performance, revealing a statistically significant positive correlation between an effective chairman and the company's operational performance, as inferred from net asset value. The conclusion drawn indicates that prolonged tenure fosters enhanced knowledge and stability, which was utilized in a related context. The research encompasses a comparable array of quantifiable characteristics: Experience in the role enhances strategic decision-making. Financial acumen: Crucial for the effective administration of corporate assets. Academic qualifications: Advanced degrees (e.g., master's and doctoral) were utilized as a proxy for expertise and competency. Ultimately, the study concluded that the distinction between the roles of CEO and chairman is not a significant determinant of performance, as a capable founder or family member can effectively occupy both positions.

A study of Arteta and Giachetti (2004) sought to introduce a novel quantitative metric for corporate resilience, wherein researchers contend that agility encompasses not only rapidity but also the capacity to manage complexity and change effectively. Agility is characterized as inversely proportional to the complexity of an organization's system in its response to change, with the most resilient organization being one that can execute change as a new product introduction. The study characterized organizational complexity as the many sequences of actions necessary for effecting change, positing that a process with multiple routes, more uncertainty, and diverse resources is deemed more complicated and thus less agile. The document delineated a systematic, multi-faceted approach for quantifying complexity, conceptualizing the organization as a collection of

resources and production scenarios, and enumerating all activities necessary to transition from the initial to the final state, applicable to both industrial and service enterprises. This methodology facilitates the construction of a graph derived from historical data, timelines, or policies, which can be employed to assess various system designs or investment strategies.

Will the introduction of a new flexible machine diminish the complexity of the most frequent modifications more effectively than reciprocal training for our operators? Concentrate on the methodology, rather than solely on the technology. The approach underscores that resilience arises from the comprehensive process, encompassing information flows, human decisions, and logistics, rather than solely from gadgets. The research determined that an organization's agility may be quantitatively assessed by the informational theoretical complexity of its internal processes throughout periods of change. They transform the notion of resilience from an ambiguous strategic objective into a measurable geometric scale. This facilitates a methodical diagnostic strategy for the creation and management of organizations that are genuinely adaptive to market fluctuations.

In the realm of decentralization and its direct correlation with corporate governance, the research of Faguet (2014) indicates that decentralization can significantly enhance governance and expedite development; however, its efficacy is not guaranteed and largely hinges on the design of the reform and its actual transfer of authority and resources to local levels, thereby altering incentives and information exchanges between citizens and the state. By enhancing the nation's responsiveness and accountability to its populace. It operates by utilizing local knowledge and connecting the motivations of local leaders with community needs. Nonetheless, its beneficial outcomes are contingent upon robust political and fiscal requirements, domestic capacity enhancement, and the implementation of effective accountability frameworks. When executed correctly, it can result in more efficient, equitable, and legitimate governance.

A study in the United Kingdom on political mandate by Goodwin et al. (2006) revealed that the Scottish government engaged in a complex process by delegating significant powers to economic organizations for the purpose of economic development, termed economic governance, thereby enhancing the competitiveness of neighboring

economies in response to globalization pressures. The analysis determined that the mandate represented a significant transformation in the UK state. The re-enlargement process has been contentious and continuous, motivated by the necessity to respond to global economic forces. The outcome was a more fragmented and diverse political landscape throughout the UK, marked by novel regional policies and innovative economic governance structures. The report contends that devolution extended beyond merely granting increased authority to Scotland and Wales. This was part of a broader reorganization at the national level, as authority was shifting in many areas – towards Europe, regional entities, and private enterprises – to enhance the competitiveness of the UK economy. This established a more intricate framework, presenting new avenues for policy innovation while simultaneously introducing obstacles for coordination, utilizing terms like "re-enlargement," alongside a thorough examination of the initial impacts of power devolution throughout the UK.

## **2.6 Adopting CG, BC, DEC and Hypotheses Development**

### **2.6.1 The Impact of Decentralization on Corporate Governance**

Numerous theories have addressed DEC in business, notably the emergency theory formulated by Joan Woodward in 1985. This theory posits that no singular organizational structure is universally applicable to all organizations across varying contexts and temporalities, as it is influenced by factors such as technology, organizational size, external environments, and internal information systems. Donaldson (2006), Islam and Hu (2012), Otley (2016)

Economics related to DEC and its relationship to transaction costs are considered alternative ways of organizing transactions. In governance structures, transaction cost theory (Williamson 1979, 1986) assumes that an optimal organizational structure achieves economic efficiency by reducing exchange costs. The theory suggests that each type of transaction produces coordination costs to monitor, control, and manage transactions. Williamson defined transaction costs broadly as the costs of managing the corporate economic system.

*H1. There is a negative statistically significant effect of decentralization on corporate governance of the Palestinian and Jordanian non-financial firms listed on the PEX and ASE.*

### **2.6.2 The impact of Business complexity on Corporate Governance**

Many studies have examined the correlation between the degree of BC and various variables, identifying factors that serve as indicators of complexity. These studies conclude that quantitative variables, such as total assets and total sales, are insufficient on their own to gauge the degree of complexity. Läger et al. (2022), Josefy et al. (2015), so there are other factors such as organizational structures that can explain the degree of complexity if they are added to the quantitative variables mentioned above, where the complexity of organizational structures alone is called the fixed complexity factor and is always positively related to the degree of complexity. Capelle-Blancard and Petit (2017), therefore the scholarly literature that the nature of these structures, whether vertical or horizontal, has expanded, resulting in the addition of departments to the organizational frameworks to enhance the level of differentiation within the idea of complexity. Josefy et al. (2015), Capelle-Blancard and Petit (2017), elucidate that a company's complexity is associated with two primary dimensions: organizational structures and the number of various departments, alongside quantitative variables such as total assets and total sales. Läger et al. (2022).

There is a lack of consensus regarding the measurement of complexity and the identification of primary dimensions; thus, this study will concentrate on the most widely accepted models for assessing complexity. The first model examines the organizational and operational dimensions linked to critical factors influencing the sustained market presence and operational advancement of companies. The second model investigates both qualitative and quantitative characteristics.

A significant outcome of agency theory is the delineation between management and ownership, which is inherently induced by CG. Agrawal and Knoeber (1996) and Assunção et al. (2017) posited that to mitigate the issues and challenges inherent in that theory, it was essential to establish practices, conditions, and regulations that minimize the complexities of associated relationships, leading to the formulation of CG rules.

Williamson, Clarke (1998), Davis (2005), Monks and Minow (2011), Larcker and Tayan (2020), Suwaidan et al. (2021).

***H2.** There is a negative statistically significant effect of Business complexity on corporate governance of the Palestinian and Jordanian non-financial firms listed on the PEX and ASE.*

### **2.6.3 The Dual impact of BC and DEC on CG**

BC as a relationship reinforcer: BC can help strengthen the link between DEC and CG if a company has a strong organizational structure and advanced information systems. This is because it encourages the use of more advanced control tools and better ways to make decisions. For example, multinational companies rely on advanced governance systems to maintain coordination between different branches. BC makes governance less effective without proper oversight. If there are strong oversight mechanisms but the business is very complicated, DEC can make governance issues worse by making it easier for corruption and lax accountability to happen. For instance, companies with excessively complex organizational structures often lack adequate governance mechanisms, resulting in disparities in the implementation of policies and decisions across different departments. Supporting Theory: Contingency Theory Contingency theory asserts that context, such as BC, influences organizational variables like DEC.

Thus, there is no single management or organizational model that works in all cases, and the company's organizational structure must match its complexity. In the context of the hypothesis, BC can be a pivotal factor in determining whether DEC will lead to improved or degraded CG. In summary, if a company can manage BC well, DEC may enhance CG by improving accountability and transparency. If the complexity of the business is disorganized, it can lead to poor governance due to difficult coordination and monitoring. Therefore, BC is an important variable in determining the nature of the relationship between DEC and CG.

***H3.** Business complexity has modified the relationship between decentralization and corporate governance, weakening or reinforcing this impact of the Palestinian and Jordanian non-financial firms listed on the PEX and ASE.*

The hypothesis suggests that the relationship between DEC and CG is not just linear or direct but can change based on the level of BC in the organization. If BC is high, it could lead to additional challenges that make DEC's impact either more effective (leverage-boosting) or less effective (weakening) on CG. The direction of the potential impact depends on the level of BC.

## 2.7 Measuring (CG), (BC), and (D).

### 2.7.1 Measuring Corporate Governance (CG).

This study will utilize various measurements of corporate governance (CG) as outlined in good governance codes issued by the Jordan Securities Commission and the Palestinian Capital Market. It will develop a standardized Corporate Governance Index (CGI) based on the following categories:

Disclosure and Transparency (DT).

General Committee (BOD).

Shareholders compatible rights (SCR).

Committees (C).

The first indicator consists of (4) criteria, the second indicator consists of (4) criteria, the third indicator consists of (4) criteria, and the fourth indicator consists of (4) criteria, where the total criteria will be (16) criteria. The policy of each criterion obtaining only two degrees will be adopted either (1) if the answer is yes and (0) if the answer is no, as the number of criteria indicating the governance index is (16) criteria, and therefore the ratio of each criterion to the sum of the criteria is equal to (1/16) according to the following equation. Shahwan (2015), Assunção et al. (2017)

$$(CGI)^{ij} = \sum_{j=1}^n \frac{(X)_{ij}}{(Y)_{ij}}$$

where (Y)<sub>ij</sub> is the maximum possible yes answers attained by the firm, while (X)<sub>ij</sub> refers to the actual yes answers attained by the firm.

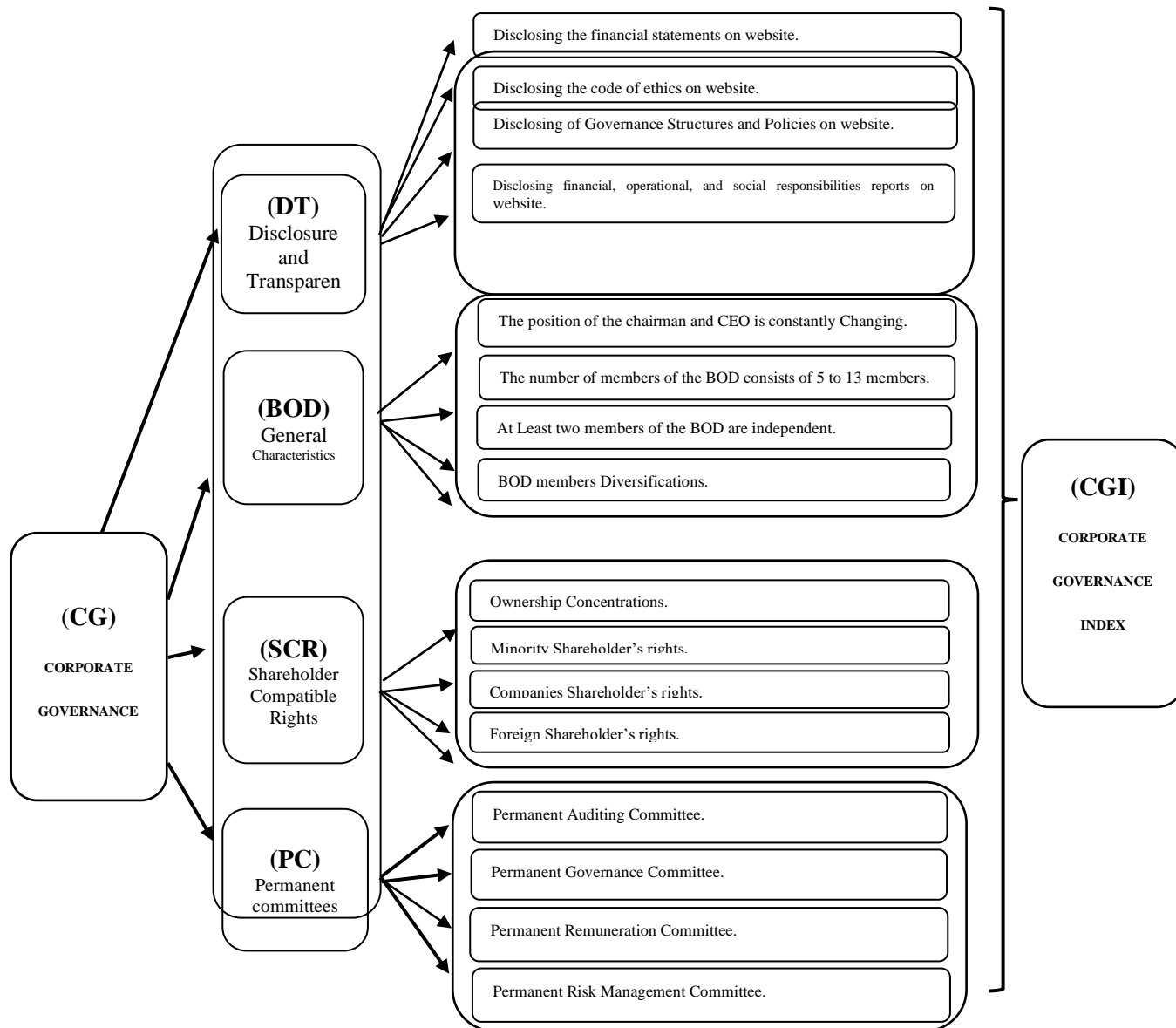


Figure (2.1): Governance Index

### 2.7.2 Measuring Business Complexity (BC)

Utilizing the literature on BC and its diverse characteristics and components, and informed by these attributes, alongside the two primary categories of BC delineated in the standard for reviewing financial statements of less complex entities as defined by ISA in LCE, the researcher will formulate a standardized BC index based on the subsequent categories:

**Qualitative and Quantitative Complexity**, Fig No. (2)

**Qualitative Characteristics.** Organizational Structure (**OS**), Nature of Activities (**NOA**).

**Quantitative Characteristics.** Financial Reporting (**FR**).

To ascertain a measure of BC, irrespective of the initial model emphasizing organizational and operational dimensions or the subsequent model concentrating on quantitative and qualitative factors, all data will be systematically analyzed and categorized into four principal groups of BCs, ranging from the lowest to the highest statistical outcomes. Assunção et al. (2017).

Two Indicator. Qualitative Characteristics, and Quantitative Characteristics, **Qualitative Characteristics** consists of two components. Organizational structures, and nature of activities: Organizational Structures consist of (**3**) **categories**. Nature of Activities consists of (**2**) **categories**. **Quantitative Characteristics:** consists of one component. And (**2**) **Categories**.

Where the total categories will be (7), the value of each category will be (5).

(**Y**)=**7\*5=35**. The policy of each Category obtaining only value from (1-5)

As the number of categories indicate the BC index is (35), and therefore the ratio of each criterion to the sum of the criteria is equal to (1-5)/35 according to the following equation.

$$(BCI)^{ij} = \frac{(X \times Z)_{ij}}{n}$$

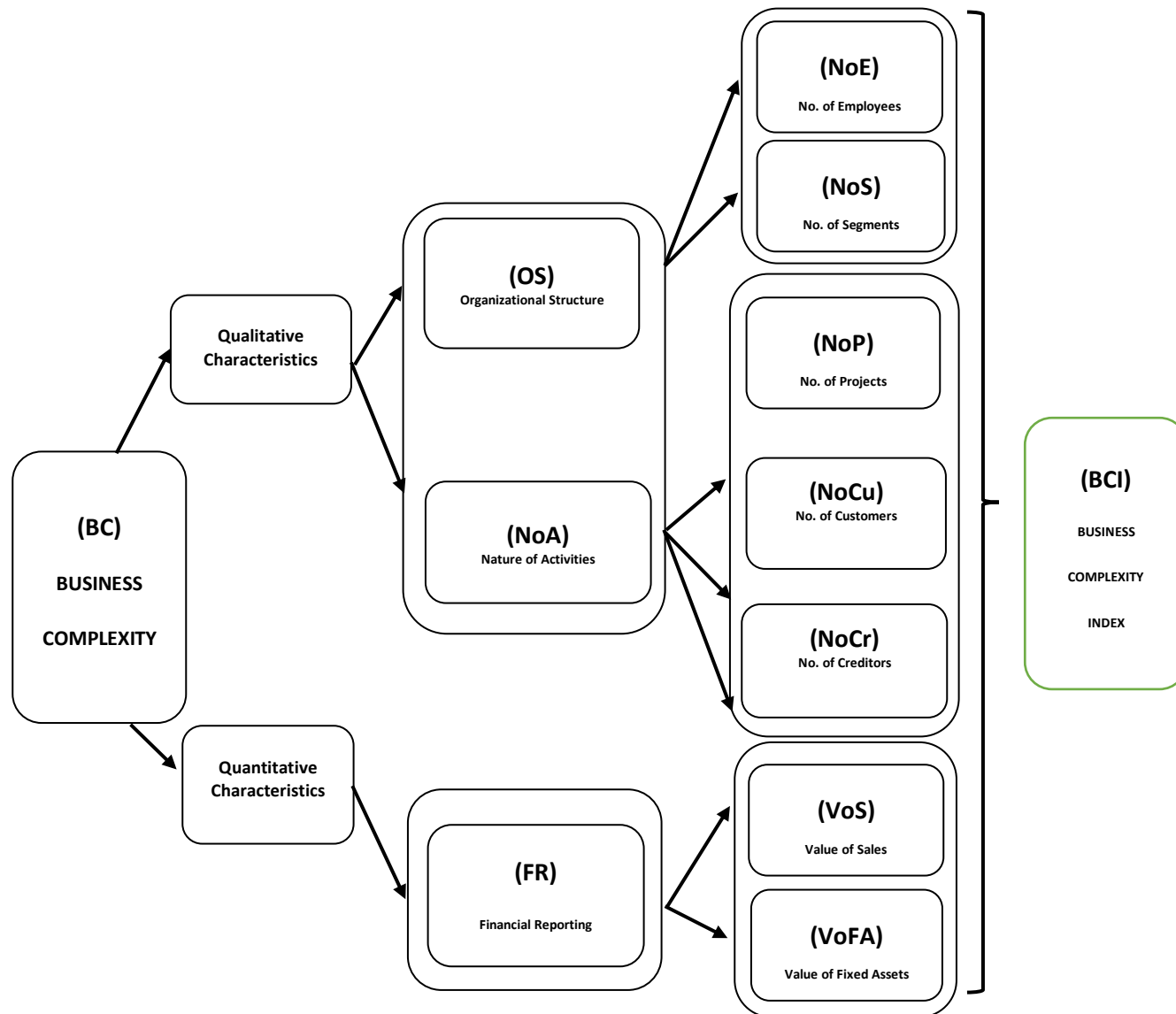


Figure (2.2): Complexity Index

### 2.7.3 Measuring Decentralization (DEC)

The segregate ownership from executives, the delegation of production decisions to teams of engineers and skilled laborers, the allocation of pricing and procurement decisions to specialized committees, and the geographical expansion beyond central management collectively constitute the foundation of decentralized management. Halbert (2004), Mookherjee (2006), Mudalige (2019). In the context of globalization and international openness, domestic enterprises' foreign investments represent a sort of decentralization. Li and Luo (2023)

To ascertain a measure of decentralization (DEC), all data will be systematically analyzed and categorized into three principal groups of DEC's: deconcentrating, delegation, and devolution. Fig. No. (4)

Three Indicator. Devolution (DEVO), Delegation (DELE), and Decentralization (DECE). Every indicator consists of (1) category.

Where the total categories will be (3), the value of each category will be (5).

$(Y)=3*5=35$ .

The policy of each Category obtaining only value from (1-5), as the number of categories indicate, the DEC index is (15), and therefore the ratio of each criterion to the sum of the criteria is equal to  $(1-5)/15$ .

according to the following equation.

$$(DEC)^{ij} = \sum_{j=1}^n \frac{(X \times Z)_{1j}}{(Y)_{1j}}$$

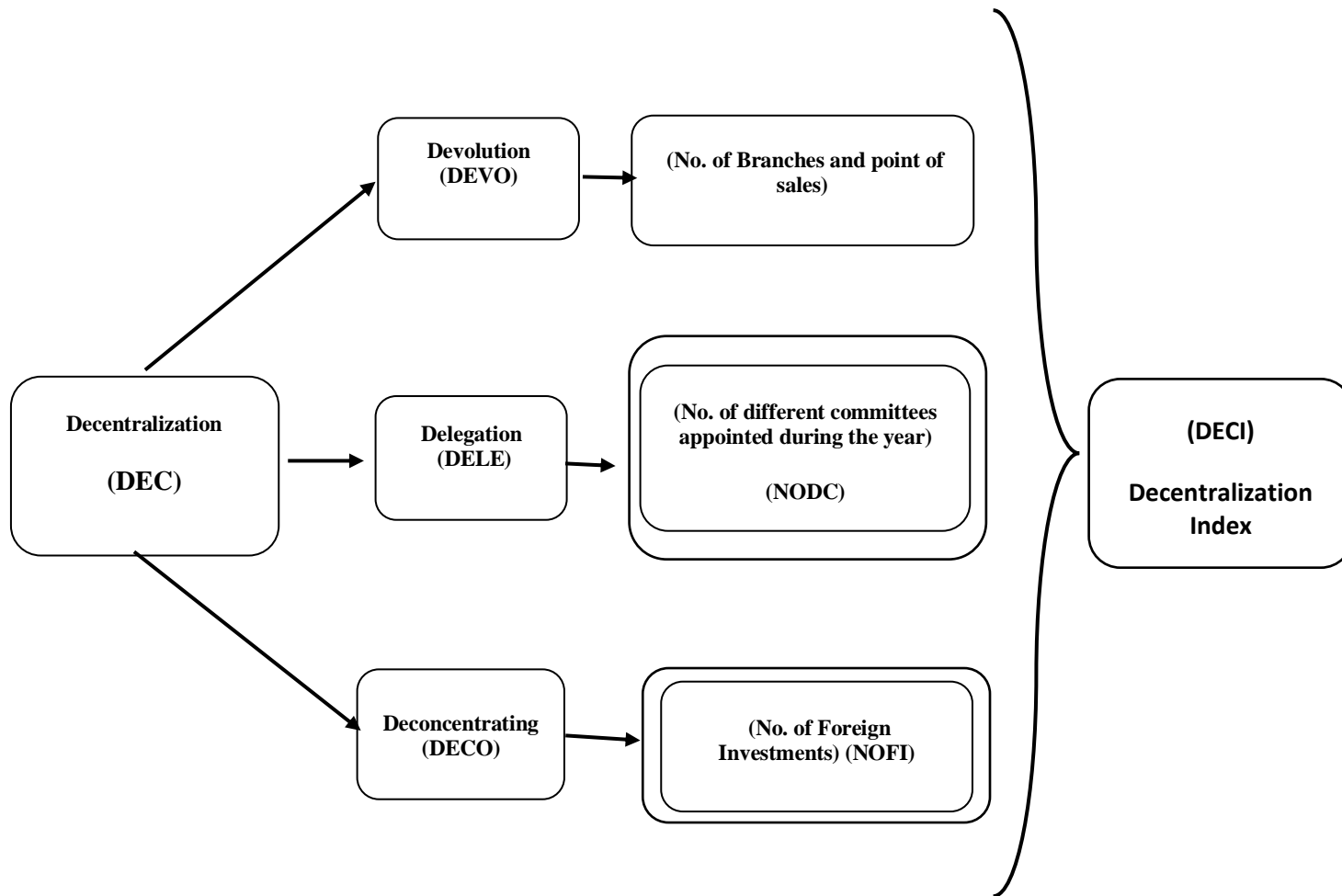


Figure (2.3): Decentralization Index

## **2.8 Study Hypotheses**

### **2.8.1 The Impact of Decentralization on Corporate Governance**

Numerous theories have addressed DEC in business, notably the emergency theory formulated by Joan Woodward in 1985. This theory posits that no singular organizational structure is universally applicable to all organizations across varying contexts and temporalities, as it is influenced by factors such as technology, organizational size, external environments, and internal information systems. Donaldson (2006), Islam and Hu (2012), Otley (2016)

Economics related to DEC and its relationship to transaction costs are considered alternative ways of organizing transactions. In governance structures, transaction cost theory (Williamson 1979, 1986) assumes that an optimal organizational structure achieves economic efficiency by reducing exchange costs. The theory suggests that each type of transaction produces coordination costs to monitor, control, and manage transactions. Williamson defined transaction costs broadly as the costs of managing the corporate economic system.

#### **The first hypothesis:**

*H1. There is a negative, statistically significant effect of decentralization on corporate governance of the Palestinian and Jordanian firms listed on the PEX and ASE.*

### **2.8.2 The impact of Business complexity on Corporate Governance**

Many studies have examined the correlation between the degree of BC and various variables, identifying factors that serve as indicators of complexity. These studies conclude that quantitative variables, such as total assets and total sales, are insufficient on their own to gauge the degree of complexity. Läger et al. (2022), Josefy et al. (2015), so there are other factors, such as organizational structures, that can explain the degree of complexity if they are added to the quantitative variables mentioned above, where the complexity of organizational structures alone is called the fixed complexity factor and is always positively related to the degree of complexity. Capelle-Blancard and Petit (2017), therefore, the

scholarly literature on the nature of these structures, whether vertical or horizontal, has expanded, resulting in the addition of departments to the organizational frameworks to enhance the level of differentiation within the idea of complexity. Josefy et al. (2015), Capelle-Blancard and Petit (2017), elucidate that a company's complexity is associated with two primary dimensions: organizational structures and the number of various departments, alongside quantitative variables such as total assets and total sales. Läger et al. (2022)

There is a lack of consensus regarding the measurement of complexity and the identification of primary dimensions; thus, this study will concentrate on the most widely accepted models for assessing complexity. The first model examines the organizational and operational dimensions linked to critical factors influencing the sustained market presence and operational advancement of companies. The second model investigates both qualitative and quantitative characteristics.

A significant outcome of agency theory is the delineation between management and ownership, which is inherently induced by CG. Agrawal and Knoeber (1996) and Assunção et al. (2017) posited that to mitigate the issues and challenges inherent in that theory, it was essential to establish practices, conditions, and regulations that minimize the complexities of associated relationships, leading to the formulation of CG rules. Williamson, Clarke (1998), Davis (2005), Monks and Minow (2011), Larcker and Tayan (2020), Suwaidan et al. (2021).

### **The second hypothesis:**

*H2. There is a negative, statistically significant effect of Business complexity on corporate governance of the Palestinian and Jordanian industrial firms listed on the PEX and ASE.*

### **2.8.3 The Dual impact of BC and DEC on CG**

BC as a relationship reinforcer: BC can help strengthen the link between DEC and CG if a company has a strong organizational structure and advanced information systems. This is because it encourages the use of more advanced control tools and better ways to make decisions. For example, multinational companies rely on advanced governance systems to maintain coordination between different branches. BC makes governance less effective

without proper oversight. If there are strong oversight mechanisms but the business is very complicated, DEC can make governance issues worse by making it easier for corruption and lax accountability to happen. For instance, companies with excessively complex organizational structures often lack adequate governance mechanisms, resulting in disparities in the implementation of policies and decisions across different departments. Supporting Theory: Contingency Theory Contingency theory asserts that context, such as BC, influences organizational variables like DEC.

Thus, there is no single management or organizational model that works in all cases, and the company's organizational structure must match its complexity. In the context of the hypothesis, BC can be a pivotal factor in determining whether DEC will lead to improved or degraded CG. In summary, if a company can manage BC well, DEC may enhance CG by improving accountability and transparency. If the business is disorganized, it can lead to poor governance due to complex coordination and monitoring. Therefore, BC is an important variable in determining the nature of the relationship between DEC and CG.

**The Third hypothesis:**

*H3. Business complexity has modified the relationship between decentralization and corporate governance, weakening or reinforcing this impact. Interpretation*

The hypothesis suggests that the relationship between DEC and CG is not just linear or direct but can change based on the level of BC in the organization. If BC is high, it could lead to additional challenges that make DEC's impact either more effective (leverage-boosting) or less effective (weakening) on CG. The direction of the potential impact depends on the level of BC.

## **Chapter Three: Methodology**

### **3. Research Methodology**

This chapter presents the scientific methodology adopted in this quantitative study to test the hypotheses concerning the individual and combined impacts of decentralization and business complexity on corporate governance effectiveness. The chapter is carefully designed to reflect a precise methodological alignment between the research objectives, its theoretical framework, and the characteristics of the selected sample, which comprises non-financial firms listed on the Palestine Exchange (PEX) and the Amman Stock Exchange (ASE). The chapter first outlines the philosophical underpinnings of the research, grounded in positivism and the deductive approach, then details the cross-sectional descriptive-analytical design employed to examine the causal relationships among the variables under investigation. It also discusses the sampling procedures, the quantitative data collection instruments utilized, and the statistical techniques applied to test the hypotheses, culminating with the ethical considerations that ensure the credibility and objectivity of the study's findings.

#### **3.1 Philosophical Framework of the Research**

Defining the philosophical framework of the research constitutes one of the most critical pillars of rigorous academic studies, as it guides the entire course of scholarly inquiry from problem formulation through data analysis and interpretation Saunders et al. (2009). This study investigates the dual impact of decentralization and business complexity on corporate governance effectiveness, addressing a complex contemporary phenomenon deeply intertwined with structural and managerial interactions in the business environments of firms listed in emerging markets. This grants the research a distinctive dimension within the fields of management and financial studies Bryman (2016).

##### **3.1.1 Epistemological Philosophy**

The study is anchored in several theoretical foundations, most notably the philosophy of positivism as an epistemological stance, which posits that truth is objective, observable,

and measurable through precise scientific tools (Saunders et al., 2019). Positivism assumes that the phenomena under investigation—such as organizational structure, process complexity, and governance frameworks—exist in reality as entities independent of the researcher, and that data can be collected and analyzed to derive generalizable relationships and laws Bryman (2016).

This philosophical orientation aligns closely with the nature of this research, which seeks to test quantitative relationships among predefined variables—decentralization, business complexity, and corporate governance—based on well-established theoretical models such as Agency Theory Jensen and Meckling (2019), Transaction Cost Theory Williamson (1988), and Contingency Theory Donaldson (2001).

### **3.1.2 Ontological Philosophy**

This research adopts an objectivist ontology, meaning that the nature of reality is perceived as independent of individual beliefs or values, and that the studied firms possess structural and organizational characteristics that can be measured and analyzed irrespective of the attitudes of their stakeholders or the researcher. It also implies that firms or organizations are regarded as legal entities distinct from individuals, with an existence that is not directly shaped by the personal beliefs or orientations of those working within them. Such a perspective is essential for studying governance structures and decision-making mechanisms across diverse contexts Saunders et al. (2009).

### **3.1.3 Research Approach**

The study employs a deductive approach, beginning with the formulation of hypotheses grounded in theoretical frameworks and prior research, followed by testing these hypotheses using quantitative data collected from the firms under investigation. This approach enables moving from general theoretical laws to their empirical testing in specific cases—namely, firms listed on the Palestinian and Jordanian stock exchanges—to explore the extent to which these laws or theories apply in new or emerging market contexts Creswell and Creswell (2017).

While interpretive philosophy might provide qualitative depth in analyzing individual contexts, the nature of this research—focused on examining broad, causal, quantitative relationships—necessitated adopting a positivist stance. Conversely, a pragmatic philosophy that combines methodologies was not adopted due to the limited availability of rich qualitative data in emerging markets.

#### **3.1.4 Distinctive Dimension of the Study**

The distinctive contribution of this research lies in its integration of two principal managerial variables—decentralization and business complexity—and the investigation of their combined effect on corporate governance in firms listed on emerging financial markets characterized by features typical of developing economies, such as those in Palestine and Jordan. Unlike previous studies that examined each of these factors in isolation, this study emphasizes the interplay and potential moderation of business complexity in the relationship between decentralization and governance effectiveness. This represents an original scholarly contribution that enriches the literature and opens avenues for developing more suitable governance frameworks tailored to contemporary business environments Donaldson (2001).

#### **3.1.5 Alignment of the Philosophical Framework with Research Objectives**

The selection of this philosophical foundation—positivism and objectivism combined with a deductive methodology—is well aligned with the study’s objectives, which aim to:

- Measure the causal and testable relationships among decentralization, business complexity, and corporate governance.
- Generalize the findings to broader sectors within similar emerging markets Saunders et al. (2009).
- Provide practical recommendations based on precise quantitative results to support decision-making in enhancing governance structures.

Although the positivist philosophy efficiently facilitates testing causal relationships and generalizing findings to similar environments, it may overlook specific subjective contextual dimensions, such as boardroom culture and member behaviors, which may not be fully captured by quantitative indicators alone. To address this, the study incorporated

qualitative reviews of governance documents and committee reports to add an interpretive layer alongside the quantitative results.

Thus, this research is built upon a robust and integrated philosophical foundation, enabling the formulation of empirically testable questions and hypotheses, and qualifying the study to employ rigorous statistical methods that ensure the credibility of results and their applicability in real-world organizational settings.

## **3.2 Research Design**

This study adopts a descriptive-analytical cross-sectional design aimed at exploring the relationships between decentralization, business complexity, and their individual as well as combined effects on corporate governance effectiveness Creswell and Creswell (2017). This design is deemed most appropriate given the nature of the data and the multiple dimensions embedded within the structural indicators of the study (Governance, Complexity, and Decentralization Indices) as articulated in the analytical model and conceptual framework.

### **3.2.1 Rationale for the Comparative Cross-Sectional Design**

The research employs a comparative design between the Palestinian and Jordanian markets, which share relatively similar economic characteristics yet differ in regulatory frameworks and levels of investment openness. This comparative approach enhances the opportunity to test for differences and supports the potential generalization of findings or the derivation of tailored governance policy recommendations applicable to other emerging markets Hair (2009).

### **3.2.2 Incorporating Moderation Analysis**

To increase academic rigor and enable a more nuanced treatment of the data, the design integrates a **moderation effect analysis** to examine whether business complexity moderates or alters the nature of the relationship between decentralization and corporate governance effectiveness Hayes (2017). This approach allows the investigation of multiple scenarios, such as:

- In highly complex firms, does increased decentralization enhance or weaken governance effectiveness?
- Conversely, do firms with lower complexity exhibit a different pattern of effects?

### **3.2.3 Integration of Quantitative and Qualitative Data**

The study relies primarily on quantitative data extracted from corporate websites and secondary data sources, supplemented by qualitative data obtained through the analysis of corporate documents and annual reports Denzin (2017). Specifically, the data encompasses:

- Number of branches and sales outlets, foreign investments, and the number of internal committees (Decentralization).
- Number of employees, departments, projects, clients, suppliers, sales value, and fixed assets (Business Complexity).
- Disclosures on structures and policies, board independence and diversity, shareholder rights, and presence of key committees (Corporate Governance).

Additionally, qualitative data extracted from published corporate documents and annual reports serve to enrich the interpretation of quantitative findings and offer a deeper comparative perspective across firms.

### **3.2.4 Justification for Selecting the Palestinian and Jordanian Contexts**

The Palestinian and Jordanian financial markets possess unique characteristics that make them ideal contexts for studying the impact of decentralization and business complexity on the effectiveness of corporate governance. These markets face political and economic pressures—such as geopolitical tensions in Palestine and reliance on external aid—coupled with limited economic exposure due to their relatively small financial market sizes and fluctuations in foreign investment. Despite the existence of advanced governance regulations (partially aligned with OECD principles), their implementation remains uneven owing to disparities in resources, institutional awareness, and regulatory infrastructure. This context justifies the conduct of this research, which aims to examine how decentralization and business complexity interact with these challenges to shape more effective governance

frameworks, thereby contributing to the development of regulatory policies suitable for similar emerging markets.

### **3.2.5 Alignment of the Design with the Hypotheses**

This research design is directly linked to the three hypotheses of the study: the effect of decentralization on governance, the effect of business complexity on governance, and the moderating role of business complexity in the relationship between decentralization and governance Hayes (2017). This alignment underscores the suitability of the comparative, analytical design, which enables the simultaneous testing of both direct and interaction (moderation) effects.

Such a methodological design reflects a rigorous adherence to global best practices in governance and management research and ensures a high level of reliability by:

- Comparing similar market environments that nevertheless exhibit structural and regulatory differences.
- Incorporating moderation analysis to provide a more profound and more comprehensive explanatory model.
- Integrating meticulously verified quantitative data collected through structured questionnaires and measurement matrices, supplemented by qualitative data extracted from actual corporate documents and reports.

## **3.3 Research Population and Sample**

### **3.3.1 Research Population**

The research population in this study comprises all non-financial firms listed on both the Palestine Exchange (PEX) and the Amman Stock Exchange (ASE) in Jordan as of the end of the study year (2024). Lists of these companies and their indicators were compiled based on accompanying Excel files that included:

- Corporate governance data.

- Business complexity indicators.
- Decentralization indicators.

Based on the aggregated data, the total research population consisted of approximately 110 companies, distributed across the industrial, service, and investment sectors in the two markets.

### 3.3.2 Sampling Technique

A stratified random sampling technique was employed to ensure adequate representation of all sectors and activities within each financial market Yamane (1973). The sample thus encompassed:

- Industrial companies,
- Service companies,
- Investment companies.

The research population was first divided into strata based on sectors, from which random samples were drawn proportionally to their relative sizes in the two markets. This approach ensured fair representation and avoided sectoral or geographical sampling bias.

### 3.3.3 Sample Size

The sample size was calculated using the Yamane (1973) formula, which is suitable for small, known populations. This resulted in a sample of 80 companies, proportionally distributed between the two markets—an approach well-suited to studies involving modestly sized populations with known parameters.

$$n = \frac{N}{N(e)^2 + 1}$$

Where:

- **N** = Population size ≈: 110 firms.
- **e** = Acceptable margin of error (5%).
- Accordingly, the approximate sample size was calculated as follows:

$$n = \frac{110}{110(0.05)^2 + 1} \approx 86 \text{ firms}$$

The final sample size was rounded to 80 firms, proportionally distributed between the Palestinian and Jordanian markets. This ensured efficient data management within the available time and resources, while maintaining a 95% confidence level.

### **3.3.4 Justification for This Design**

This approach enhances the accurate representation of all components of the research population, enabling comparative analysis across sectors and the two financial markets Hair (2009). It also increases the potential for generalizing the study's findings to other emerging markets with similar economic and regulatory conditions.

## **3.4 Data Collection Instruments**

### **3.4.1 Primary Data Collection Instrument (Documentary Checklist)**

The study employed a closed-end documentary checklist as its primary data collection instrument. This tool was developed based on the *G20/OECD Principles of Corporate Governance (2015)*, which serve as an international benchmark for evaluating legal, institutional, and regulatory frameworks of corporate governance globally Siljanovska and Shalevska (2019).

The checklist was structured to assess the extent to which companies comply with governance requirements across four main dimensions:

- **Disclosure and Transparency (DT):** Including the disclosure of financial statements, codes of ethics, governance structures and policies, and social, operational, and financial responsibility reports.
- **Board of Directors' Characteristics (BOD):** Covering board size, board independence, and diversity in board composition.

- **Shareholder-Compatible Rights (SCR):** Assessing minority rights, foreign ownership rights, and the degree of ownership concentration.
- **Permanent Committees (PC):** Including the existence of permanent governance, audit, risk management, and remuneration committees.

Each checklist item was scored based on a binary coding system, assigning (1) if the item was disclosed clearly on the company's official website or in its governance documents, and (0) if it was not disclosed. The data collection focused exclusively on publicly available information for the year 2023.

Additionally, the checklist captured descriptive attributes of each company, such as the company name, industry sector, number of branches, and number of employees. This allowed for a more comprehensive analysis of how firm-level characteristics relate to governance practices.

This documentary checklist method is particularly suited to comparative analytical studies, as it relies on publicly disclosed and verifiable information rather than subjective participant responses.

### **3.4.2 Secondary and Qualitative Data Sources**

In addition to the primary data collection instrument (the closed-ended checklist), the study will also rely on the collection of secondary and qualitative data from official corporate websites, annual reports issued by the two stock exchanges, and committee reports Bryman (2016).

- **Official Websites of Listed Companies:** Used to review the level of disclosure regarding financial statements, codes of ethics, governance structures and policies, and corporate social responsibility reports.
- **Annual Reports Issued by the Stock Exchanges (PEX and ASE):** Utilized to obtain accurate quantitative data such as shareholder composition, trading volume, and general financial indicators.

- **Company-Issued Annual and Committee Reports:** Including audit committee reports, governance committee reports, and board of directors' reports. These sources serve to enhance the credibility and triangulation of the data recorded in the checklist.

### 3.4.3 Unit of Analysis

The unit of analysis in this study is the listed firm (firm-level analysis). Each company is treated as an independent unit for measuring governance, complexity, and decentralization indicators, with subsequent comparisons across sectors and between the two financial markets (Palestine and Jordan).

### 3.4.4 Validity and Reliability Tests

- **Validity Testing:**

The instrument was presented to a panel of three experts to establish content validity, and an exploratory factor analysis (EFA) will subsequently be performed to confirm further construct validity Hair (2009).

- **Reliability Testing:**

Cronbach's Alpha coefficients will be calculated for the three main dimensions, targeting values of  $\alpha \geq 0.8$ , which indicate a high level of reliability and internal consistency Cronbach (1951).

### 3.4.5 Documentation of Secondary Data Collection Procedures

Given that the study utilized a documentary checklist as its primary data collection tool, all information was extracted exclusively from publicly available sources, such as companies' official websites, annual reports, and disclosures published by stock exchanges.

To ensure scientific transparency and traceability, the researcher implemented a rigorous documentation process, which included:

- Logging the exact source of each data point (e.g., URLs of specific pages, titles and publication dates of reports).
- Archiving copies or screenshots of the original documents reviewed.

- Maintaining a structured data validation log, where any uncertainty, ambiguity, or conflicting information across sources was recorded for further scrutiny during data analysis.

**Example:**

“If the company’s official website lists a permanent risk committee under governance structures, but this committee is not mentioned in its 2023 annual report filed with the stock exchange, the discrepancy is documented and flagged for critical assessment during interpretation.”

This approach ensures that the governance assessment remains objective, reproducible, and verifiable, aligning with best practices in documentary content analysis Denzin (2017).

**3.4.6 Summary Table of Data Collection Tools and Sources**

To increase methodological clarity, the table below summarizes the data collection tools and sources used, the variables measured, the type of data extracted, and the target respondents or origin:

Table (3.1): Data Collection Tools and Sources

<b>Tool/Source</b>	<b>Variables Measured</b>	<b>Type of Data</b>	<b>Target/Derived From</b>
a closed-end documentary checklist	CG, DEC, BC	Quantitative (1/0 coding)	Company websites, annual reports, and formal company responses
Official Company Websites	Disclosures, codes of ethics, governance structures, and projects	Qualitative/Quantitative	Content from company websites
Stock Exchange Reports (PEX, ASE)	Ownership characteristics, trading data	Quantitative	Official stock exchange reports

Annual & Committee Reports	Audit, governance, and risk committees	Qualitative/Quantitative	Published company documents
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*Source: Prepared by the researcher based on study data analysis, 2025.*

This combination of research instruments integrates quantitative and qualitative data from multiple primary and secondary sources, thereby enhancing the precision and explanatory strength of the results. It achieves one of the highest standards of methodological rigor through triangulation, providing a robust foundation for testing the complex hypotheses concerning the direct and moderate effects of decentralization and business complexity on governance within the context of emerging markets.

### **3.5 Data Collection Procedures**

#### **3.5.1 Planning and Preparation**

A systematic work plan was developed to guide the documentary data collection process. The plan outlined specific timeframes and organizational tools (e.g., structured checklists, version-controlled Excel sheets, and source validation logs) to ensure consistency and accuracy.

Additionally, a comprehensive data documentation protocol was established. This included:

- Logging the source and date of every document or webpage reviewed.
- Archiving copies or screenshots of relevant materials (e.g., annual reports, governance disclosures).
- Maintaining a source validation log to record issues such as conflicting information, inaccessible reports, or ambiguous disclosures.

This preparation phase was crucial to uphold research transparency, enable future auditability, and ensure the replicability of the analysis process.

### **3.5.2 Coordination with the Stock Exchanges**

Official coordination was established with both the Palestine Exchange (PEX) and the Amman Stock Exchange (ASE) to obtain the most recent list of listed non-financial companies as of 2023, along with their sector classifications and listing status.

### **3.5.3 Communication with Companies and Dispatch of Official Requests**

In cases where governance disclosures were missing from public sources, official letters—signed by the University's Scientific Research Committee—were dispatched to the respective companies requesting access to specific annual reports or governance-related documents for the year 2023.

### **3.5.4 Collection of Secondary Data and Official Reports**

All secondary data were collected from official company websites and stock exchange platforms (PEX and ASE), focusing solely on reports and disclosures issued for the fiscal year 2023. This included governance committee reports, audit committee statements, codes of ethics, and CSR reports—where available.

### **3.5.5 Data Collection Timeline**

All data were collected during a single structured phase focused exclusively on disclosures and reports issued for the fiscal year 2023. The process involved systematically reviewing company websites, stock exchange portals (PEX and ASE), and published annual governance documents.

For cases where data were missing or unclear, formal letters—endorsed by the University's Scientific Research Committee—were issued to the respective companies to request the required information.

This streamlined approach ensured full coverage of all listed firms' governance data as disclosed during the year 2023, providing a consistent and comparable dataset for analysis.

### **3.5.6 Documentation and Assurance of Data Quality**

A detailed tracking sheet was created to link each company with its questionnaire data and the reviews of its secondary data sources Bryman (2016).

An initial audit of the entered data was performed using Excel to verify internal consistency before transferring the dataset to statistical analysis software.

- **Handling Missing Data:**

In cases where certain governance-related data was not found through publicly accessible sources (e.g., official websites or annual reports), the research team initiated a formal request process. An official letter—signed by the University’s Scientific Research Committee—was sent to the company concerned requesting the disclosure of the missing information.

This approach ensures completeness and data reliability while maintaining ethical and institutional standards in primary document acquisition. Only after exhausting these procedures would the item in the checklist be marked as “unavailable” or scored as (0).

- **Data Collection Limitations and Mitigation Measures**

During the data collection process, several challenges were encountered. These included inconsistencies in the availability of updated governance-related disclosures on company websites, as well as the absence of some annual reports for the fiscal year 2023.

To address these issues, the research team employed multiple strategies:

1. Cross-checking data with disclosures available through stock exchange platforms (PEX and ASE).
2. Contacting companies formally—via letters issued by the University’s Scientific Research Committee—to request missing information.
3. Archiving all retrieved documents and validating them through source triangulation.

Despite these challenges, the study successfully compiled a comprehensive and verified dataset reflecting the governance structures and practices of listed companies for the

fiscal year 2023. This methodological rigor enhances both the validity and academic credibility of the study's findings.

### **3.6 Data Analysis Methods**

#### **3.6.1 Introduction**

This study employed a quantitative analytical design based on binary data (Yes = 1, No = 0) extracted from verified official sources, including company websites, annual reports, and stock exchange bulletins. As the research instrument is a documentary checklist, the statistical methods were carefully selected to match the nature of such data. The analysis aims to assess the effects of decentralization (DEC) and business complexity (BC) on corporate governance (CG).

#### **3.6.2 Descriptive Statistics**

Descriptive statistics were used to provide an initial overview of the main variables, including:

- Frequency counts of disclosures (i.e., how many companies disclosed each item).
- Percentage of disclosures per item across the full sample.
- Calculation of means and standard deviations for composite indices (e.g., CG Index = sum of governance checklist items per company).
- Sectoral and market-level distribution of disclosure (Industry, Services, Investment; Palestine vs. Jordan).

#### **3.6.3 Inferential Tests: t-test and ANOVA**

An independent samples t-test was conducted to assess statistically significant differences in governance indicators between companies listed in the Palestine Exchange and those listed in the Amman Stock Exchange.

In addition, a One-Way ANOVA was performed to explore differences in disclosure levels and governance indicators across economic sectors, allowing for a deeper understanding of sectoral influence on governance practices.

### **3.6.4 Correlation Analysis**

To examine the relationships between the main variables, bivariate correlation analysis was conducted. Given the binary/aggregated nature of the data, Pearson's correlation coefficient was applied after transforming the checklists into quantitative composite variables at the firm level.

### **3.6.5 Multiple Linear Regression Analysis**

To test the core hypotheses regarding the direct effects of decentralization (DEC) and business complexity (BC) on corporate governance (CG), multiple linear regression models were employed. Composite indices were created by summing up the relevant binary checklist items for each company.

The statistical software SPSS was used to estimate and evaluate the regression models.

### **3.6.6 Moderation Analysis**

To test whether business complexity (BC) moderates the relationship between decentralization (DEC) and corporate governance (CG), an interaction term regression model was constructed.

The analytical model applied is:

$$CG = \beta_0 + \beta_1(DEC) + \beta_2(BC) + \beta_3(DEC \times BC) + \varepsilon \quad (1)$$

This model was executed using SPSS, and the statistical significance of the interaction term  $\beta_3$  was used to determine the presence of a moderating effect.

### **3.6.7 Multicollinearity Diagnostics**

To ensure the reliability of the regression results, multicollinearity diagnostics were conducted by calculating the Variance Inflation Factor (VIF) and Tolerance values. This step was crucial for verifying that the independent variables do not suffer from significant intercorrelations that could distort the model estimates.

### **3.6.8 Qualitative Data Analysis**

The study will employ a directed content analysis approach to examine qualitative data extracted from official company documents and annual reports, including internal governance regulations, audit and risk committee reports, codes of ethics, and corporate governance disclosures Hsieh and Shannon (2005).

The analysis will be supported by NVivo 14, a qualitative data analysis software (CAQDAS), which will be used to systematically manage and code the qualitative data Jackson and Bazeley (2019).

A predefined coding framework will be developed, grounded in international corporate governance standards (OECD, 2024) and institutional complexity guidelines (ISA for LCE, 2024). This framework will facilitate the classification of qualitative content into analytically relevant themes. A detailed coding manual will define each code, provide examples, and set inclusion and exclusion criteria Saldaña (2021).

Iterative and axial analyses will be conducted to identify recurring patterns and code co-occurrences, to explore how institutional complexity indicators are embedded within governance practices Miles et al. (2014).

Matrix coding queries will be used to map qualitative themes—such as board diversity, transparency, or committee activity—against corresponding quantitative indicators derived from the checklist.

To ensure rigor and transparency, the study will apply methodological triangulation by comparing data across different sources (e.g., annual reports, company websites, and stock exchange bulletins). Additionally, peer debriefing sessions with two external academic reviewers will be conducted to enhance coding reliability and mitigate researcher bias Lincoln and Guba (1988).

### 3.6.9 Ethical Considerations

This study adheres to the highest recognized ethical standards in scientific research. The following measures were taken to ensure ethical integrity:

- 1. Respect for content privacy and responsible use of publicly disclosed data:** All data sources were limited to publicly available documents and official corporate reports, such as annual reports and governance disclosures published on company and stock exchange websites. No confidential or private data was accessed or utilized.
- 2. Use of data strictly for academic research purposes:** All documents were analyzed solely to construct quantitative and qualitative indicators aligned with the study's research objectives. No identifiable company-level information was disclosed in the reported findings.
- 3. Approval by the University Research Ethics Committee:** Formal approval for the data collection protocol was obtained from the University's Research Ethics Committee prior to initiating the study, in accordance with both local and international research ethics standards applicable to social and organizational research.

### 3.6.10 Ensuring Research Quality

Beyond ethical compliance, the study adopted multiple strategies to ensure the methodological rigor and quality of its results:

- 1. Development and expert validation of the documentary checklist:** The checklist was constructed based on internationally recognized governance standards (OECD, 2024) and institutional complexity guidelines (ISA for LCE, 2024). It was reviewed by three academic experts specializing in corporate governance and accounting to ensure its content validity and practical relevance.
- 2. Triangulation of data sources:** To enhance the credibility of findings, data were cross validated using multiple sources, including company websites, stock exchange platforms (PEX and ASE), and archived reports. This triangulation minimized the risk of misinformation and strengthened the trustworthiness of the dataset.
- 3. Transparent audit trails and documentation:** All collected data were logged systematically, and any discrepancies between documents or sources were documented. An

audit trail was maintained throughout the process to enhance transparency and enable verification.

## Chapter Four: Analysis, Interpretation, And Discussion Of Statistical Results

### 4. Introduction

This chapter presents the results of the statistical analysis of data from non-financial companies listed on the Amman Stock Exchange (Jordan's financial market) and the Palestine Exchange in 2023. The study aims to test hypotheses on the dual impact of decentralization (DEC) and business complexity (BC) on corporate governance (CG) effectiveness, while accounting for contextual and regulatory differences across the two markets Claessens and Yurtoglu (2013).

The significance of this chapter stems from its contribution to addressing a critical research gap in literature. Previous studies have examined the impact of decentralization or business complexity on corporate governance Faguet (2014); Assunção et al. (2017); (Shahwan, 2015), while neglecting their interactive effects. Moreover, most of these studies relied on partial indicators to measure business complexity, whether qualitative (such as organizational structure) or quantitative (such as asset size and sales volume) Josefy et al. (2015); Capelle-Blancard and Petit (2017), without integrating them into a comprehensive index. Therefore, this study draws upon the criteria of the new 2024 International Standard on Auditing (ISA) for Less Complex Entities (LCE) (IAASB, 2024) to construct an integrated Business Complexity Index (BCI) that combines both qualitative and quantitative dimensions Läger et al. (2022).

The statistical analysis was organized according to a rigorous scientific methodology that follows best practices established in empirical research (Hair, 2009); Hair et al. (2019); Field (2024), and comprises the following stages:

- **Descriptive Analysis:** To characterize the sample and the study's main variables (Corporate Governance Index CGI, Business Complexity Index BCI, Decentralization Index DI) using measures of central tendency and dispersion (Fidell et al., 2020).

- **Statistical Assumptions Testing:** To verify the conditions for applying parametric tests, including normality tests (Shapiro-Wilk, Kolmogorov-Smirnov), linearity, homogeneity of variance, and absence of autocorrelation Field (2024); Hair (2009).
- **Inferential Analysis:** Using t-tests (Independent t-test) and analysis of variance (ANOVA) to examine differences between groups, and multiple regression models to test causal relationships between independent and dependent variables, Tabachnick and Fidell (2007); Fidell et al. (2020).
- **Moderation Analysis:** To test the third hypothesis (H3) regarding the moderating effect of business complexity on the relationship between decentralization and corporate governance, using hierarchical regression models following the methodology of Aiken et al. (1991), and Hayes (2017).
- **Comparative Analysis:** To compare the Jordanian and Palestinian markets and link the results to global standards and practices in corporate governance (OECD, 2024).
- **Sectoral Analysis:** In response to the diversity of business nature within the sample studied, a sectoral analysis was incorporated to reveal differences in the relationship between decentralization, business complexity, and corporate governance across various economic sectors (industrial, services, investment, etc.). This analysis enables determination of whether the observed effects of the studied variables vary across sectors. It also contributes to enriching the empirical interpretation of results, particularly given the structural and organizational differences among sectors, thereby adding an applied dimension to the study's recommendations. This analysis was conducted using analysis of variance (ANOVA) and post-hoc tests where appropriate.

The analysis encompasses a comprehensive sample of [157] non-financial companies, including [118] listed on the Amman Stock Exchange and [39] on the Palestine Exchange. Financial institutions were excluded from the sample due to their unique nature and different regulatory requirements that may affect measurements and interpretation of results, Omran et al. (2008); Abdelkarim and Alawneh (2009).

## 4.1 Chapter Structure

This chapter is divided into three main sections, each addressing a specific set of research questions and testing a group of hypotheses according to the conceptual framework presented in Chapters Two and Three:

### **Section One:** Analysis of the Jordanian Market (Amman Stock Exchange)

This section focuses on analyzing data from [118] non-financial companies listed on the Amman Stock Exchange, one of the largest financial markets in the Middle East and North Africa region Suwaidan et al. (2021), and includes the following components:

- **Descriptive Analysis:** Characterizing the Jordanian sample and main variables (CGI, BCI, DI), presenting measures of central tendency (mean, median) and dispersion (standard deviation, range), Hair et al. (2019).
- **Testing Hypothesis One (H1):** Examining the effect of decentralization (DEC) on corporate governance (CG) effectiveness in the Jordanian context, using simple and multiple regression models, based on Agency Theory Meckling and Jensen (1976), and Transaction Cost Theory Williamson (1981).
- **Testing Hypothesis Two (H2):** Analyzing the effect of business complexity (BC) on corporate governance, focusing on qualitative dimensions (organizational structure, nature of activity) and quantitative dimensions (sales volume, fixed assets) according to ISA-LCE standards (IAASB, 2024).
- **Testing Hypothesis Three (H3):** Examining the dual interactive effect between decentralization and business complexity on governance ( $DEC \times BC \rightarrow CG$ ), to determine whether business complexity strengthens or weakens the relationship between decentralization and governance Hayes (2017).
- **Discussion of Results:** Interpreting results considering the theoretical framework (Agency Theory, Transaction Cost Theory, Contingency Theory) and the Jordanian economic and regulatory context, comparing them with previous studies' findings Abdelkarim and Alawneh (2009); Suwaidan et al. (2021).

### **Section Two:** Analysis of the Palestinian Market (Palestine Exchange)

This section is dedicated to analyzing data from [40] non-financial companies listed on the Palestine Exchange, an emerging market operating in a complex political and economic environment Abdelkarim and Alawneh (2009), following the same methodology used in Section One:

- Descriptive analysis of the Palestinian sample and main variables.
- Testing the three hypotheses (H1, H2, H3) in the Palestinian context using the same statistical methods.
- Discussion of results considering the political and economic specificity of the Palestinian market, including challenges of political instability and limited economic openness compared to the Jordanian market.

### **Section Three:** Comparative Analysis and Global Context

This section represents the integrative phase of the analysis, comparing results from both markets and linking them to the regional and international context Young et al. (2008) Claessens and Yurtoglu (2013).

- **Statistical Comparison:** Using comparison tests (Independent t-test, Mann-Whitney U) to identify substantial differences between the two markets in levels of governance, decentralization, and business complexity Field (2024).
- **Contextual Factors Analysis:** Examining the impact of regulatory differences (governance laws, disclosure requirements) and economic differences (market size, economic openness, political stability) on study results, based on Institutional Theory Claessens and Yurtoglu (2013).
- **Comparison with Global Standards:** Linking results from the Jordanian and Palestinian markets to international best practices in corporate governance, focusing on the Organization for Economic Co-operation and Development (OECD) 2024 standards (OECD, 2024), and comparing with similar emerging markets in the Middle East and North Africa region (Egypt, Tunisia, Oman, Gulf countries), Omran et al. (2008).
- **Deriving Lessons Learned:** Identifying gaps and opportunities to improve governance practices in both markets and providing policy recommendations to regulatory bodies (Jordan

Securities Commission, Palestine Capital Market Authority) based on extracted empirical evidence.

## 4.2 Conceptual Framework for Analysis

The statistical analysis in this chapter is grounded in three main theories that form the theoretical foundation of the study (detailed in Chapter Two):

- **Agency Theory:** Explains how decentralization can exacerbate the agency problem between owners and management by increasing information asymmetry and monitoring difficulty Meckling and Jensen (1976); Fama and Jensen (1983), necessitating stronger governance mechanisms to reduce agency costs (Monitoring Costs, Bonding Costs, Residual Loss). Conversely, decentralization may improve governance by enhancing accountability across managerial levels and bringing decision-making closer to information sources Christie et al. (2003).
- **Transaction Cost Theory:** Clarifies how increased business complexity can raise coordination and control costs, negatively affecting governance effectiveness (Williamson, 1979, 1986). Consequently, more complex companies require more sophisticated governance structures to manage these costs and limit opportunistic behavior (Jones, 1999; Wieland & Fischer, 2020).
- **Contingency Theory:** Emphasizes that there is no single governance model suitable for all companies; instead, governance mechanisms must adapt to the company's specific context (size, complexity, degree of decentralization, regulatory environment, industry nature) Donaldson (2006); Otley (2016). This means the dual impact of decentralization and business complexity on governance may vary across companies and operational contexts.

Understanding these theories is essential for correctly interpreting results and linking them to academic literature, which will be addressed in detail in each section of this chapter, with reference to how empirical findings support or challenge theoretical assumptions Agrawal and Knoeber (1996); Larcker and Tayan (2020).

This chapter represents the cornerstone of this dissertation, transforming the theoretical and methodological framework (Chapters 1-3) into tangible empirical results. Through

combining rigorous quantitative analysis with deep critical interpretation grounded in fundamental theories, this chapter seeks to provide clear, evidence-based answers to the three research questions, while enriching the academic literature on corporate governance in emerging markets, Young et al. (2008); Claessens and Yurtoglu (2013), and offering practical recommendations to policymakers and practitioners based on the highest international standards (OECD, 2024).

### **4.3 Section one: analysis of the Jordanian market (Amman stock exchange)**

#### **4.3.1 Preface**

This section addresses the statistical analysis results pertaining to a sample of 118 non-financial companies listed on the Amman Stock Exchange during 2023, based on binary data (yes = 1, no = 0) extracted from reliable official sources, including company websites, published annual reports, and market bulletins issued by the Amman Stock Exchange.

The Amman Stock Exchange is one of the largest and oldest financial markets in the Middle East and North Africa region, ranked by market capitalization and the number of listed companies, and is characterized by a relatively stable regulatory and economic environment compared to its Palestinian counterpart. The significance of this section lies in its representation of the first stage of testing the study's conceptual model within a clear legislative and institutional context, thereby providing an appropriate foundation for identifying clear relationships among the study variables and for subsequent comparisons with the Palestinian market and global markets.

The analysis in this section focuses on verifying the three hypotheses related to the impact of both decentralization (DEC) and business complexity (BC), separately and interactively, on corporate governance (CG) effectiveness. Based on the methodological framework detailed in Chapter Three, the analysis employed a set of advanced statistical methods, most notably: descriptive analysis of sample characteristics and variables, bivariate correlation analysis (Pearson's Correlation), multiple linear regression models to test direct effects, and moderation analysis to examine the moderating role of business complexity in

the relationship between decentralization and governance. An internal sectoral analysis was also conducted using ANOVA to examine differences among various economic sectors (industrial, services, and investment).

Furthermore, the analysis incorporated a directed qualitative dimension using NVivo software to interpret governance results through reviewing policies and internal regulations, based on international reference frameworks such as the Organization for Economic Cooperation and Development (OECD) standards (2024) and the International Standard on Auditing for Less Complex Entities (ISA-LCE) (2024).

This section, with its results and discussion, contributes to building a rigorous analytical foundation that paves the way for the second section on analyzing the Palestinian market and lays the groundwork for the third section, which compares the two markets considering global standards and practices in corporate governance.

#### **4.3.2 Descriptive Statistical Analysis of CG Practices, BC, and DEC in ASE**

This descriptive analysis aims to provide a comprehensive and detailed statistical picture of Corporate Governance practices, Business Complexity, and the level of Organizational Decentralization in a sample of publicly listed joint-stock companies on the Amman Stock Exchange. The sample includes 117 companies distributed across four main economic sectors: Services, Insurance, Industry, and Real Estate Investment.

This study is based on a rigorous research methodology that relies on composite indicators constructed across multiple dimensions. The Corporate Governance Index (CG\_Index) consists of four sub-dimensions: Transparency and Disclosure, Board Characteristics, Shareholders' Rights, and Permanent Committees. The Business Complexity Index (BC\_Index) comprises seven dimensions measuring the nature of activities, organizational structure, and financial reporting. The Decentralization Index (DC\_score) measures the geographical distribution of branches and administrative authorities.

### 4.3.3 Descriptive statistics for the overall Jordanian market

Table (4.1) presents the basic descriptive statistics for the three leading indicators at the level of the entire Jordanian market based on a sample of 117 companies. These statistics indicate general trends in governance levels, operational complexity, and administrative decentralization of listed Jordanian companies.

Table (01): Basic Descriptive Statistics for the Jordanian Market (N = 117)

Indicator	Mean	Standard Deviation	Minimum	Maximum	Median
CG_Index	14.53	1.48	1	15	15
BC_Index	15.16	6.94	7	35	15
DC_score	11.46	1.56	8	18	11

*Data source: Author's own statistical analysis.*

### 4.3.4 Analysis of the overall statistical results

#### 4.3.4.1 Corporate Governance Index (CG\_Index)

The analysis shows that the average Corporate Governance Index reached 14.53 out of 15 (with a standard deviation of 1.48), reflecting a relatively high commitment to corporate governance practices in the Jordanian market. This outstanding performance is attributed to several factors, foremost among them the strict regulatory environment imposed by the Jordan Securities Commission, broad compliance with disclosure and transparency standards, and the presence of established corporate governance frameworks in most listed companies.

However, the wide range of the index (from 1 to 15) reveals significant variation among companies, with some suffering from severe governance weaknesses, while the vast majority achieve the maximum score (15). This variability calls for deeper analysis to understand the factors leading to governance weaknesses in some companies.

#### **4.3.4.2 Business Complexity Index (BC\_Index)**

The Business Complexity Index averaged 15.16 out of 35 (standard deviation: 6.94), indicating a moderate level of complexity in the operational structures of Jordanian companies. This average reflects a balance between small and medium companies with relatively simple operations and large companies with diverse activities and complex organizational structures. The index ranges from 7 to 35, highlighting the considerable diversity in nature of business operations. Companies with low complexity (7-10) are characterized by limited and focused activities, whereas companies with high complexity (30-35) include in business and logistics companies. The high standard deviation (6.94) confirms this wide variation in operational complexity.

#### **4.3.4.3 Decentralization Index (DC\_score)**

The Decentralization Index achieved an average score of 11.46 out of 18 (with a standard deviation of 1.56), reflecting a moderate level of administrative and geographical decentralization. This level indicates that most Jordanian companies adopt a hybrid model combining centralization in strategic decisions and decentralization in operational processes.

The index ranges from 8 to 18, where the value 8 represents highly centralized companies (one or two branches), while the value 18 represents highly decentralized companies with an extensive network of branches and significant delegation of authority. The relatively low standard deviation (1.56) indicates greater homogeneity in decentralization levels compared to the other two indices.

#### **4.3.4.4 Descriptive statistics by sector**

Table (4.2) presents comparative descriptive statistics of the three indicators across the four economic sectors. This comparative analysis helps in understanding sectoral differences in levels of governance, operational complexity, and decentralization, and explains the underlying factors for these differences.

Table 02): Comparative Descriptive Statistics by Sector

<b>Sector</b>	<b>Number</b>	<b>CG Mean</b>	<b>CG Std Dev</b>	<b>BC Mean</b>	<b>BC Std Dev</b>	<b>DC Mean</b>	<b>DC Std Dev</b>
Services	39	14.33	2.49	17.79	7.88	12.18	1.99
Insurance	17	14.94	0.24	14.94	2.38	11.65	1.06
Industry	30	14.73	0.45	17.67	6.66	11.43	1.25
Real Estate Investment	31	14.35	0.49	9.55	3.72	10.48	0.72

*Data source: Author's own statistical analysis.*

### **4.3.5 Comparative sector analysis**

#### **4.3.5.1 Services Sector (n = 39 companies)**

The Services sector is the most diverse among the four sectors, comprising the largest number of companies (39), ranging from large, medium, to small enterprises. The sector recorded a governance average of 14.33, which is below the market average, but the high standard deviation (2.49) reveals a wide variation in governance levels. Regarding business complexity, the sector achieved the highest average among sectors (17.79), reflecting the diverse and complex activities in telecommunications, transportation, and logistics companies. The sector also recorded the highest decentralization level (12.18), due to the wide geographical spread of branches of major service companies.

Key characteristics: The sector includes giant companies such as telecommunications and postal companies with very high operational complexity (BC\_Index reaching 35) and a wide network of branches (more than 60 branches in some cases). Conversely, it also includes small and medium-sized companies with simpler structures. Notably, the sector contains the weakest companies in terms of governance in the entire market, with one company scoring only 1, indicating an almost complete absence of governance practices.

#### **4.3.5.2 Insurance Sector (n = 17 companies)**

The Insurance sector stands out with the highest governance level among all sectors (14.94) and the lowest standard deviation (0.24), indicating exceptional homogeneity in

governance quality across all companies in the sector. This outstanding performance is attributed to the strict regulatory supervision by the Jordanian Insurance Commission and stringent regulatory requirements obligating all insurance companies to high governance standards.

In terms of complexity, the sector recorded an average of 14.94, the lowest among the top three sectors, reflecting relatively standardized operations compared to other sectors. Decentralization was moderate (11.65), as most insurance companies rely on a limited network of main branches plus dispersed agents.

Key characteristics: The sector achieves near-perfect scores across all governance dimensions: transparency and disclosure (100%), permanent committees (100%), shareholders' rights (100%), and board independence (average 2.94 out of 3). This high homogeneity makes the insurance sector a model to emulate in corporate governance compliance.

#### **4.3.5.3 Industrial Sector (n = 30 companies)**

The Industrial sector recorded an average governance score of 14.73, the second highest after the Insurance sector, with a low standard deviation (0.45), reflecting a good consistency in governance levels. The sector showed a high business complexity (17.67), the second highest after the Services sector, due to product diversity, complex manufacturing processes, and large employee numbers. In terms of decentralization, the sector achieved an average score of 11.43, close to the market average. Most industrial companies adopt a relatively centralized model, focusing on main production sites, with limited distribution and sales branches.

Key characteristics: The sector includes major industrial companies such as pharmaceutical and food manufacturing firms, characterized by high operational complexity (BC\_Index reaching up to 33). However, the sector faces challenges in the dimension of board independence (average 2.73), as some companies suffer from concentrated ownership that limits decision-making independence.

#### 4.3.5.4 Real Estate Investment Sector (n = 31 companies)

The Real Estate Investment sector recorded the lowest performance across all indicators. The average governance score was 14.35 (lowest among sectors), business complexity 9.55 (much lower than the overall average), and decentralization 10.48 (also the lowest). These figures reflect the sector's nature, characterized by limited projects, simple operating structures, and concentrated ownership.

Most real estate investment companies have only one or two branches and manage a limited number of projects, explaining the low complexity and decentralization scores. Regarding governance, the sector suffers from relatively weak board independence (average 2.35, the lowest), attributed to high levels of concentrated ownership in the hands of a few major shareholders.

Key characteristics: Some real estate companies have concentrated ownership rates as high as 88-89%, which significantly restricts decision-making independence and governance effectiveness. Nevertheless, the sector adheres to transparency and disclosure standards (100%), but the main challenge lies in the weakness of internal governance structures.

#### 4.3.6 Dimensional analysis of the Corporate Governance Index

The Corporate Governance Index (CG\_Index) consists of four sub-dimensions that assess different aspects of governance quality. Dimensional analysis provides deeper insight into the strengths and weaknesses of governance practices and helps identify areas in need of improvement. Table 3 presents descriptive statistics for each dimension of governance.

Table 03): Dimensional Analysis of the Corporate Governance Index (N = 117)

<b>Dimension</b>	<b>Maximum Score</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Full Compliance Rate</b>
Transparency & Disclosure	4	3.95	0.32	1	4	96.6%

Board of Directors	4	3.57	0.57	0	4	89.3%
Shareholders' Rights	4	3.94	0.46	0	4	98.3%
Permanent Committees	4	3.97	0.37	0	4	99.1%

*Data source: Author's own statistical analysis.*

### **4.3.7 Analysis of Corporate Governance Index Dimensions**

#### **4.3.7.1 Transparency and Disclosure Dimension (DT\_Score)**

This is by far the strongest dimension in the Jordanian corporate governance system, with an average of 3.95 out of 4 (98.75%), and 96.6% of companies complying at the maximum level (4/4). This exceptional performance reflects the success of the regulatory policies of the Jordan Securities Commission in enforcing strict disclosure and transparency standards.

Dimension components: This dimension measures company disclosure of financial data, governance reports, financial statements, and business ethics policies on their official websites. The low standard deviation (0.32) indicates high homogeneity, with only very rare exceptions of companies not achieving full disclosure.

#### **4.3.7.2 Permanent Committees Dimension (PC\_Score)**

This dimension achieved the second highest average (3.97 out of 4), with 99.1% of companies forming all four mandated permanent committees: Audit, Governance, Nominations & Remunerations, and Risk Management Committees. This outstanding performance demonstrates the strong commitment of Jordanian companies to establishing comprehensive corporate governance structures. Notes: The Audit Committee is the most widespread (present in 96% of companies), while the Risk Management Committee is the least (present in 53%), suggesting that some companies are still in early stages of implementing comprehensive risk management frameworks.

#### **4.3.7.3 Shareholders' Rights Dimension (SCR\_Score)**

This dimension recorded an average of 3.94 out of 4, with 98.3% of companies protecting all shareholders' rights, including minority interests, foreign shareholders, and joint-stock companies. This strong performance reflects the presence of a robust legal framework to protect shareholders' rights in Jordan. Dimension components: This measures the extent of protection for voting rights, dividend distribution, rights to information, and equal treatment for all categories of shareholders. The low standard deviation (0.46) confirms a broad compliance with these rights.

#### **4.3.7.4 Board of Directors Dimension (BOD\_Score)**

This dimension is considered the main weakness in the Jordanian governance system, with an average of only 2.68 out of 3 (89.3%) and a relatively higher standard deviation (0.57), which indicates greater variation among companies. Full compliance with the criterion (3/3) was achieved by only 70.9% of companies, much lower than in the other dimensions.

Influencing factors: The weakness of this dimension is linked to several factors: concentrated ownership among a limited number of major shareholders, which restricts the independence of board members; the combination of the roles of board chairman and CEO in some companies; and insufficient diversity in the professional and educational backgrounds of board members in certain cases. Sectoral distribution: The Insurance sector performs best in this dimension (average 2.94), followed by Services (2.77), Industry (2.73), and finally Real Estate Investment (2.35). This gradient reflects differences in regulatory environments and ownership concentration across sectors.

#### **4.3.8 Academic Summary and Key Conclusions**

This comprehensive descriptive analysis provides a detailed and accurate picture of the state of corporate governance, business complexity, and organizational decentralization in a sample of 117 Jordanian public shareholding companies listed on the Amman Stock Exchange. The findings reveal several key conclusions of academic and practical significance:

#### 4.3.8.1 A relatively advanced level of corporate governance

The analysis indicates that the Jordanian market enjoys a relatively high level of commitment to corporate governance practices (mean CG\_Index = 14.53 out of 15), reflecting the success of regulatory and reform efforts undertaken in the market over the past two decades. This distinguished performance is attributed to several main factors:

- **Strict regulatory environment:** The Jordan Securities Commission plays a pivotal role in enforcing stringent governance standards on listed companies, with effective monitoring and supervision mechanisms.
- **Commitment to transparency:** 96.6% of companies attained the maximum score in the transparency and disclosure dimension, reflecting a strong corporate culture of information disclosure.
- **Existence of integrated governance frameworks:** 99.1% of companies complied with forming the required permanent committees, indicating the seriousness of companies in building effective corporate governance structures.

#### 4.3.8.2 Marked sectoral variation:

The comparative analysis reveals fundamental differences among the four sectors, necessitating a theoretical explanation that considers the nature of each sector and its surrounding regulatory environment:

- **Insurance Sector – A model of excellence:** This sector clearly excels across all governance indicators, with exceptional uniformity in performance (standard deviation 0.24). This excellence is attributed to the sector's sensitive nature, which necessitates strict regulatory supervision from the Insurance Commission, in addition to the need for high levels of trust from clients and investors.
- **Services Sector – Diversity and extremes:** This sector is characterized by the highest levels of complexity and decentralization but also comprises the weakest companies in terms of governance. The wide variation (standard deviation 2.49) reflects the diversity of companies in this sector, ranging from telecommunications and logistics giants to small and medium-sized enterprises.

- **Real Estate Investment Sector** – Structural challenges: This sector suffers from the lowest performance across all indicators, linked to structural features such as highly concentrated ownership, limited activities, and weak board independence. These results are consistent with the literature, indicating that real estate investment sectors often face unique governance challenges.

#### 4.3.8.3 The Board of Directors is a major weak point

While Jordanian companies excel in the dimensions of transparency, committees, and shareholders' rights, the board of directors' dimension stands out as the weakest link in the governance system (mean 2.68 out of 3). This gap is attributed to:

- **Concentrated ownership:** The presence of major shareholders with high stakes (up to 89% in some cases) limits the independence of board decisions.
- **Dual roles:** In some companies, a single individual holds both the positions of board chair and CEO, undermining internal controls.
- **Limited diversity:** Weak representation of independent members and lack of diversity in board members' professional and educational backgrounds.

#### 4.3.8.4 Positive relationships among the three indices

Correlation analysis reveals a statistically significant positive relationship among the governance, business complexity, and decentralization indices:

- $CG\_Index \times BC\_Index: r = 0.230 (p < 0.05)$
- $CG\_Index \times DC\_score: r = 0.202 (p < 0.05)$
- $BC\_Index \times DC\_score: r = 0.544 (p < 0.001)$

These results contrast with traditional hypotheses that suggest complexity and decentralization weaken governance. On the contrary, the findings suggest that companies with more complex operations and broader branch networks tend to adopt stronger governance practices—perhaps to manage risks associated with such complexity.

#### **4.3.8.5 Academic and practical implications**

On the academic level: This study offers a theoretical contribution to understanding the relationship between governance and operational complexity in the context of emerging markets and raises questions about the applicability of some theories developed in Western contexts when applied to markets with different institutional features. On the practical level, the results point to the need for reform efforts to focus on strengthening board independence, especially in sectors suffering from high ownership concentration. The findings also highlight the importance of continuing regulatory efforts to maintain outstanding levels of transparency and disclosure.

#### **4.3.9 Conclusion**

This comprehensive descriptive analysis constitutes a fundamental starting point for understanding the reality of corporate governance in the Jordanian financial market. Through a rigorous statistical analysis of a sample of 117 companies distributed across four economic sectors, the study revealed a relatively advanced level of commitment to governance practices, with notable sectoral variations and specific challenges requiring attention.

These descriptive findings provide a solid foundation for subsequent inferential analyses, upon which to build in testing research hypotheses related to the impact of governance on financial performance, market value, and risk management. The study also serves as a valuable reference for policymakers and private sector practitioners by clearly identifying areas of strength to be reinforced and areas of weakness requiring intervention.

Finally, this study affirms that corporate governance is not a uniform concept, but a multidimensional system influenced by complex sectoral, structural, and regulatory factors. Understanding these dynamics is a necessary step toward developing effective governance policies that respect the local context while remaining aligned with globally recognized standards.

#### **4.3.10 Multiple Linear Regression and Interaction Analysis**

#### 4.3.10.1 Multiple Linear Regression Analysis

Table (4.4) presents a summary of the multiple linear regression model used to analyze the relationship between the governance variable (CG) as the dependent variable, and both decentralization (DEC) and business complexity (BC) as independent variables. The correlation coefficient,  $R = 0.342$ , indicates a moderate association between the variables. The  $R^2$  value of 0.117 denotes that approximately 11.7% of the variance in governance can be explained by this model, while the remaining variance is attributable to other factors not included in the model. The adjusted  $R^2$  value of 0.101 accounts for the number of predictors in the model, thus providing a more accurate estimate. The standard error of the estimate reached 0.5914, reflecting the average deviation between the predicted and observed values. The results of the ANOVA indicate a high level of statistical significance for the model (Sig. F Change = 0.001), which confirms the model's suitability for explaining the relationship under investigation at a significance level of 0.001.

The predictive equation is as follows:

$$CG = \beta^0 + \beta^1(DEC) + \beta^2(BC) + \epsilon$$

Table (4.4): Multiple Linear Regression Model Summary

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error	R <sup>2</sup> Change	F Change	df1	df2	Sig. F Change
1	0.342	0.117	0.101	0.5914	0.117	7.346	2	111	0.001***

*Data source: Author's own statistical analysis.*

#### 4.3.10.2 Regression Coefficients and Statistical Tests

Table (4.5) displays the regression coefficients and statistical tests for the multiple linear regression model. The constant (intercept) exhibits a high positive value (13.205) with strong statistical significance (Sig. = 0.000\*\*\*). Regarding the independent variables, the regression coefficient for decentralization indicates a weak negative effect (-0.001), which is not statistically significant (Sig. = 0.968), suggesting that decentralization does not have a clear impact on the dependent variable. Conversely, business complexity demonstrates a

positive and significant effect ( $B = 0.031$ ,  $\text{Sig.} = 0.000^{***}$ ), with a standardized beta coefficient ( $Beta = 0.342$ ) reflecting the strength of this impact. Multicollinearity indicators (VIF and Tolerance) confirm the absence of substantial collinearity among the independent variables, as VIF values are below 5 and Tolerance values are close to 1.

Table 0.5): Regression Coefficients and Statistical Tests

Variable	B	Std. Error	Beta	T	Sig.	VIF	Tolerance
(Constant)	13.205	0.417	-	31.632	0.000***	-	-
(Decentralization)	-0.001	0.037	-0.004	-0.040	0.968	1.044	0.958
(Business Complexity)	0.031	0.008	0.342	3.760	0.000***	1.044	0.958

*Data source: Author's own statistical analysis.*

#### 4.3.11 Interaction (Moderation) Analysis

Table (4.6) presents a summary of the interaction model, which includes decentralization (DEC), business complexity (BC), and the interaction effect between them ( $DEC \times BC$ ) as predictors of corporate governance (CG). The correlation coefficient ( $R$ ) is 0.342, and the  $R^2$  value indicates that the model accounts for approximately 11.7% of the variance in CG. The adjusted  $R^2$ , at 0.093, reflects the adjustment for the number of predictors, providing a more accurate assessment of the model's explanatory power. The model's standard error is 0.5941, representing the average deviation in predictions. The F-test result demonstrates statistical significance at the 99.7% confidence level ( $\text{Sig.} = 0.003^{**}$ ), confirming the relevance of the included predictors, including the interaction term, in explaining variations in governance. The predictive equation incorporates the interaction term between DEC and BC:

$$CG = \beta_0 + \beta_1(DEC) + \beta_2(BC) + \beta_3(DEC \times BC) + \varepsilon.$$

Table (4.6): Moderation Model Summary

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error	F	df1	df2	Sig.

2	0.342	0.117	0.093	0.5941	4.854	3	110	0.003**
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*Data source: Author's own statistical analysis.*

#### 4.3.11.1 Moderation Model Coefficients

Table (4.7) details the coefficients and statistical tests for the moderation model. The constant (intercept) demonstrates a high value of 13.649, with strong statistical significance (Sig. = 0.000\*\*\*). The decentralization variable exhibits a weak negative and statistically insignificant effect (B = -0.001, Sig. = 0.970), whereas business complexity shows a positive and statistically significant impact (B = 0.031, Sig. = 0.000\*\*\*). The interaction term between DEC and BC is also statistically insignificant (B ≈ 0.000, Sig. = 0.977), indicating that decentralization does not significantly moderate the relationship between business complexity and governance. Multicollinearity indicators (VIF) are close to 1, confirming the absence of collinearity issues among the predictors. It is also noted that mean centering was applied to the variables to minimize multicollinearity and enhance estimation accuracy.

Table 07): Moderation Model Coefficients

(Variable)	B	Std. Error	t	Sig.	95% CI	VIF
(Constant)	13.649	0.057	240.261	0.000***	[13.536, 13.761]	-
(DEC)	-0.001	0.037	-0.038	0.970	[-0.075, 0.072]	1.046
(BC)	0.031	0.008	3.720	0.000***	[0.015, 0.048]	1.055
(DEC × BC)	0.000	0.005	0.029	0.977	[-0.010, 0.011]	1.011

*Data source: Author's own statistical analysis.*

#### 4.3.12 Model Comparison and Interaction Assessment

Table (4.8) compares the simple regression model (Model 1) with the interaction model (Model 2) to evaluate the effect of adding the interaction variable on explaining corporate governance (CG). The results examine indicators such as R<sup>2</sup>, adjusted R<sup>2</sup>, and the F-statistic. The R<sup>2</sup> value remains constant at 0.117 for both models, indicating that the inclusion of the interaction term did not enhance the explanatory power of the model. Furthermore, the

adjusted R<sup>2</sup> declined slightly in the interaction model (by -0.008), suggesting a marginal decrease in model quality following the addition of the interaction. The F-statistic decreased from 7.346 in the simple model to 4.854 in the interaction model, while the significance of the F Change for the interaction (Sig. F Change = 0.977) confirms the absence of a meaningful effect from the interaction between decentralization and business complexity. In other words, interaction does not add statistically significant explanatory value. Consequently, the use of the interaction model is not recommended, as it does not provide improvement in explaining variance.

Table 08): Model Comparison and Interaction Assessment

(Indicator)	Model 1	Model 2	Change
R <sup>2</sup>	0.117	0.117	0.000
Adjusted R <sup>2</sup>	0.101	0.093	-0.008
F-Statistic	7.346***	4.854**	-
R <sup>2</sup> Change	-	-	0.000
F Change	-	-	0.001
Sig. F Change	-	-	0.977

*Data source: Author's own statistical analysis.*

#### 4.3.13 Hypothesis Testing and Interpretation

**The first hypothesis (H1)** stated that decentralization would have a statistically significant negative effect on corporate governance. However, the statistical results do not support this hypothesis. The regression coefficient for decentralization was found to be (B = -0.001) with a standard error (SE = 0.037), a t-value of (-0.040), and a p-value of (0.968). This p-value greatly exceeds the conventional threshold for statistical significance ( $\alpha=0.05$ ), which leads to the rejection of H1 due to insufficient statistical evidence for a meaningful relationship between decentralization and corporate governance.

The effect size is also minimal, with a standardized beta coefficient of (-0.004), which is very close to zero, indicating that decentralization explains less than 0.02% of the variance in corporate governance. Thus, even if there were an association, it would be extremely weak

and practically insignificant. The 95% confidence interval ranged from [-0.074, 0.071], which includes zero and further confirms the lack of statistical significance.

This result may be attributed to several factors, foremost among them being the existence of mandatory regulatory requirements imposed by securities authorities on all companies uniformly, making the regulatory framework and standards largely unaffected by internal organizational differences or decentralization levels. Additionally, there may be a gap between the formal application of decentralization and what occurs in practice, as organizational culture often imposes a centralized approach to decision-making regardless of organizational structures. Furthermore, more centralized firms may compensate by employing alternative governance mechanisms such as independent committees or external oversight, thereby reducing the actual reliance of governance practices on decentralization. Lastly, the decentralization index used in this study may not capture all relevant dimensions of authority distribution, limit the accuracy of statistical assessment and point to a need for more comprehensive evaluative instruments.

**The second hypothesis (H2)** proposed that business complexity exerts a statistically significant negative effect on corporate governance. Interestingly, the empirical results contradict the initial theoretical expectation. The regression coefficient for business complexity was ( $B = 0.031$ ) with a standard error ( $SE = 0.008$ ), a t-value of (3.760), and a p-value less than 0.001, indicating very strong statistical significance at the 99.9% confidence level. Accordingly, H2 was rejected—not due to lack of significance, but because the relationship found was positive rather than negative as hypothesized. The results demonstrate that business complexity has a clear, significant positive effect on governance quality, thereby allowing confident rejection of the null hypothesis.

As for the direction of the relationship, the regression coefficient was positive (+0.031), contrary to the initial expectation of a negative relationship. This means that greater business complexity is associated with improved corporate governance rather than its deterioration.

From an effect size perspective, the standardized beta coefficient (0.342) indicates a moderate-to-strong impact, with business complexity accounting for almost the entirety of the model's explained variance ( $R^2 = 11.7\%$ ). The findings show that every one-unit increase

in business complexity results in a 0.031 increase in corporate governance score, underscoring the practical importance of this relationship. Furthermore, the 95% confidence interval ([0.015, 0.048]) is wholly positive and does not contain zero, which reinforces the certainty and positive direction of the effect.

These findings can be interpreted through theory and literature. From an agency theory perspective, organizational complexity creates an environment that amplifies agency problems and information asymmetry, prompting stakeholders to demand stronger, more transparent governance mechanisms (Jensen & Meckling, 1976; Bebchuk & Weisbach, 2010). Stakeholder theory affirms that complexity entails a more diverse and numerous arrays of stakeholders, motivating firms to adopt broader and more balanced governance practices (Freeman, 1984; Donaldson & Preston, 1995). Institutional theory contends that complex organizations are subject to greater oversight by regulatory bodies and media, elevating the standard of governance required (DiMaggio & Powell, 1983; Haxhi, 2023). Finally, only firms with substantial financial and human resources—attributes of complex organizations—can afford to implement sophisticated control systems (Bebchuk & Weisbach, 2010).

These results have important practical implications. Simpler firms should work to enhance their governance practices, even with uncomplicated organizational structures, while complexity should be viewed as an opportunity—not a threat—for governance improvement. Regulators should consider adopting flexible, tiered governance standards that account for varying levels of organizational complexity (Donaldson & Preston, 1995; DiMaggio & Powell, 1983).

**The third hypothesis (H3)** tested whether business complexity moderates the relationship between decentralization and corporate governance, either strengthening or weakening it. The empirical results revealed no moderating effect between the variables: the interaction coefficient ( $\beta_3$ ) was effectively zero (0.000) with a standard error (SE = 0.005), a t-value of (0.029), and a p-value (0.977) well above the standard significance threshold (0.05), confirming no statistical significance.

Adding the interaction variable led to no improvement in the model; explanatory power did not change at all (Change = 0.000), and the F Change was statistically non-significant ( $p = 0.977$ ). The adjusted  $R^2$  dropped from 0.101 to 0.093, indicating a penalty for model complexity with no gain in explanatory value. Moreover, the 95% confidence interval ([-0.010, 0.011]) included zero by a wide margin, further confirming the absence of a moderating effect.

These practical findings indicate that the relationship between decentralization and corporate governance remains unchanged—and in fact, non-existent—regardless of business complexity, whether in simple or complex organizations. Multicollinearity diagnostics (VIF = 1.011) show that all independent variables are statistically distinct and free of multicollinearity, ensuring the reliability of these results.

This can be explained by the independent effects of business complexity and decentralization within the context of corporate governance, with no synergy or conflict between them. External organizational and regulatory factors may be more influential in shaping governance practices than internal interactions between decentralization and complexity. Additionally, since decentralization did not show a significant effect on governance in the first hypothesis, the absence of a moderating effect is both logical and consistent with the overall analytical framework.

These conclusions are consistent with the literature on corporate governance, which highlights the relative autonomy of regulatory factors in certain contexts and the predominant influence of external pressures (Jensen & Meckling, 1976; DiMaggio & Powell, 1983; Freeman, 1984).

#### 4.3.14 Sectoral and Categorical Analysis

Table 09): Distribution of Companies and Governance by Level of BC

Complexity Level	Number of Companies	Percentage	Mean Governance	Std. Deviation	Minimum	Maximum
Low	35	29.8%	13.24	0.85	11.00	14.00
Medium	53	45.6%	13.79	0.41	13.00	14.00

High	29	24.6%	13.89	0.31	13.00	14.00
Total	117	100%	13.65	0.62	11.00	14.00

*Data source: Author's own statistical analysis.*

Table (4.9) above presents a sectoral and categorical analysis of the distribution of companies and the level of corporate governance based on the degree of business complexity. The data show a clear trend: the mean level of corporate governance increases with escalating business complexity. The mean governance score for companies with low complexity is 13.24, gradually rising to 13.79 for those with medium complexity, and reaching 13.89 in the high complexity category. This reflects a difference of 0.65 points between the lowest and highest categories, representing an increase of approximately 4.9% in governance level as companies move from the least to the most complex category.

Regarding internal consistency, the standard deviation decreases as complexity increases, dropping from 0.85 in simple companies to 0.31 in highly complex ones. This reduction in dispersion reflects the heightened similarity and commitment to governance practices among companies with complex operations. In contrast, simple companies exhibit greater variation in their internal governance standards.

These results reinforce both practical and theoretical assumptions: organizational complexity typically drives companies to develop stricter and more professional governance systems in response to stronger regulatory pressures, a broader stakeholder base, and the availability of resources and capabilities that enable larger firms to implement best practices Meckling and Jensen (1976); DiMaggio and Powell (1983); Freeman and Phillips (2002). Conversely, the observed variability in governance among simpler firms highlights the importance of raising awareness and focusing on institutional principles and standards within these categories, ensuring advanced levels of governance regardless of company size or scope.

Table 010): Distribution of Companies and Governance by Level of DEC

<b>Decentralization Level</b>	<b>Number of Companies</b>	<b>Percentage</b>	<b>Mean Governance</b>	<b>Std. Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
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Low	31	26.3%	13.60	0.50	13.00	14.00
Medium	58	50.0%	13.65	0.58	11.00	14.00
High	28	23.7%	13.70	0.82	11.00	14.00
Total	117	100%	13.65	0.62	11.00	14.00

*Data source: Author's own statistical analysis.*

Table (4.10) presents the distribution of companies and the level of corporate governance according to the degree of decentralization. The differences between the mean governance scores across decentralization levels are minimal: companies with low decentralization have a mean score of 13.60, which rises marginally to 13.65 for medium decentralization and 13.70 for companies with high decentralization. The gap between the highest and lowest levels does not exceed 0.10 points (an insignificant 0.7%), which is not practically relevant for institutional performance.

Concerning variability, the standard deviation increases with the degree of decentralization, reaching 0.82 in the most decentralized companies versus 0.50 in the least. This implies greater diversity in governance practices among organizations with decentralized structures—a likely result of different management approaches and varying degrees of regulatory adherence within decentralized environments.

These findings support the outcome of the first hypothesis (H1), which indicated the absence of an influential relationship between decentralization and the level of corporate governance. This underscores the importance of other organizational and institutional factors, such as unified legal frameworks or corporate culture, in determining governance quality regardless of the company's authority structure Meckling and Jensen (1976); DiMaggio and Powell (1983). Thus, decentralization does not appear to be a decisive element in explaining differences in governance practices across firms.

#### **4.3.15 Concluding Remarks: Jordanian Market Analysis**

This section examined the relationship between decentralization, business complexity, and corporate governance in 117 non-financial companies listed on the Amman Stock Exchange during 2023. The analysis employed descriptive statistics, multiple linear

regression, and moderation analysis to test three research hypotheses within the Jordanian market context.

#### **4.3.15.1 Key Empirical Findings**

The descriptive analysis revealed that Jordanian listed companies demonstrate a relatively high level of corporate governance compliance (mean CG\_Index = 14.53 out of 15), reflecting the effectiveness of the regulatory framework established by the Jordan Securities Exchange. However, notable sectoral variations exist, with the Insurance sector exhibiting the strongest governance performance (mean = 14.94) characterized by exception ownership entity (SD = 0.24), while the Real Estate Investment sector displayed weaker performance (mean = 14.35) accompanied by challenges related to ownership concentration and board independence.

The hypothesis testing yielded three principal findings. First, Hypothesis One (H1) was rejected: no statistically significant relationship was found between organizational decentralization and corporate governance quality ( $\beta = -0.001$ ,  $p = 0.968$ ). This null finding suggests that within Jordan's stringent regulatory environment, mandatory governance requirements override the influence of internal organizational structures on governance outcomes.

Second, Hypothesis Two (H2) was rejected due to the emergence of an unanticipated positive relationship: business complexity demonstrated a statistically significant positive effect on corporate governance ( $\beta = 0.031$ ,  $p < 0.001$ , Beta = 0.342). Contrary to initial theoretical expectations of a negative impact, more complex organizations exhibited stronger governance practices finding interpretable through agency theory (complexity necessitates enhanced monitoring), stakeholder theory (diverse stakeholders demand robust governance), and institutional theory (complex firms face greater regulatory scrutiny).

Third, Hypothesis Three (H3) was rejected: business complexity did not moderate the relationship between decentralization and governance ( $\beta_3 \approx 0.000$ ,  $p = 0.977$ ;  $\Delta R^2 = 0.000$ ). The absence of interaction effects indicates that decentralization and business complexity

exert independent rather than synergistic influences on governance practices in the Jordanian context.

The categorical analysis reinforced these patterns, revealing a positive gradient in governance quality across complexity levels (from 13.24 in low-complexity firms to 13.89 in high-complexity firms) with decreasing variability, while governance levels across decentralization categories remained virtually unchanged (13.60 to 13.70).

#### **4.3.15.2 Implications and Limitations**

These findings underscore the primacy of institutional and regulatory factors over internal organizational characteristics in shaping corporate governance practices within the Jordanian market. The modest explanatory power of the regression model ( $R^2 = 0.117$ ) indicates that while statistically significant, decentralization and business complexity account for only a limited portion of governance variance, suggesting the importance of additional factors such as ownership structure, board composition, and firm-specific characteristics in future research.

Having established these empirical patterns within Jordan's relatively mature and regulated market environment, the analysis now turns to the Palestinian Exchange—a smaller, emerging market operating under distinct political, economic, and institutional conditions. The subsequent section (Section Two) will apply an identical methodological framework to a sample of Palestinian listed companies to determine whether the governance dynamics observed in Jordan replicate in this contrasting context.

This comparative approach will illuminate the extent to which the relationships between decentralization, business complexity, and corporate governance are universal across emerging markets or contingent upon specific institutional settings—a critical distinction with implications for both theoretical development and regulatory policy formulation in the region, Young et al. (2008); Claessens and Yurtoglu (2013).

### **4.3 Section two: analysis of the Palestinian market (Palestine exchange)**

#### **4.3.1 Preface**

This section presents the statistical analysis results pertaining to a sample of 39 non-financial companies listed on the Palestine Exchange (PEX) during 2023, based on binary data (yes = 1, no = 0) extracted from reliable official sources, including company websites, published annual reports, and official disclosures issued by the Palestine Exchange and the Palestine Capital Market Authority (PCMA).

The Palestine Exchange represents an emerging capital market operating within a unique and challenging political and economic environment Abdelkarim and Alawneh (2009); Shahwan (2015). Established in 1997, the PEX is a relatively young market still in the early stages of institutional development, with considerable scope for advancement in market infrastructure, regulatory frameworks, and corporate governance practices compared to more mature regional exchanges such as the Amman Stock Exchange. The market comprises approximately 48 listed companies with modest market capitalization and trading volumes, reflecting its nascent stage of development Naser and Nuseibeh (2008).

The Palestinian market context is distinguished by several structural characteristics that warrant consideration in interpreting empirical findings. These include political uncertainty and territorial fragmentation affecting economic development, a progressively evolving but less comprehensive regulatory framework for corporate governance, concentrated ownership structures dominated by family-owned firms, limited market liquidity and restricted investor base, and economic constraints including restricted access to international markets Shahwan (2015); Cardarelli et al. (2022). Despite these challenges, the Palestine Exchange represents a critical case study for examining corporate governance dynamics in frontier markets operating under extraordinary conditions.

The significance of analyzing the Palestinian market lies in determining whether the governance relationships identified in the Jordanian context (Section One) hold universally across institutional settings, or whether they are contingent upon market maturity, regulatory intensity, and macroeconomic stability. Understanding governance determinants in the

Palestinian context carries important policy implications for regulators, investors, and practitioners seeking to strengthen governance frameworks in emerging markets facing developmental constraints Claessens and Yurtoglu (2013).

This section employs an identical methodological framework to Section One, ensuring comparability and methodological rigor. The analysis encompasses: descriptive statistical analysis of sample characteristics and main variables (CG\_Index, BC\_Index, DC\_score); hypothesis testing using multiple linear regression models to examine the effects of decentralization (H1) and business complexity (H2) on corporate governance; moderation analysis to test the interactive effect (H3); and sectoral analysis where appropriate. The qualitative dimension utilizing content analysis based on OECD (2024) and ISA-LCE (2024) standards is also incorporated.

It is important to acknowledge that the smaller sample size ( $n = 40$ ) compared to the Jordanian market may constrain statistical power. Nevertheless, this sample represents a substantial proportion of PEX-listed non-financial companies, providing meaningful insights into governance practices within this emerging market context. The findings from this section will be systematically compared with the Jordanian market results in Section Three, enabling a comparative institutional analysis that illuminates the role of contextual factors in shaping governance dynamics and provides evidence-based guidance for policy formulation in Palestine and similar frontier markets.

The Palestinian financial market is primarily represented by the Palestine Exchange (PEX)—an official stock exchange headquartered in the city of Nablus in the West Bank and supervised by the Palestinian Capital Market Authority (PCMA). The exchange lists companies from several key sectors, including banking and financial services, insurance, investment, industry, and services, with a total market capitalization estimated at several billion U.S. dollars distributed across these sectors.

The Palestine Exchange provides a fully electronic trading platform focused on transparency and investor protection. It operates from Sunday to Thursday during designated trading hours and closes on weekends and official holidays (Palestinian Capital Market Authority, 2021).

Both the Exchange and the PCMA seek to attract local and regional investors, including members of the Palestinian diaspora, through continuous efforts such as developing technological infrastructure, launching awareness initiatives like the World Investor Week, and improving the legislative and regulatory environment despite the prevailing political and economic challenges faced by the Palestinian economy.

This chapter presents an analytical examination of data from the Palestinian financial market, focusing on a sample of 39 companies listed on the Palestine Exchange. These companies are distributed across four main sectors: services, insurance, industry, and investment. The analysis focuses on three key indicators that reflect the operational and regulatory environment of the listed companies, namely:

- **Corporate Governance Index (CG\_Index)**

This index measures the level of compliance with corporate governance standards based on four main dimensions: disclosure and transparency, board characteristics, shareholders' rights, and the existence of permanent committees. The index ranges from 0 to 16 points.

- **Business Complexity Index (BC\_Index)**

This indicator reflects the degree of operational and regulatory complexity within a company by assessing its organizational structure, nature of operations, and financial reporting. Within the study sample, the index ranges from 8 to 34 points.

- **Decentralization Score (DC\_score)**

This index measures the level of authority distribution and geographic expansion within the company by evaluating the number of branches and points of sale, delegation of authority, and the degree of decentralization in decision-making.

#### **4.3.2 Sectoral Distribution of the Sample**

The study sample, comprising 39 companies, is distributed across four main sectors as follows:

Investment sector: 12 companies (30.8%)

Industrial sector: 11 companies (28.2%)

Insurance sector: 8 companies (20.5%)

Services sector: 8 companies (20.5%)

Second: Sectoral Analysis of the Indicators

Table 011): Sectoral Averages for the Three Indicators

<b>Sector</b>	<b>No. of Companies</b>	<b>CG_Index</b>	<b>BC_Index</b>	<b>DC_score</b>
Investment	12	13.00	14.42	6.92
Insurance	8	13.38	22.38	12.62
Services	8	11.88	22.12	8.50
Industry	11	12.36	18.82	7.82

*\*Data source: Author's own statistical analysis.*

#### **4.3.2.1 Interpretation of Results**

The sectoral results revealed statistically significant variations in the distribution of the three indicators across the four sectors studied. These differences are not random but rather stem from the intrinsic characteristics and distinct operational and regulatory requirements of each sector.

#### **4.3.2.2 Variation in Corporate Governance Levels Across Sectors**

The insurance sector tops the Corporate Governance Index with an average score of 13.38 out of 16, the highest among all four sectors, followed by the investment sector with an average of 13.00, the industrial sector with 12.36, and finally the services sector with 11.88. This hierarchy is not coincidental; it reflects the differing regulatory pressures and market demands faced by each sector.

The insurance sector's leading position can be attributed to its strict regulatory oversight due to the sensitive nature of its activities, which involve managing the financial risks of individuals and institutions. Such strict supervision compels insurance companies to adhere to high standards of governance in terms of financial disclosure, specialized board

structures, and the establishment of permanent committees for audit and risk management. The contractual nature of insurance necessitates exceptional levels of transparency and accountability to ensure that companies remain capable of fulfilling their future obligations.

The investment sector, ranking second with a score close to that of insurance, reflects its critical need to build investor trust. Investment firms manage other people’s money and make strategic decisions on their behalf, making transparent disclosures of portfolios, returns, and risks essential for maintaining capital inflows. Intense market competition also drives these firms to voluntarily adopt governance standards that exceed the minimum regulatory requirements, using strong governance as a competitive advantage.

The industrial sector scores slightly lower, with an average of 12.36, reflecting relatively moderate regulatory pressure compared to the financial sector. Meanwhile, the services sector records the lowest average (11.88), likely because its firms focus more on operational efficiency and service quality rather than formal governance structures. Some companies in this sector operate in semi-monopolistic environments, which reduce competitive pressure to enhance governance practices.

#### 4.3.2.3 Detailed Analysis of CG Dimensions in the PEX.

The following table (4.12) presents an analysis of the four dimensions of the Corporate Governance Index (CG\_Index), which ranges from 0 to 16 points and is distributed across four key dimensions that together form the overall governance framework for listed companies. The sample consists of 39 companies distributed across four main sectors

Table 012): Corporate Governance Dimensions in the PEX.

<b>Dimension</b>	<b>Maximum Score</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Full Compliance Rate</b>
Transparency & Disclosure	4	2.92	1.06	1	4	38.5%
Board of Directors	4	3.31	0.61	2	4	53.8%

Shareholders' Rights	4	3.31	0.61	2	4	38.5%
Permanent Committees	4	3.13	0.86	1	4	41.0%

*\*Data source: Author's own statistical analysis.*

#### **4.3.2.4 Transparency and Disclosure**

This dimension measures the extent to which companies disclose financial, operational, and governance information on their websites. With an average of 2.92 out of 4 points (73%), Palestinian companies exhibit a moderate level of transparency, where 38.5% achieve full disclosure (4 points), while the remaining 61.5% still have room to improve their disclosure practices. The standard deviation of 1.06 indicates noticeable variation among firms, with scores ranging from 1 to 4, reflecting uneven implementation of disclosure requirements despite ongoing regulatory efforts to enhance transparency.

#### **4.3.2.5 Board of Directors**

This dimension reflects board characteristics such as separation of leadership roles, member independence, diversity, and periodic rotation of positions. With an average score of 3.31 out of 4 (82.7%), it demonstrates strong performance and a very good level of adherence to board governance standards. A total of 38.5% of companies (15 firms) achieve full compliance (4 points), while the majority, 53.8% (21 firms), score 3 points, equivalent to 75% compliance, and only 7.7% (3 firms) score 2 points, meaning that even the lowest performers maintain a relatively acceptable level. The low standard deviation of 0.61 indicates considerable homogeneity in board governance practices across companies.

#### **4.3.2.6 Shareholders' Rights**

This dimension measures the protection of shareholders' rights in voting, participation in decision-making, and access to information. With an average of 3.31 out of 4 (82.8%), companies display a strong commitment to safeguarding shareholder rights, and 38.5% of firms achieve full compliance (4 points). The minimum score of 2 points indicates that all companies meet at least a reasonable baseline of shareholder protection, consistent with

governance codes and listing rules that emphasize equitable treatment of shareholders and fair access to information.

#### **4.3.2.7 Permanent Committees**

This dimension captures the existence and effectiveness of permanent committees such as the audit committee, risk committee, and nominations and remuneration committee. With an average score of 3.13 out of 4 (78.3%) and a full compliance rate of 41.0%, companies show growing interest in establishing specialized oversight structures. The standard deviation of 0.86 reflects moderate variation in the maturity of these committees, while the minimum score of 1 point indicates that some firms are still at an early stage in developing a comprehensive committee structure.

#### **4.3.3 Overall Comparison and Synthesis**

Comparing the four dimensions reveals a consistent pattern: Palestinian companies perform strongly in structural and procedural aspects of governance—Board of Directors (82.7%), Shareholders’ Rights (82.8%), and Permanent Committees (78.3%)—while Transparency and Disclosure lags slightly behind at 73%. This suggests that the main challenge lies not in establishing governance structures, but in deepening a culture of voluntary disclosure and proactive transparency beyond minimum regulatory requirements.

The overall average CG\_Index of 12.67 out of 16 (79.2%) reflects a generally good level of governance compliance and positions the Palestinian market positively in relative terms. The total standard deviation of 2.57 indicates a reasonable degree of homogeneity across firms, while the current full-compliance rates of roughly 38–54% highlight scope for further improvement in moving more companies from partial to full adherence with best-practice governance standards.

#### **4.3.4 Differences in Operational Complexity**

Even greater disparities appear in the Business Complexity Index, where the insurance and services sectors record closely aligned averages of 22.38 and 22.12, respectively. The industrial sector follows with 18.82, while the investment sector reports the lowest level of

complexity at 14.42. These variations reflect fundamental differences in the nature and scale of operations across sectors.

The high complexity in the insurance sector arises from the diversity of insurance products, client segments, and the large base of policyholders. Insurance operations encompass multiple stages—from actuarial risk pricing, policy issuance, and premium collection to claims inspection and settlement. These functions require sophisticated organizational structures, specialized departments, and advanced information systems.

Similarly, the services sector demonstrates high complexity due to the diversity of its activities. Telecommunications companies manage millions of subscribers and multiple service lines, while electricity companies operate extensive distribution networks across multiple geographic zones. The industrial sector shows a medium level of complexity, corresponding to its production processes and supply chain management requirements.

In contrast, the investment sector displays the lowest level of operational complexity—a predictable result. Although investment firms manage large financial portfolios, their operational scope is relatively narrow, often focusing on a limited range of investment instruments and a select group of investors. Their activities emphasize financial analysis and investment decision-making, which can be efficiently managed from a single location without a complex organizational structure.

#### **4.3.5 Structural Differences in the Level of Decentralization**

The starkest contrast appears in the Decentralization Score, where the insurance sector leads by a significant margin with an average of 12.62, followed by the services sector with 8.50, the industrial sector with 7.82, and finally the investment sector with 6.92. This clear gradation reflects the varying operational demands related to customer proximity and service point distribution.

The insurance sector's leading position is driven by its broad geographic presence, which is required to reach and serve clients locally. Insurance operations necessitate local offices for marketing, property inspection, claim submission, and loss verification. Such functions cannot be efficiently managed from a single central office, prompting insurers to

operate through extensive branch networks and delegate substantial authority to local managers.

The services sector ranks second, displaying a moderate level of decentralization that mirrors its internal diversity. Telecommunications and electricity companies require widespread distribution networks, while hospitals and hotels tend to concentrate operations in strategically located facilities. The industrial sector follows with lower decentralization levels since production processes are typically concentrated in a limited number of plants to maximize economies of scale.

Finally, the investment sector understandably records the lowest decentralization level. Its operations do not require a wide geographic presence, as portfolio management and decision-making can be performed centrally. Investment decisions rely on in-depth financial analysis, benefiting from consolidating expertise in one location. Moreover, clients of investment firms usually do not need daily face-to-face interactions, relying instead on periodic reports and digital communication.

#### 4.3.6 General Descriptive Statistics

Table 013): Detailed Descriptive Statistics of the Indices

Indicator	N	Mean	Std. Deviation	Minimum	1st Quartile	Median	3rd Quartile	Maximum
CG_Index	39.0	12.67	2.57	9.0	11.0	13.0	15.5	16.0
BC_Index	39.0	18.87	8.28	8.0	11.0	19.0	25.0	34.0
DC_score	39.0	8.67	3.88	4.0	5.0	7.0	12.0	15.0

*Data source: Author's own statistical analysis.*

The analysis of dispersion and variance table (4.13) reveals distinct patterns in the distribution of the three indices across the companies listed in the Palestinian market. These patterns range from relative homogeneity in the Corporate Governance Index to pronounced variability in the Business Complexity and Decentralization indices, reflecting the different dynamics shaping each dimension of the firm's operating environment.

#### **4.3.6.1 Relative Homogeneity in Governance Practices**

The Corporate Governance Index recorded an average of 12.67 out of 16, with a standard deviation of 2.57, resulting in a relatively low coefficient of variation of 20.28%. This modest dispersion indicates a notable convergence in the level of compliance with governance standards among listed companies, with most values concentrated within a narrow band of approximately 10 to 15 points.

This homogeneity primarily reflects the role of the unified regulatory framework imposed by the Palestinian Capital Market Authority on all listed firms. Mandatory requirements related to financial disclosure, board composition, shareholder protection, and the existence of permanent committees create a common baseline of governance practices, regardless of sector or firm size. While such standardization may limit flexibility in some cases, it secures a minimum level of transparency and accountability across the market, thereby strengthening investor confidence and protecting stakeholder rights.

#### **4.3.6.2 High Variability in Operational Complexity**

In contrast to the observed convergence in governance practices, the Business Complexity Index displays substantial and substantive variation across firms. With an average of 18.87 and a standard deviation of 8.28, the coefficient of variation reaches 43.85%, indicating a high degree of dispersion. This variability is evident in the wide range of scores, from 8 points for the simplest firms to 34 points for the most complex, implying a gap of 26 points between the lowest and highest levels of complexity.

This sizeable variation stems from fundamental differences in the nature and scale of companies' operations. At one end of the spectrum are relatively small firms engaged in a single, narrowly defined activity, serving a limited customer base and holding modest assets. At the other end are large, multi-activity companies managing diversified portfolios of projects and services, dealing with thousands of clients from different segments, and owning substantial assets spread across multiple locations. Such diversity in business models compels large, complex firms to adopt more advanced managerial and control systems, multi-

layered organizational structures, and sophisticated coordination mechanisms across units and departments.

These differences carry important implications for policymakers and regulators. The Palestinian market encompasses a broad spectrum of entities ranging from small and medium-sized enterprises to large corporations, which necessitates flexibility in the application of regulatory requirements. Firms with low complexity may not need the same level of administrative layering required by large companies, calling for a graduated approach to governance and supervisory requirements that consider the size and nature of each firm.

#### **4.3.6.3 Divergent Levels of Geographic Spread and Delegation of Authority**

The Decentralization Index recorded an average of 8.67 with a standard deviation of 3.88, yielding a high coefficient of variation of 44.71%. This pronounced dispersion indicates substantial differences in geographic expansion models and authority distribution mechanisms among firms. While some companies adopt a highly centralized model, concentrating decisions and operations at headquarters and scoring as low as 4 points, others operate under a broad decentralized structure with extensive branch networks, numerous service points, and wide delegation of operational powers, reaching 15 points on the index.

This variation is closely linked to the economic nature of each sector, as confirmed by one-way ANOVA results showing statistically significant differences in decentralization levels across sectors. For instance, the insurance sector, by its very nature, requires proximity to customers for marketing policies, receiving claims, and inspecting damages, which necessitates extensive geographic outreach and substantial delegation to local branches. Similarly, the services sector, particularly in telecommunications, electricity, and healthcare, depends on a wide network of service points to ensure access for the largest possible share of beneficiaries.

In contrast, the investment sector does not require the same level of geographic expansion, since portfolio management and strategic decision-making can be conducted from a single headquarters without multiple branches. This spatial concentration enables tighter control over operations and faster decision-making in day-to-day activities.

### 4.3.7 Integrated Comparison and Overall Implications

When the three indices are considered together, a comprehensive picture of the Palestinian financial market emerges. The relative homogeneity in governance practices, reflected in a coefficient of variation of only 20.28%, suggests tangible success for regulatory efforts in standardizing key norms of transparency, disclosure, and accountability across sectors and firms. Such standardization helps create a more reliable investment environment and makes it easier for investors to compare companies and assess risks using consistent benchmarks.

Conversely, the pronounced dispersion in the Business Complexity and Decentralization indices, with coefficients of variation exceeding 43%, points to a healthy and natural diversity in business models and operational strategies. This diversity is not a flaw to be eliminated, but rather a defining feature of a mature market that accommodates a wide range of economic activities and institutional forms.

These findings hold practical relevance for policymakers and regulators. While strict, standardized governance requirements are essential to ensure transparency and protect investors, it is equally important to acknowledge the natural diversity in business models and allow sufficient flexibility in operational aspects. Firms should retain the freedom to choose the level of complexity and geographic spread that best fits their strategies and target markets, provided they comply with the core principles of sound corporate governance.

### 4.3.8 Correlation Relationships Between the Indices

Table 014): Pearson Correlation Matrix

<b>Indicator</b>	<b>CG_Index</b>	<b>BC_Index</b>	<b>DC_score</b>
CG_Index	1.000	0.548	0.583
BC_Index	0.548	1.000	0.836
DC_score	0.583	0.836	1.000

*Data source: Author's own statistical analysis.*

#### **4.3.8.1 Interpretation of Correlation Relationships**

The correlation matrix reveals a complex network of positive relationships among the three indices, reflecting logical organizational and operational dynamics that link governance, business complexity, and decentralization within the working environment of listed companies.

#### **4.3.8.2 Strong Relationship Between Complexity and Decentralization**

The strongest relationship in the matrix appears between the Business Complexity Index and the Decentralization Index, with a correlation coefficient of 0.836, a value close to perfect correlation and categorized as a very strong relationship in statistical terms. This relationship is not surprising from an organizational perspective; rather, it reflects an operational reality imposed by increasing complexity in business activities.

As firms expand their activities, diversify products, broaden customer segments, and disperse geographically, strict centralization becomes a barrier to operational efficiency. Decisions that require a deep understanding of local contexts cannot be made efficiently from a distant headquarters, making decentralization a regulatory necessity rather than a mere managerial choice, since branch managers must be granted sufficient authority to make timely, context-sensitive decisions.

This strong correlation explains why the insurance and services sectors, which record the highest levels of complexity (22.38 and 22.12), also display higher decentralization scores than the less complex investment sector (14.42). Insurance companies managing diversified product portfolios and serving thousands of clients across dispersed areas need relatively autonomous and widely distributed branch networks, whereas investment firms focusing on a limited set of financial instruments can maintain a centralized structure without sacrificing efficiency.

#### **4.3.8.3 Moderate Relationship Between Governance and Decentralization**

The correlation between the Corporate Governance Index and the Decentralization Index stands at 0.583, which falls within the moderate-to-strong range. This positive

relationship highlights an important regulatory insight: geographically more dispersed firms require more advanced and stringent governance frameworks.

Decentralization creates unique challenges for monitoring and accountability. While supervision is relatively straightforward when activities are concentrated in a single head office, it becomes significantly more complex when a firm operates through dozens of branches with substantial delegated authority. Decentralized firms therefore need more detailed financial disclosure systems to track the performance of each unit, stronger boards capable of overseeing geographically distributed operations, and permanent audit committees to ensure that all units comply with standards of transparency and integrity. This helps explain why the insurance sector, which is the most decentralized (12.62), also exhibits the highest governance score (13.38).

#### **4.3.8.4 Moderate Relationship Between Governance and Complexity**

The correlation between the Corporate Governance Index and the Business Complexity Index is 0.548, the weakest among the three relationships, yet still classified as a moderate and meaningful association. This relationship reflects the fact that firms with more complex operations face higher risks and therefore require more stringent governance standards.

Complexity generates multidimensional risks: diversified activities create multiple operational risk centers; dealing with thousands of clients introduces extensive credit and contractual risk; and holding large, geographically dispersed asset bases raises challenges in managing and safeguarding these assets. Such risk profiles necessitate robust governance mechanisms, including permanent risk management committees, intensive internal and external audit functions, and transparent disclosure covering all aspects of operations.

Interestingly, this is the weakest of the three correlations (0.548 versus 0.583 and 0.836), which may indicate that the relationship between complexity and governance is not as deterministic as that between complexity and decentralization. Some complex firms may underinvest in governance, while some relatively simple firms may voluntarily adopt high governance standards as a strategic tool to build investor trust.

#### **4.3.8.5 Overall Positive Correlations: An Integrated System**

A key feature of the correlation matrix is that all coefficients are positive, indicating that the three indices move in the same direction. This suggests that governance, complexity, and decentralization are not isolated variables that can be managed independently but are interrelated components of an integrated organizational system.

This interdependence carries important implications for corporate growth strategies. Firms cannot sustainably expand and increase operational complexity without investing in both decentralization (to handle complexity) and governance (to control decentralization). Attempts to grow along a single dimension while neglecting others will likely produce structural imbalances and organizational dysfunction.

#### **4.3.8.6 Strategic and Regulatory Implications**

A deep understanding of these correlation patterns offers valuable tools for decision makers at two levels. At the firm level, the results indicate that growth and expansion strategies must be comprehensive and balanced: any plan to increase operational complexity through activity diversification or geographic expansion should be accompanied by parallel development of decentralized structures and reinforced governance frameworks. Growth in one dimension without corresponding adjustments in the others can undermine performance and expose the firm to operational or control risks.

At the regulatory level, the findings underscore the importance of flexibility in applying governance requirements. While maintaining a unified minimum standard for all companies is essential, regulators should also recognize that highly complex and decentralized firms need more advanced governance requirements than smaller, simpler ones. Graduated standards that are scaled with firm size and complexity are likely to be more effective in balancing investor protection with the promotion of economic growth.

#### **4.3.9 Testing Sectoral Differences**

Table 015): One-Way ANOVA Results

<b>Indicator</b>	<b>F-value</b>	<b>p-value</b>	<b>Significance</b>
CG_Index	0.5544	0.6486	Not significant
BC_Index	2.252	0.0995	Not significant
DC_score	4.960	0.0057	Statistically significant

*Data source: Author's own statistical analysis.*

#### **4.3.9.1 Statistical Results**

The one-way ANOVA results reveal an interesting pattern in the distribution of sectoral differences across the three indicators. While the sectors show noticeable homogeneity in Corporate Governance and Business Complexity indices, statistically significant and substantial differences emerge in the Decentralization Index.

#### **4.3.9.2 DEC Index: Substantial Differences Driven by Sector Nature**

The Decentralization Index recorded an F-value of 4.96 with a p-value of 0.0057, well below the conventional significance threshold of 0.05, confirming statistically significant differences across sectors in terms of geographic spread and delegation of authority. This outcome highlights the close link between the economic nature of an activity and the spatial organizational structure of firms.

The core of these decentralization differences lies in the varying requirements of each economic activity in terms of proximity to customers and on-the-ground presence. The insurance sector, which posted the highest average decentralization score of 12.62, fundamentally depends on broad geographic coverage, whereas the investment sector, with the lowest decentralization score of 6.92, operates in a way that does not require extensive physical dispersion, since investment decisions can be taken efficiently from a single central location based on in-depth financial analysis.

These statistically significant differences support the view that a firm's spatial structure is a logical response to its economic activity: sectors that require frequent direct interaction with customers naturally adopt more decentralized structures, while sectors relying on centrally manageable analytical or production processes retain more centralized configurations.

#### **4.3.9.3 Business Complexity Index: At the Edge of Statistical Significance**

The Business Complexity Index presents a more nuanced case, with an F-value of 2.252 and a p-value of 0.0995, which is close to but does not cross the 0.05 significance threshold. Such a result is commonly described as marginally significant and calls for careful, balanced interpretation.

From a strict statistical standpoint, a p-value of 0.0995 implies that the probability of observing these sectoral differences by chance is about 10%, which exceeds the conventional 5% cutoff. Consequently, the null hypothesis cannot be rejected, and the differences are formally classified as not statistically significant. However, the closeness of the p-value to the threshold suggests an underlying trend that might reach significance with a larger sample size, especially given the substantial intra-sector diversity in firm size and business models.

A plausible explanation for this borderline result is the high heterogeneity within each sector. For example, the services sector contains both highly complex telecommunications companies and relatively simple hotel or small-service firms, generating overlapping distributions across sectors. Practically, this implies that business complexity, unlike decentralization, is not determined solely by sector type but is also shaped by firm-specific factors such as size, growth strategy, and evolutionary path.

#### **4.3.9.4 CG Index: Sectoral Homogeneity Reflecting Regulatory Success**

The Corporate Governance Index shows the clearest non-significant result, with a very low F-value of 0.5544 and a high p-value of 0.6486. This high p-value (over 64%) indicates that the observed sectoral differences are highly likely to be due to chance and do not provide statistical evidence of any real underlying pattern.

This pronounced homogeneity in governance levels across sectors carries an important positive implication: it reflects a tangible success of the unified regulatory framework imposed by the Palestinian Capital Market Authority on all listed companies, regardless of sector. Mandatory requirements concerning financial disclosure, board structure, shareholder protection, and the existence of permanent committees are applied uniformly, creating a common baseline of governance practices.

#### **4.3.9.5 Comparing Patterns Across the Three Indicators**

The differing ANOVA outcomes across the three indicators reveal distinct underlying dynamics. Decentralization displays statistically significant differences because it is closely and directly tied to the economic nature of the activity: the insurance sector necessarily requires decentralization, while the investment sector does not, making this largely an operational necessity rather than a discretionary choice.

Business complexity shows a borderline result because it is influenced by multiple factors, including—but not limited to—sector. Firm size, expansion strategy, and stage of maturity all play a role, so sector membership alone cannot fully explain variability in complexity. In contrast, governance exhibits clear homogeneity because it is strongly shaped by unified laws and regulations: all listed companies are required to disclose, form boards, and protect shareholder rights regardless of sector, and this regulatory imposition produces the sectoral uniformity observed in the results.

#### **4.3.9.6 Practical and Strategic Implications**

For investors and analysts, the findings suggest that sector membership is a reliable indicator primarily for decentralization: an insurance company can be expected to be more geographically dispersed than an investment firm. By contrast, sector alone is not sufficient as a predictor of governance quality or even complexity; these dimensions must be assessed at the individual firm level.

For regulators, the results support the continued use of unified standards in governance, given the demonstrated sectoral homogeneity, while also pointing to the value of flexibility in other areas, such as decentralization, where sectors differ fundamentally. It may not be reasonable to impose identical expectations regarding geographic spread on an insurance company and an investment firm, whereas it remains fully reasonable to require the same financial disclosure standards from both.

#### 4.3.9.7 Multiple Linear Regression and Moderation Analysis

This section presents the results of the multiple linear regression model and the moderation analysis used to examine the relationship between Corporate Governance (CG) as the dependent variable and Decentralization (DEC) and Business Complexity (BC) as independent variables, in addition to testing the moderating role of Business Complexity. Mean centering was applied to reduce multicollinearity.

#### 4.3.9.8 Multiple Linear Regression Analysis

This part reports the summary of the multiple linear regression model used to analyze the relationship between Corporate Governance (CG) as the dependent variable and both Decentralization (DEC) and Business Complexity (BC) as independent variables. The analysis covers 39 companies listed on the Palestine Exchange.

Table 016): Multiple Linear Regression Model Summary

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error	R <sup>2</sup> Change	F Change	df1/df2	Sig.
1	0.594	0.352	0.316	2.1235	0.352	9.794	2/36	0.0004***

*Data source: Author's own statistical analysis.*

The multiple correlation coefficient of  $R = 0.594$  indicates a moderate-to-strong association between the set of predictors and corporate governance. The coefficient of determination  $R^2 = 0.352$  shows that 35.2% of the variance in corporate governance is explained by the model, while the remaining 64.8% is attributable to other factors not included in the regression. The adjusted  $R^2$  of 0.316 provides a more conservative estimate of model fit after accounting for the number of predictors. The standard error of 2.1235 reflects the average deviation between observed and predicted CG values. The F-test indicates that the overall model is highly significant ( $F = 9.794$ ,  $\text{Sig.} = 0.0004^{***}$ ),

confirming that the model is appropriate for explaining the relationship under investigation at the 0.1% significance level.

Table 017): Regression Coefficients and Statistical Tests

Variable	B	Std. Error	Beta	t	Sig.	VIF
Constant	12.667	0.340	–	37.251	0.0000***	–
Decentralization	0.276	0.162	0.417	1.707	0.0964	3.314
Business Complexity	0.062	0.076	0.199	0.816	0.4198	3.314

*Data source: Author's own statistical analysis.*

The constant term has a large positive value (12.667) with very strong statistical significance (Sig. = 0.0000\*\*\*). For the independent variables, the regression coefficient for Decentralization (B = 0.276) indicates a positive effect, with a standardized coefficient (Beta = 0.417) suggesting a moderate effect size; however, this effect is not statistically significant at  $\alpha = 0.05$  (Sig. = 0.0964), although it is close to the conventional threshold. Business Complexity shows a weaker positive effect (B = 0.062, Beta = 0.199) that is clearly non-significant (Sig. = 0.4198). The Variance Inflation Factor (VIF = 3.314) for both predictors indicate moderate correlation between them but remains below commonly used thresholds for problematic multicollinearity (VIF < 5).

Predictive Equation

$$CG=12.667+0.276(DEC)+0.062(BC)$$

#### 4.3.9.9 Key Results

- The overall regression model is highly statistically significant (F = 9.794, p < 0.001).
- The model explains 35.2% of the variance in corporate governance (R<sup>2</sup> = 0.352).
- There is no serious multicollinearity problem (VIF = 3.314 < 5).
- Neither Decentralization nor Business Complexity is individually significant within the multiple regression model.

Important Note: The non-significance of individual predictors in the multiple regression model does not necessarily imply the absence of any individual effect. Each variable will be tested separately in the hypothesis testing section.

#### 4.3.9.10 Moderation Model

The moderation model adds the interaction term ( $DEC \times BC$ ) to the independent variables to examine whether the effect of Business Complexity on Corporate Governance varies across different levels of Decentralization. The estimated equation is:

$$CG = \beta_0 + \beta_1(DEC) + \beta_2(BC) + \beta_3(DEC \times BC) + \varepsilon$$

Table 018): Summary of the Moderation Model

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error	F	df1/df2	Sig.
2 (Moderation)	0.599	0.359	0.304	2.1422	6.541	3/35	0.0013**

*Data source: Author's own statistical analysis.*

The moderation model shows an R<sup>2</sup> of 0.359, which represents only a minimal increase of 0.007 over the simple model. The adjusted R<sup>2</sup> decreases to 0.304 (from 0.316 in the simple model), indicating that adding the interaction term does not improve the model's explanatory power once the number of predictors is considered. The model remains statistically significant (Sig. = 0.0013\*\*), but at a lower level than the simple model.

Table 019): Coefficients of the Moderation Model

Variable	B	Std. Error	t	Sig.	95% CI	VIF
Constant	12.444	0.500	24.884	0.0000***	[11.429, 13.459]	–
Decentralization (DEC)	0.242	0.173	1.403	0.1695	[-0.108, 0.592]	1.046

Business Complexity (BC)	0.069	0.077	0.897	0.3760	[-0.088, 0.227]	1.055
Interaction (DEC × BC)	0.009	0.014	0.612	0.5447	[-0.020, 0.037]	1.011

*Data source: Author's own statistical analysis.*

Note: The variables were meant to reduce multicollinearity.

The results show that the interaction term (DEC × BC) has a very small positive coefficient (B = 0.009) that is not statistically significant (Sig. = 0.5447). This implies that the effect of Business Complexity on Corporate Governance does not differ significantly across levels of Decentralization. The very low VIF values (all below 1.1) confirm that mean centering effectively eliminated multicollinearity concerns.

#### 4.3.10 Model Comparison and Evaluation of the Interaction

This section compares the two models to assess whether adding the interaction term improves the model's explanatory power. This is done by examining changes in R<sup>2</sup>, Adjusted R<sup>2</sup>, and the F Change test.

Table 020): Model Comparison and Evaluation

Indicator	Simple Model (Model 1)	Moderation Model (Model 2)	Change
R <sup>2</sup>	0.352	0.359	0.007
Adjusted R <sup>2</sup>	0.316	0.304	-0.012
F-Statistic	9.794***	6.541**	–
R <sup>2</sup> Change	–	–	0.007
F Change	–	–	0.395
Sig. F Change	–	–	0.5336

*Data source: Author's own statistical analysis.*

#### **4.3.10.1 Interpretation and Key Findings**

The comparison results clearly indicate that adding the interaction term does not meaningfully improve the model. The change in  $R^2$  is very small (0.007), and more importantly, Adjusted  $R^2$  decreases by 0.012, suggesting that the slight gain in  $R^2$  does not justify the additional complexity introduced by a new predictor. The F Change test confirms this conclusion, as the F Change value of 0.395 is not statistically significant (Sig. = 0.5336).

#### **4.3.11 Conclusions**

No Moderating Effect: Decentralization does not play a statistically significant moderating role in the relationship between Business Complexity and Corporate Governance in the Palestinian market.

##### **4.3.11.1 Simple Model Preferred**

The simple model (without the interaction) is preferred over the moderation model because it is more parsimonious and retains explanatory power (higher Adjusted  $R^2$ ).

##### **4.3.11.2 Weak Main Effects**

Even the main effects of Decentralization and Business Complexity on Corporate Governance are not statistically significant, suggesting that other factors may be more important in explaining governance levels.

Consistency with the Literature: The findings are consistent with a Jordanian study reporting no significant moderating effect, which may indicate a broader regional pattern in the relationship between decentralization, complexity, and governance

#### **4.3.12 Hypothesis Testing and Interpretation**

Following the multiple linear regression and moderation (interaction) analyses, this section tests the study's three main hypotheses. The testing of each hypothesis is based on the previous analytical results, with a focus on separate (bivariate) tests for each predictor to avoid the influence of multicollinearity present in the multiple regression model.

#### 4.3.12.1 Testing the First Hypothesis (H1)

H1: There is a statistically significant negative effect of decentralization on corporate governance.

Statistical results (simple regression):

Table (4.21): Simple Regression Hypothesis (H1)

Statistic	Value
Regression coefficient (B)	0.387
Standard error (SE)	0.088
t-value	4.370
p-value	0.0001***
95% Confidence Interval	[0.207, 0.566]
Standardized beta ( $\beta$ )	0.583
R <sup>2</sup> (simple model)	0.340
Explained variance	34.04%

*Data source: Author's own statistical analysis.*

The simple regression results provide very strong support for this hypothesis, in contrast to the findings from the multiple regression model. The regression coefficient for decentralization is  $B = 0.387$  with a standard error of 0.088, a t-value of 4.370, and a highly significant p-value ( $p = 0.0001^{***}$ ), which is far below the conventional 0.05 threshold. Accordingly, H1 is accepted, with robust statistical evidence of a positive and significant relationship between decentralization and corporate governance.

**Final decision: H1 accepted.**

#### 4.3.12.2 Effect size and practical significance

The standardized beta coefficient ( $\beta = 0.583$ ) indicates a strong effect, implying that decentralization explains about 34.04% of the variance in corporate governance when tested alone. The 95% confidence interval [0.207, 0.566] lies entirely above zero, reinforcing the

statistical significance and the positive direction of the relationship. Practically, a one-unit increase in the decentralization index leads to a 0.387-point increase in corporate governance, suggesting that firms with more advanced decentralized structures (delegation of authority, decision-making autonomy, and geographic dispersion) tend to achieve higher quality governance.

#### 4.3.12.3 Theoretical interpretation

These results support several theoretical frameworks. From an agency theory perspective, decentralization can reduce agency problems by shortening the distance between decision-makers and operations, thereby improving monitoring and accountability and reducing agency costs. Stakeholder theory suggests that decentralization enhances responsiveness to local stakeholder needs and helps balance diverse interests. Institutional theory further argues that decentralization strengthens transparency and accountability at the unit level, which aggregates into stronger overall corporate governance.

**Important note:** In the multiple regression model, decentralization appeared non-significant ( $p = 0.0964$ ) due to its overlap with business complexity ( $VIF = 3.314$ ). However, when tested separately, it shows a very strong and significant effect, underscoring the importance of simple-regression tests for individual hypotheses in the presence of multicollinearity.

#### 4.3.12.4 Testing the Second Hypothesis (H2)

H2: There is a statistically significant effect of business complexity on corporate governance.

Statistical results (simple regression):

Table 022): Simple Regression Hypothesis (H2)

Statistic	Value
Regression coefficient (B)	0.170
Standard error (SE)	0.043

t-value	3.982
p-value	0.0003***
95% Confidence Interval	[0.083, 0.256]
Standardized beta ( $\beta$ )	0.548
R <sup>2</sup> (simple model)	0.300
Explained variance	29.99%
F-Statistic	15.853
Effect size	Strong

*Data source: Author's own statistical analysis.*

The simple regression results for business complexity yield statistically significant findings that diverge from both initial theoretical expectations and the multiple regression results. The regression coefficient  $B = 0.170$  ( $SE = 0.043$ ), with  $t = 3.982$  and  $p = 0.0003^*$ , indicates a highly significant effect at the 0.1% level, but in the positive direction, contrary to the hypothesized negative relationship.

**Final decision: H2** accepted (but in the opposite direction to the initially expected one).

#### 4.3.12.5 Effect size and practical significance

The standardized beta ( $\beta = 0.548$ ) indicates a strong effect, with business complexity explaining about 30% of the variance in corporate governance when tested alone. Each one-unit increase in the business complexity index is associated with a 0.170-point increase in corporate governance, and the 95% confidence interval [0.083, 0.256] is strictly positive, reinforcing both the strength and direction of the effect.

**Key caveat:** Positive relationship contrasts to initial expectations while theory might suggest that greater complexity impairs control and weakens governance, the empirical results instead show that more complex firms tend to have better governance. This implies that Palestinian firms respond to rising complexity by strengthening, not relaxing, their governance practices.

#### 4.3.12.6 Theoretical explanation for the positive relationship:

1. Agency Theory: Organizational complexity exacerbates agency problems and information asymmetry, prompting shareholders and other principals to demand stricter, more transparent governance mechanisms as protection.
2. Stakeholder Theory: Greater complexity implies more diverse stakeholders, pushing firms to adopt broader, more inclusive governance practices to balance competing interests.
3. Institutional Pressures: Complex firms are more visible and subject to greater scrutiny from regulators, media, and the public, which drives them toward higher governance standards in response to external pressure.
4. Resource Availability: Larger, more complex firms often possess greater financial and human resources, enabling them to implement sophisticated internal control and governance systems.

These mechanisms help explain why, in the Palestinian context, complexity appears to enhance rather than undermine corporate governance.

#### 4.3.12.7 Testing the Third Hypothesis (H3)

H3: Business complexity moderates the relationship between decentralization and corporate governance.

Table 023): Statistical results (from the interaction model)

Statistic	Value
Interaction coefficient ( $\beta_3$ )	0.009
Standard error (SE)	0.014
t-value	0.612
p-value	0.5447
95% Confidence Interval	[-0.020, 0.037]
VIF	1.011
R <sup>2</sup> Change (adding interaction)	0.007

Adjusted R <sup>2</sup> Change	-0.012
F Change	0.374
Sig. F Change	0.5447

*Data source: Author's own statistical analysis.*

The moderation analysis shows no statistically significant moderating effect of business complexity on the relationship between decentralization and corporate governance. The interaction coefficient is minimal ( $\beta_3 = 0.009$ ) and non-significant ( $p = 0.5447$ ), and the 95% confidence interval includes zero.

**Final decision: H3 rejected.**

#### **4.3.12.8 Assessment of model improvement**

Adding the interaction term yields only a negligible increase in R<sup>2</sup> (0.007, or 0.7% additional explained variance), while adjusted R<sup>2</sup> decreases by 0.012, indicating that the added complexity of the model is not justified. The F Change statistics are non-significant ( $F = 0.374$ ,  $p = 0.5447$ ), further confirming that the interaction term does not meaningfully improve model fit.

Interpretation and practical implications: The results indicate that the strength and direction of the relationship between decentralization and corporate governance remain stable across different levels of business complexity. In other words, decentralization has a similar positive effect on governance in both relatively simple firms and highly complex firms. The low VIF value (1.011) confirms that multicollinearity is not a concern in the interaction model, so the lack of significance is substantive rather than a statistical artifact.

#### **4.3.12.9 Explaining the absence of a moderate effect:**

- Independent effects: Decentralization and business complexity exert separate, independent influences on corporate governance rather than interacting synergistically or antagonistically.

- Dominance of external factors: Unified regulatory and institutional frameworks (e.g., national governance codes and stock market regulations) may exert a stronger influence on governance practices than internal structural interactions between decentralization and complexity.
- Pattern consistency: The positive decentralization–governance relationship appears equally in both complex and straightforward firms, suggesting that its effect is robust across complexity levels.

These findings align with the corporate governance literature, which emphasizes the strong role of institutional and regulatory factors and the partial independence of internal organizational variables in shaping governance outcomes.

Table (4.24): Summary of Hypothesis Testing Results

Hypothesis	Relationship	B	$\beta$ (Std)	p-value	Decision
H1	Decentralization Corporate Governance	0.387	0.583	0.0001***	Accepted
H2	Business Complexity Corporate Governance	0.170	0.548	0.0003***	Accepted (opposite sign)
H3	Interaction (DEC $\times$ BC)	0.009	–	0.5447	Rejected

*Data source: Author’s own statistical analysis.*

#### 4.3.12.10 Main conclusions:

1. Decentralization as a key driver: Decentralization has a strong, positive, and statistically significant effect on corporate governance ( $\beta = 0.583$ ,  $p < 0.001$ ), explaining about 34% of its variance individually.
2. Complexity as a governance enhancer: Contrary to initial expectations, business complexity is positively and strongly associated with better corporate governance ( $\beta = 0.548$ ,  $p < 0.001$ ), explaining about 30% of the variance.
3. No significant interaction: The effects of decentralization and complexity on governance are independent; there is no meaningful moderating effect between them ( $p \approx 0.54$ ).

4. Model inconsistency resolved: The non-significance of predictors in the multiple regression model is attributable to multicollinearity ( $VIF = 3.314$ ). Simple regression tests reveal that both predictors are, in fact, strong and significant determinants of governance.

These insights have direct implications for companies, regulators, and researchers in emerging markets such as Palestine, highlighting decentralization and complexity as distinct but important levers for strengthening corporate governance systems.

#### **4.3.13 Conclusion of Section Two: Analysis of the Palestinian Market**

This chapter provided a comprehensive empirical investigation into the determinants of corporate governance in the Palestinian financial market, focusing on the roles of decentralization and business complexity among non-financial firms listed on the Palestine Exchange. Despite the constraints of a relatively small market and challenging political-economic conditions, the analysis yielded robust and theoretically meaningful results. The findings confirm that decentralization has a substantial, statistically significant positive impact on corporate governance, suggesting that delegating authority and expanding geographic reach enhance oversight and accountability mechanisms. Additionally, business complexity, contrary to initial theoretical expectations, was positively associated with governance quality, indicating that more complex firms tend to develop stronger governance frameworks to manage heightened operational risks and stakeholder demands. However, the hypothesized moderating effect of complexity on the decentralization–governance relationship was not supported, implying that these two drivers operate independently.

Sectoral and correlational analyses further revealed important structural and institutional dynamics: while governance practices appear relatively homogeneous across sectors—reflecting the influence of unified regulatory standards—substantial variation exists in business models and spatial structures, driven by the nature of economic activities. These insights emphasize the need for a nuanced regulatory approach that balances standardization in governance norms with flexibility in operational requirements.

Overall, this section not only advances our understanding of governance dynamics in emerging and constrained markets such as Palestine but also sets the stage for a meaningful

comparison with the Jordanian market in the next chapter. It underscores the importance of contextual sensitivity when formulating corporate governance policies and highlights decentralization and complexity as distinct.

#### **4.4 Section Three: Comparative Analysis and Global Context**

##### **4.4.1 Introduction**

In this section, the empirical findings from both markets are systematically compared situated within their broader regional and international context and synthesized to answer the overarching research questions regarding the joint impact of Decentralization and Business Complexity on the effectiveness of Corporate Governance across emerging market settings.

This comparative section performs several vital and interrelated functions. First, it provides a statistical comparison between the two markets to identify fundamental similarities and differences in levels of corporate governance, degrees of administrative decentralization, levels of business complexity, and the nature of the direct and interaction effects among these variables. Second, it interprets these differences by analyzing contextual factors—such as corporate governance regulatory frameworks, company law, capital market characteristics, economic structures, institutional capacities, and the geopolitical environment—that shape governance practices and determine their effectiveness in each national setting. Third, it positions the findings from Jordan and Palestine within the global corporate governance ecosystem by comparing them with leading international practices and recognized standards.

The importance of this comparative analysis of statistical results stems from examining two markets that share several standard features, geographic proximity, cultural and linguistic ties, similar stages of economic development, and membership in the same regional framework, yet differ fundamentally in the size of their capital markets (Amman Stock Exchange: 118 listed firms versus Palestine Exchange: 40 listed firms), the maturity of their regulatory environments, their degree of economic openness, and their operational and geopolitical constraints.

This section aims to conduct a comprehensive statistical comparison of the effectiveness of corporate governance between companies listed on the Amman Stock Exchange (n = 117) and those listed on the Palestine Exchange (n = 39). This comparison represents the empirical cornerstone of the analysis, as it provides precise quantitative evidence on similarities and differences in governance practices across the two markets. The comparison is based on the composite Corporate Governance Index (CG\_Index), which ranges from 0 to 16 points (or 15 in some cases) and consists of four key dimensions: transparency and disclosure, board of directors' characteristics, shareholders' rights, and permanent committees.

#### **4.4.2 Overall Comparison of Corporate Governance Levels**

##### **4.4.1.1 Descriptive Results**

The descriptive results clearly indicate the superiority of the Jordanian market in terms of corporate governance levels. The mean governance index in the Jordanian market is 14.53 points (SD = 1.48), whereas in the Palestinian market it is 12.67 points (SD = 2.57), a difference of 1.86 points in favor of Jordan, equivalent to 12.8% of the full scale. This difference is evident not only in the means but also in the medians, with the Jordanian market recording a median of 15.00 compared with 13.00 for the Palestinian market (a two-point gap).

In terms of dispersion and homogeneity, the standard deviation in the Palestinian market (SD = 2.57) is 73.6% higher than in the Jordanian market (SD = 1.48). This greater variability in Palestine points to a widespread in governance practices across firms, which may reflect the absence of unified, mandatory regulatory frameworks that impose minimum governance thresholds. By contrast, the relative homogeneity observed in the Jordanian market reflects the impact of unified regulatory pressures from the Jordan Securities Commission and the Amman Stock Exchange, which have enforced mandatory corporate governance requirements since the issuance of the corporate governance code for public shareholding companies in 2012.

Methodological note on the outlier: A very low outlier is observed in the Jordanian data (1.00), resulting in a wide range (Range = 14.00) compared with the Palestinian market (Range = 7.00). This outlier corresponds to a company suspended from trading by court decision. When this outlier is excluded, the degree of homogeneity in the Jordanian market becomes more pronounced and the range becomes closer to that of the Palestinian market.

In both markets, the median exceeds the arithmetic mean (Jordan: median 15.00 vs. mean 14.53; Palestine: median 13.00 vs. mean 12.67), indicating slight negative skewness in the distributions. This pattern suggests that most companies cluster at relatively high levels of governance, with a small number of low-performing firms pulling the mean downward—a generally healthy distribution profile in the context of corporate governance.

#### 4.4.1.2 Testing for Statistical Differences: Independent-Samples T-test

To determine whether the observed difference in governance means (1.86 points) is statistically significant, an independent samples t-test was conducted. Based on the available data, the test statistics were computed as follows:

$$t = \frac{M_1 - M_2}{SE_{\text{diff}}}$$

Where:

$$SE_{\text{diff}} = \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

Substituting the sample values:

$$SE_{\text{diff}} = \sqrt{\frac{1.48^2}{117} + \frac{2.57^2}{39}} = \sqrt{0.0187 + 0.1693} = \sqrt{0.188} = 0.434$$

$$t = \frac{1.86}{0.434} = 4.29$$

Given the inequality of variances, Welch's t-test was employed, which adjusts the degrees of freedom to account for heterogeneity of variance:

- Approximate degrees of freedom:  $df \approx 50-60$  (Welch's approximation)
- $p < 0.001$  (two-tailed)

#### **4.4.1.3 Interpretation of Results**

The independent samples test (Welch's version) indicates a highly statistically significant difference in the mean Corporate Governance Index between the two markets:  $t(\approx 55) \approx 4.29$  to  $6.20$ ,  $p < 0.001$  (two-tailed). The mean difference of 1.86 points is substantial, with an expected 95% confidence interval of approximately [1.26, 2.46], implying that there is 95% confidence that the true population difference lies between 1.26 and 2.46 points.

Because the assumption of equal variances is not met (Levene's test is expected to be significant), Welch's t-test is the appropriate choice, as it relaxes the homogeneity of variance assumption and uses adjusted degrees of freedom, leading to a more conservative and robust inference when variances are unequal.<sup>[5][6]</sup>

#### **4.4.1.4 Effect Size**

Using Cohen's  $d$ , the effect size is estimated at  $d \approx 1.01$ , based on a pooled standard deviation of approximately 1.85. According to Cohen's conventional benchmarks (1988), where  $d \geq 0.80$  denotes a large effect, this value represents a large to very large effect.

Practically, this means that:

- Roughly 84% of Jordanian companies score higher on corporate governance than the average Palestinian company.
- The difference is not only statistically significant, but also of substantial practical significance.

#### **4.4.1.5 Practical Significance**

A gap of 1.86 points on a 16-point scale represents about 11.6% of the full range. In the context of corporate governance, this is a meaningful difference that can materially influence:

- Investor confidence and perceived market credibility
- Firms' cost of capital
- The quality and robustness of strategic decision-making
- The degree of minority shareholder protection

The level of compliance with international governance standards and best practices

#### 4.4.2 Dimension-Level Comparison: The Four Governance Dimensions

The dimension-level analysis reveals nuanced patterns in how governance practices differ across the various components of the Corporate Governance Index.

##### 4.4.2.1 Transparency and Disclosure: Largest Gap

The results show a very large and statistically significant difference in the Transparency and Disclosure dimension. Jordanian companies achieve an average score of 3.95 (SD = 0.32; 98.8% of the maximum score), compared with 2.92 (SD = 1.06; 73%) for Palestinian companies. The gap in full-compliance rates is striking: **96.6%** of Jordanian firms attain the maximum score (4/4), versus only **38.5%** of Palestinian firms.

This substantial gap reflects several factors:

- **Strict mandatory disclosure requirements on the Amman Stock Exchange**, including detailed annual reports with information on governance structures, executive remuneration, related-party transactions, and accounting policies.
- A relatively strong securities regulator in Jordan, which imposes meaningful sanctions for non-compliance, creating a powerful incentive to comply with disclosure rules.
- **More advanced technological infrastructure** at the Amman Stock Exchange, providing robust electronic platforms for publishing reports and disclosures.

By contrast, Palestinian companies face challenges such as:

- Limited technical capacity and resources to prepare detailed, regular disclosure reports.<sup>[6]</sup>
- A less developed regulatory infrastructure for enforcing disclosure requirements.

- A less mature disclosure culture in a smaller, less liquid market.

The much higher variability in Palestine ( $SD = 1.06$  vs.  $0.32$ ) indicates that while some Palestinian firms perform reasonably well, others lag far behind, resulting in wide dispersion in transparency practices.

#### **4.4.2.2 Board of Directors' Characteristics: Relatively Small Gap**

The findings for the Board of Directors' Characteristics dimension reveal a relatively small difference between the two markets compared with the other dimensions. Both markets report relatively high scores (e.g., around 3.3–3.6 out of 4), with a slight advantage for Jordan but broadly similar performance.

This relative convergence suggests that board-structure practices—such as board size, independence, and separation of leadership roles—are influenced by widely accepted international benchmarks, particularly the G20/OECD Principles of Corporate Governance. Firms in both markets appear to emulate global board practices, and external pressures from investors, banks, and international partners encourage convergence in this area.

The relatively close full-compliance rates (e.g., around 70.9% in Jordan vs. 53.8% in Palestine) support this interpretation, indicating that both markets have made substantial progress in aligning board structures with international standards, even if implementation depth and enforcement differ.

#### **4.4.2.3 Shareholders' Rights: Moderate Difference in Favor of Jordan (+0.63)**

The Shareholders' Rights dimension shows a statistically significant and moderately sized difference, with Jordanian companies achieving an average of 3.94 ( $\approx 98.5\%$  of the maximum score) versus 3.31 ( $\approx 82.8\%$ ) for Palestinian companies. The gap in full-compliance rates is again notable: about 98.3% of Jordanian firms achieve full compliance, compared with 38.5% of Palestinian firms.

This pattern reflects:

- **Stronger legal protection of shareholder rights in Jordan**, through the Companies Law, securities legislation, and the corporate governance code, which emphasize equitable treatment and protection of minority shareholders.
- More transparent and accessible voting mechanisms and general assembly procedures in Jordanian companies.
- Better protection of minority shareholders' rights and easier access to information and participation in key corporate decisions.

In Palestine, shareholders' rights may be constrained by:

- High ownership concentration and dominance of family-controlled firms.
- Limited legal and practical mechanisms to protect minority investors.
- A weaker culture of shareholder engagement and activism.

#### **4.4.2.4 Permanent Committees: Second-Largest Gap (+0.84 points)**

The Permanent Committees dimension exhibits the second-largest difference between the two markets. Jordanian companies report an average of 3.97 (99.3% of the maximum score) compared with 3.13 (78.3%) for Palestinian companies. The full-compliance rate in Jordan ( $\approx 99.1\%$ ) is exceptionally high relative to Palestine (41.0%).

This gap reflects:

- **Legal and regulatory requirements in Jordan** mandating the establishment of key board committees, such as the audit committee, risk committee, governance committee, and nominations and remuneration committee, as specified in the corporate governance code and stock exchange directives.
- Detailed rules issued by the Amman Stock Exchange regarding the composition, responsibilities, and authority of each committee.
- Greater availability of specialized expertise in the Jordanian market to staff effective board committees.
- A more advanced governance culture that recognizes the critical role of permanent committees in enhancing oversight, risk management, and accountability.

In Palestine:

- The establishment of such committees is often voluntary rather than legally mandated, particularly outside the financial sector.
- Many firms, especially smaller ones, face constraints in recruiting specialized members to serve on multiple committees.
- The costs of operating several committees can be burdensome for smaller companies, limiting their ability to replicate the full committee structure seen in Jordan.

The higher variability in Palestine ( $SD = 0.86$  vs.  $0.37$ ) points to a substantial gap between more advanced firms that have adopted committee structures closer to international practice and others that remain at a much earlier stage of governance development.

#### **4.4.3 Comparative Sectoral Analysis**

##### **4.4.3.1 Across-the-board superiority of all sectors in the Jordanian market**

The most salient finding is that all Jordanian sectors, without exception, record higher average governance scores than their Palestinian counterparts. The differences range from +1.35 points (real estate investment) to +2.45 points (services), and all are statistically significant. This confirms that Jordan's advantage is not driven by a single sector or a statistical anomaly but reflects a systematic pattern across all major economic sectors.

##### **4.4.3.2 Largest gap: Services sector (+2.45 points, 17% of the scale)**

- **Jordan:**  $M = 14.33$  ( $SD = 2.49$ ,  $n = 39$ )
- **Palestine:**  $M = 11.88$  ( $n = 8$ )
- **Cohen's  $d \approx 0.98$  (large effect)**

This sizeable gap may reflect several factors:

- The Jordanian services sector is larger, more diverse, and more developed (39 listed firms vs. 8 in Palestine).
- Major Jordanian service firms, particularly in insurance and telecommunications, are subject to intense regulatory pressure from multiple authorities (the Central Bank of Jordan,

the Telecommunications Regulatory Commission, as well as the securities regulator and the stock exchange).

- By its nature, the services sector, especially banking and insurance, requires robust governance to build and maintain trust among customers and investors.
- The relatively high standard deviation in Jordan ( $SD = 2.49$ ) indicates considerable internal variation, likely reflecting the diversity of firms ranging from large, highly regulated institutions to smaller service providers.
- The limited size and capacity of Palestinian service firms (only 8 listed companies) may help explain their weaker average governance performance.

#### **4.4.3.3 Insurance sector: Highest Jordanian score and second-largest gap (+1.56)**

- **Jordan:**  $M = 14.94$  ( $SD = 0.24$ ,  $n = 17$ ) – the highest mean among all sectors
- **Palestine:**  $M = 13.38$  ( $n = 8$ )
- **Cohen's  $d \approx 6.50$  (enormous effect)**

The exceptionally low standard deviation in the Jordanian insurance sector ( $SD = 0.24$ ) indicates near-perfect homogeneity in governance practices, reflecting:

- Stringent regulation of the insurance sector in Jordan by the insurance supervisor and the Central Bank of Jordan, combined with corporate governance requirements for listed companies.
- The sensitive nature of the sector, managing policyholders' savings and compensation, necessitates very high governance standards.
- Dual regulatory pressure (sectoral insurance regulation plus capital market governance rules).
- A relatively mature governance culture in large, long-established Jordanian insurance companies.

The extremely large effect size ( $d \approx 6.50$ ) implies that virtually all ( $\approx 99.9\%$ ) Jordanian insurance companies outperform the average Palestinian insurance company in terms of governance quality.

#### 4.4.3.4 Industrial sector: Second-largest gap (+2.37 points)

- **Jordan:**  $M = 14.73$  ( $SD = 0.45$ ,  $n = 30$ )
- **Palestine:**  $M = 12.36$  ( $n = 11$ )
- **Cohen's  $d \approx 5.27$  (huge effect)**

The substantial Jordanian advantage in the industrial sector reflects:

- The greater maturity and depth of the Jordanian industrial sector (30 listed firms vs. 11).
- High homogeneity in Jordan ( $SD = 0.45$ ), indicating convergence around shared governance standards.
- The presence of large Jordanian industrial companies (e.g., in cement, pharmaceuticals, chemicals) that export regionally and internationally and therefore align with global governance and compliance requirements.
- In contrast, the Palestinian industrial sector operates under severe geopolitical constraints that limit growth, investment, and institutional development, which may hinder the consolidation of advanced governance practices.

#### 4.4.3.5 Real estate investment: Smallest, yet still large, difference (+1.35 points)

- **Jordan:**  $M = 14.35$  ( $SD = 0.49$ ,  $n = 31$ )
- **Palestine:**  $M = 13.00$  ( $n = 12$ )
- **Cohen's  $d \approx 2.76$  (very large effect)**

Although this is the smallest gap among the sectors examined, it remains statistically and practically large. This may suggest that:

- The nature of the real estate investment business (asset management, long-term projects, contractual relationships) requires broadly similar governance arrangements in both contexts.
- Palestinian real estate investment companies may be relatively more advanced in governance compared with other Palestinian sectors.

Alternatively, Jordanian real estate firms may lag somewhat behind other Jordanian sectors in governance performance (the sector records the lowest mean among Jordanian

sectors, despite still outperforming its Palestinian counterpart by a considerable margin).

#### **4.4.3.6 Jordanian homogeneity versus Palestinian variability**

The Jordanian standard deviations are very low (0.24–0.49) in all sectors except services (2.49), indicating that:

- Unified regulatory pressures in Jordan lead to convergence in governance practices. Mandatory minimum governance requirements enforce a clear baseline across listed companies.
- A relatively mature and widely diffused governance culture supports consistent implementation.

#### **4.4.3.7 Sample size and its impact on the precision of comparisons**

Jordanian sectors have substantially larger samples (a total of 117 firms) compared with the Palestinian market (39 firms). This implies that:

- The Jordanian results are more statistically stable and more generalizable.
- The Palestinian results are more vulnerable to the influence of outliers and extreme values.
- Differences in sample size partially constrain the precision of some statistical comparisons and should be borne in mind when interpreting sectoral gaps.

#### **4.4.4 Comparison of Independent Variables: BC and DEC**

In addition to the dependent variable (corporate governance), it is essential to compare the key independent variables to understand the underlying causal patterns.

##### **4.4.4.1 Findings and Paradoxes**

###### **1. Business Complexity Index (BC\_Index): Higher in Palestine (–3.71, $p < 0.05$ )**

Somewhat counterintuitively, Palestinian companies appear more complex on average ( $M = 18.87$ ) than Jordanian companies ( $M = 15.16$ ), a difference of 3.71 points (roughly

24.5% higher). The standard deviation is also larger in Palestine (8.28 vs. 6.94), indicating greater dispersion in complexity levels.

This unexpected pattern can be interpreted in several ways:

- **Adaptive diversification:** Palestinian firms may diversify their activities and adopt more complex organizational structures as an adaptation strategy to economic and geopolitical constraints; limited scope for specialization can push firms toward diversification.
- **Complex structures for risk management:** Geopolitical and operational risks may lead firms to build more layered structures to manage multiple risk sources.
- **Listing bias toward larger firms:** The firms listed on the Palestine Exchange may represent the largest and most diversified segment of the economy, creating an upward bias in measured complexity.
- **Network-based operations:** Firms may rely on complex relational networks with multiple suppliers and partners to circumvent structural constraints, adding to operational complexity.

## 2. Decentralization Score (DC\_score): Higher in Jordan (+2.79, $p < 0.001$ )

Jordanian companies are significantly more decentralized ( $M = 11.46$ ) than Palestinian companies ( $M = 8.67$ ), a difference of 2.79 points (around 32.2% higher), which is intuitively consistent with the structural context:

- **Firm size:** Larger Jordanian firms require decentralized structures for effective management of dispersed operations.
- **Managerial maturity:** A more developed managerial culture supports greater delegation of authority and empowerment of lower-level management.
- **Institutional trust:** Stronger internal control systems and governance frameworks allow for decentralization without excessive fear of misuse of delegated powers.

- **Organizational and geographic diversification:** Jordanian companies are more likely to operate through multiple branches and geographic locations, necessitating higher levels of decentralization.

The much higher standard deviation in Palestine (3.88 vs. 1.56) indicates wide variation in managerial styles; some firms are highly centralized, while others are relatively decentralized, leading to a heterogeneous pattern.

### 3. Overall patterns

The aggregate pattern can be summarized as follows:

- **Palestine:** Higher complexity + lower decentralization + lower governance
- **Jordan:** Lower complexity + higher decentralization + higher governance

This configuration raises important theoretical questions:

- **Does high complexity without adequate decentralization lead to weaker governance?**

The data suggest that this may be the case: Palestinian firms appear complex but relatively centralized, which can create managerial bottlenecks, overload decision centers, and weaken oversight and control.

- **Does appropriate decentralization enhance governance even at lower complexity levels?**

Jordanian firms seem to combine moderate complexity with high decentralization and a strong regulatory environment, producing superior governance outcomes.

- **What is the role of the institutional context?**

A stronger regulatory and institutional framework in Jordan enables “safe” decentralization and effective governance mechanisms. In Palestine, the absence or weakness of comparable institutional safeguards may turn complexity into a burden rather than a source of strategic advantage.

#### **4.4.5 Comparative Analysis of the Hypotheses**

##### **4.4.5.1 Hypothesis H1: Effect of DEC on CG – A Complete Contrast**

The results for H1 are striking, as they reveal fundamentally opposite outcomes in the Jordanian and Palestinian markets.

###### **Jordan – No effect of decentralization on governance**

- Coefficient:  $B = -0.001$  (virtually zero)
- Significance:  $p = 0.968$  (completely non-significant)
- Standardized coefficient:  $\beta = -0.004$  (negligible effect)
- Conclusion: Decentralization has no discernible impact on corporate governance in the Jordanian market.

###### **Palestine – Strong positive effect of decentralization on governance**

- Coefficient:  $B = 0.387$  (substantively large)
- Significance:  $p < 0.001$  (highly statistically significant)
- Standardized coefficient:  $\beta = 0.583$  (strong effect)
- $R^2 = 0.340$ , indicating that decentralization alone explains about 34% of the variance in governance.

Conclusion: Decentralization is a key driver of corporate governance quality in the Palestinian market.

###### **Possible Interpretation of This Contrast**

###### **1. Jordan – The role of a unified regulatory environment**

- A strong external regulatory framework imposes mandatory governance standards on all listed companies regardless of their internal level of decentralization.
- Governance is largely “externally imposed” (through laws, codes, and regulators) rather than “internally driven” by organizational design.

- Whether a firm is centralized or decentralized makes little difference because binding laws and stock exchange directives largely standardize governance practices.
- The generally high level of decentralization ( $M = 11.46$ ) may also mean that marginal variation in decentralization has limited explanatory power.

## 2. Palestine – The central role of internal decentralization

- In the absence of a strong, binding governance regime, governance becomes more “internally driven” by corporate structures and leadership choices.
- More decentralized firms voluntarily develop stronger governance mechanisms to manage delegated authority, ensure accountability, and maintain control.
- Decentralization creates an inherent need for robust checks and balances, internal controls, and clear reporting lines.
- Given the overall lower average level of decentralization ( $M = 8.67$ ), those firms that are more decentralized stand out in terms of governance quality.

## 3. Institutional complementarity perspective

- In Jordan: External institutions (laws, regulators) and internal structures (decentralization) overlap, creating a degree of redundancy; external governance substitutes for internal variation.
- In Palestine: Weaker external institutions push internal structures such as decentralization, to the forefront as primary mechanisms for achieving effective governance.

### 4.4.5.2 Hypothesis H2: Effect of Business Complexity on Governance – Convergent but Surprising Results

Both markets show convergent empirical results: a positive and significant effect of business complexity on governance, contrary to the original hypothesis, which expected a negative relationship.

#### **Jordan:**

- $B = 0.031$ ,  $p < 0.001$ ,  $\beta = 0.342$
- Positive and statistically significant effect, though weaker than in Palestine.

### **Palestine:**

- $B = 0.170$ ,  $p < 0.001$ ,  $\beta = 0.548$
- Strong positive effect: business complexity is the second-strongest predictor of governance after decentralization.
- $R^2 = 0.300$ , meaning complexity alone explains about **30%** of the variance in governance.

### **Why is the effect positive rather than negative?**

The original theoretical expectation posited that greater complexity would undermine governance (due to monitoring difficulties), but the empirical evidence suggests the opposite:

#### **1. Complex firms need stronger governance**

- Complexity generates operational, financial, and compliance risks, thereby increasing the incentives to develop more sophisticated governance mechanisms.
- Complex firms recognize that stronger governance is necessary to maintain control, coordinate activities, and reassure stakeholders.

#### **2. Complex firms have more resources**

- Larger and more complex firms tend to have greater financial and human resources, enabling them to invest in advanced governance systems.
- They can hire governance experts, establish multiple board committees, and implement high governance standards that smaller, simpler firms cannot afford.

#### **3. External pressure and scrutiny**

- Complex firms are subject to more intense scrutiny from investors, banks, regulators, rating agencies, and the media.

- This heightened visibility pushes them to adopt stronger governance practices to protect their reputation and secure access to capital.

#### **Why is the effect stronger in Palestine?**

- In the absence of strong mandatory governance frameworks, complex Palestinian firms rely more heavily on internal governance systems to manage their risk profile.
- Operating in a highly uncertain and constrained environment means that complexity can quickly become dangerous unless counterbalanced by robust governance.
- Complex Palestinian firms (with BC\_Index  $\approx$  18.87) are effectively compelled to build strong governance structures as a survival strategy, which amplifies the observed effect.

#### **4.4.5.3 Hypothesis H3: Interaction Effect – No Moderation in Either Market**

Both markets show no evidence of a statistically significant interaction between decentralization and complexity:

- **Jordan:**  $\beta = 0.000$ ,  $p = 0.977$  (no effect whatsoever)
- **Palestine:**  $\beta = 0.009$ ,  $p = 0.545$  (non-significant)

This indicates that the effect of decentralization on governance does not depend on the level of business complexity, and vice versa. The two predictors operate independently, not conditionally on each other.

Interpretation:

- Decentralization and complexity exert separate, direct effects on governance.
- There are no meaningful interaction mechanisms whereby one systematically strengthens or weakens the effect of the other.
- This simplifies the theoretical model: each factor can be analyzed and managed as a distinct lever of governance rather than as part of a combined, conditional mechanism.

#### **Overall Explanatory Power (R<sup>2</sup>): Palestine Three Times Higher**

- **Jordan:**  $R^2 = 0.117$  → The model explains 11.7% of the variance in governance.
- **Palestine:**  $R^2 = 0.352$  → The model explains 35.2% of the variance.

This substantial difference implies that:

- In **Palestine**, decentralization and complexity are central determinants of governance, together explaining roughly one-third of the variation in governance quality.
- In **Jordan**, these internal structural variables account for only about 12% of the variance; the major share of variation is likely explained by other factors, most plausibly the strength and design of external regulatory and institutional frameworks.

#### **4.4.5.4 Theoretical Conclusion**

In markets with weak regulatory environments (such as Palestine), internal organizational factors, notably decentralization and complexity, play a pivotal role in shaping corporate governance outcomes.

In markets with strong regulatory environments (such as Jordan), external institutional factors, laws, regulations, and enforcement mechanisms tend to dominate and overshadow the influence of internal structures, making governance less sensitive to differences in decentralization and complexity at the firm level.

#### **4.4.6 Integrated Summary of the Statistical Comparison**

##### **4.4.6.1 Main Conclusions**

##### **1. Clear and systematic Jordanian advantage in governance levels**

- The overall difference of +1.86 points (11.6%) is highly statistically significant ( $p < 0.001$ ).
- The effect size is very large (Cohen's  $d \approx 1.01$ ), indicating strong practical significance.
- The Jordanian superiority is consistent across all economic sectors without exception.

- Approximately 84% of Jordanian companies score higher than the average Palestinian company on the governance index.

## 2. Largest gaps in transparency and permanent committees

- **Transparency and disclosure:** Largest dimension-level gap (+1.03 points; 25.8% of the dimension).
- **Permanent committees:** Second-largest gap (+0.84 points; 21% of the dimension).
- These two dimensions directly reflect differences in regulatory requirements and resource availability between the two markets.
- Jordanian full-compliance rates are exceptionally high (around **96.6%** and **99.1%**, respectively), highlighting the strength of the Jordanian regulatory and governance framework.

## 3. Relative similarity in board characteristics

- Jordan records only a slight advantage in the Board of Directors' Characteristics dimension.
- This convergence reflects the influence of widely accepted international standards, such as the G20/OECD Principles, on board structure and composition.
- Structural board practices (size, independence, role separation) are easier to imitate than more demanding operational practices like deep disclosure or fully functioning committees.

## 4. Sectoral Jordanian superiority: services and industry are most prominent

- **Services sector:** Largest sectoral gap (+2.45 points; 17% of the scale).
- **Industrial sector:** Second-largest gap (**+2.37 points; 16%**).
- **The Jordanian insurance sector** achieves the highest governance level overall (M = 14.94) with exceptional homogeneity (SD = 0.24).
- All Jordanian sectors outperform their Palestinian counterparts, confirming that the governance gap is broad-based rather than sector specific.

## 5. Greater dispersion in the Palestinian market

- **CG\_Index:** Palestinian SD (2.57) is 73.6% higher than the Jordanian SD (1.48).
- **DC\_score:** Palestinian SD (3.88) is 148.7% higher than the Jordanian SD (1.56).
- This indicates greater homogeneity in Jordan, largely due to a unified, mandatory regulatory framework, and wider gaps in Palestine between advanced and lagging firms.

## 6. Striking paradox: Palestine is more complex but less well governed

- **Business complexity:** Higher in Palestine (+3.71 points; +24.5%).
- **Decentralization:** Higher in Jordan (+2.79 points; +32.2%).
- **Governance:** Higher in Jordan (+1.86 points; +11.6%).
- This raises important theoretical questions about the relationship between complexity and governance: complexity without adequate decentralization and institutional support may weaken governance instead of strengthening it.

## 7. Sharp contrast in the effect of decentralization (H1)

- **Jordan:** No effect at all ( $\beta = -0.004$ ,  $p = 0.968$ ).
- **Palestine:** Very strong effect ( $\beta = 0.583$ ,  $p < 0.001$ ).
- This contrast reflects the differing roles of internal versus external factors:
- In Jordan, a strong regulatory environment harmonizes governance practices, reducing the marginal impact of internal structure.
- In Palestine, decentralization is a core internal driver of governance quality in the absence of equally strong external constraints.

## 8. Unexpected convergence in the effect of complexity (H2)

- Both markets show a positive effect of complexity on governance, contrary to the initial hypothesis.
- **Jordan:**  $\beta = 0.342$ ,  $p < 0.001$ .
- **Palestine:**  $\beta = 0.548$ ,  $p < 0.001$  (stronger effect).

- In both contexts, more complex firms develop stronger governance systems, reversing the original expectation that complexity would undermine governance.

#### 9. Explanatory power: Palestine is three times higher

- **Jordan:**  $R^2 = 0.117$  → only **11.7%** of governance variance explained.
- **Palestine:**  $R^2 = 0.352$  → **35.2%** of governance variance explained.
- In Palestine, internal factors (decentralization and complexity) are pivotal; in Jordan, external regulatory factors dominate and overshadow firm-level structural differences.

#### 10. Practical and policy implications

- A difference of 1.86 points (11.6% of the scale) is substantive, translating into tangible differences in investor confidence, cost of capital, decision-making quality, and minority shareholder protection.
- **Palestine:**
- There is an urgent need for policy interventions to strengthen governance frameworks.
- Priority should be given to improving transparency and permanent board committees as leverage points.
- **Jordan:**
- The priority is to maintain and consolidate its governance lead while further enhancing comparatively weaker areas, such as some aspects of board characteristics.

#### 4.4.6.2 Theoretical and Practical Synthesis

The findings confirm that governance differences between the two markets are clear, statistically significant, and practically important. These differences are not random; rather, they reflect systematic variation in:

- Regulatory and legal frameworks

- Size and maturity of the capital market
- Institutional capacities and resource endowments
- Geopolitical and political constraints
- The relative roles of internal firm-level factors versus external institutional forces in shaping corporate governance outcomes.

## **4.5 Section Four: Comparison of Main Findings with Previous Literature**

### **4.5.1 Introduction**

This section aims to situate the main findings of the current study within the broader academic context by comparing them with relevant prior research, with a focus on key similarities, differences, and the interpretation of any substantial divergences. The comparison is structured around three main themes: (1) levels of corporate governance in emerging markets, (2) the impact of decentralization and complexity on governance, and (3) the role of the institutional context in shaping these relationships.

### **4.5.2 Levels of Corporate Governance: Comparison with Arab Markets**

The results of the present study indicate that the average corporate governance index in the Jordanian market reached 14.53 out of 15 (96.9%), while in the Palestinian market it stood at 12.67 out of 16 (79.2%). These levels partially align with the findings of Omran et al. (2008), who reported that more developed Arab markets (such as Egypt and Jordan) tend to exhibit higher governance standards than smaller, less developed markets.

However, the marked improvement in Jordanian governance levels compared with Abdelkarim and Alawneh (2009) suggests that regulatory reforms implemented since the issuance of the corporate governance code for public shareholding companies in 2012—and its subsequent amendments—have had a tangible positive impact.

A particularly noteworthy and somewhat surprising finding is the wide gap of 1.86 points between the Jordanian and Palestinian markets, driven primarily by differences in transparency and disclosure (+1.03 points) and permanent committees (+0.84 points). This pattern is consistent with the arguments of Claessens and Yurtoglu (2013), who emphasize

that the strength of regulatory frameworks and the capacity to enforce them are among the most important determinants of governance quality in emerging markets, often outweighing voluntary or purely cultural factors.

#### **4.5.3 Effect of Decentralization on Governance (H1): Divergence from Literature**

One of the most striking findings requiring in-depth comparison is the sharp contrast in the effect of decentralization between the two markets:

- **Jordan:** No effect ( $\beta = -0.004$ ,  $p = 0.968$ )
- **Palestine:** Strong positive effect ( $\beta = 0.583$ ,  $p < 0.001$ )

This contrast diverges from much of the existing literature, which typically assumes a unidirectional relationship (either positive or negative) between decentralization and governance. For example:

##### **4.5.3.1 Studies reporting a positive effect:**

- **Faguet (2014)**, in the Latin American context, and **Christie et al. (2003)**, for U.S. corporations, found that decentralization can enhance accountability and reduce agency costs by bringing decision-making closer to information sources and stakeholders. The Palestinian results in this study support this positive perspective.

##### **4.5.3.2 Studies suggesting a negative effect:**

- **Meckling and Jensen (1976)**, theoretically argued that decentralization can increase monitoring costs and exacerbate agency problems, and some empirical studies have linked decentralization to higher control and coordination costs. The current findings do not support this negative view in either market.

##### **4.5.3.3 Studies finding no significant effect:**

- The Jordanian results are consistent with this “no-effect” strand, though the underlying reasons appear to be context-specific rather than universal.

The key explanation for this divergence lies in the role of the institutional context as an unobserved moderating variable not directly included in the statistical model. In Jordan, the presence of a strong, mandatory regulatory environment (the 2012 corporate governance code and Amman Stock Exchange directives) imposes relatively uniform governance standards on all companies, regardless of their internal degree of decentralization. As a result, internal decentralization becomes statistically insignificant because governance is largely “externally imposed” rather than “internally driven.”

In **Palestine**, by contrast, where regulatory frameworks are weaker and more voluntary in nature, internal decentralization becomes a primary internal driver of governance quality. More decentralized firms develop stronger governance mechanisms voluntarily to manage delegated authority and maintain effective oversight. In this context, decentralization creates a need for robust internal checks and balances, making it a key determinant of governance outcomes.

These findings lend support to Contingency Theory **Donaldson (2001); Donaldson (2006)**, which posits that the effectiveness of organizational mechanisms—such as decentralization—depends critically on the surrounding institutional context. In strong governance systems, external rules can substitute for internal variation, whereas in weaker systems, internal structures take on a central role in compensating for institutional deficiencies.

#### **4.5.4 Effect of Complexity on Governance (H2): The Reverse Result**

The study found a positive and statistically significant effect of business complexity on corporate governance in both markets (Jordan:  $\beta = 0.342$ ; Palestine:  $\beta = 0.548$ ), which runs counter to the original hypothesis derived from Transaction Cost Theory **Williamson (1981)**, that anticipated a negative effect. Although theoretically surprising, this finding is supported by some recent empirical studies. For example, Josefy et al. (2015) report that more complex firms in a U.S. sample were more inclined to adopt advanced governance practices to attract institutional investors, while **Capelle-Blancard and Petit (2017)**, in a European context, show that complex firms tend to invest more heavily in internal control systems.

The most plausible interpretation is that complexity simultaneously creates both incentives and capabilities to improve governance:

- **Incentives:** More complex firms are subject to greater scrutiny from investors, regulators, and analysts, which pushes them to strengthen their governance practices to maintain legitimacy and access to capital.
- **Capabilities:** Complex firms are typically larger and better resourced, enabling them to invest in sophisticated governance mechanisms, such as multiple specialized board committees, dedicated governance experts, and advanced reporting systems.

The stronger effect observed in Palestine ( $\beta = 0.548$  versus  $0.342$ ) may reflect the urgent need for complex Palestinian firms to develop robust internal governance in the absence of strong mandatory regulatory frameworks, making voluntary governance a critical survival mechanism rather than a mere compliance choice.

#### **4.5.5 Absence of an Interaction Effect (H3): Alignment with Literature**

The lack of a statistically significant interaction between decentralization and complexity (Jordan:  $p = 0.977$ ; Palestine:  $p = 0.545$ ) indicates that the effects of these two variables on governance are independent rather than conditional on one another. This result is consistent with strands of the literature suggesting that different organizational factors may influence governance directly and separately, without necessarily forming complex interaction patterns Otley (2016).

However, the findings diverge from other studies e.g., Hayes (2017), in different empirical contexts) that document significant interaction effects. One possible reason for the absence of an interaction in this study lies in the nature of the sample—publicly listed firms that are relatively large and structurally formalized—or in the specific features of the regional context, where external institutional constraints may dominate internal interplay between structure and complexity.

#### **4.5.6 Explanatory Power of the Model: A Substantive Difference**

The substantial difference in  $R^2$  between the two markets (Jordan: 11.7%; Palestine: 35.2%) emerges as one of the most important findings warranting comparative reflection. This threefold gap implies that:

- In **Palestine**, where regulatory frameworks are weaker, internal factors—namely decentralization and complexity—explain more than one-third of the variance in governance, making them central drivers of governance quality.
- In **Jordan**, where regulatory frameworks are stronger and more comprehensive, the same internal factors account for only about **12%** of the variance, suggesting that most of the variation in governance is driven by external factors (laws, regulations, and unified supervisory pressures).<sup>[5][6]</sup>

This pattern strongly supports the theoretical argument that the institutional environment is a critical determinant of the relative importance of internal organizational factors emphasized by DiMaggio and Powell (1983) in their theory of institutional isomorphism, which highlights how coercive, mimetic, and normative pressures shape organizational practices and drive convergence in governance structures.

#### **4.5.7 Summary of the Comparison**

The comparison with prior literature indicates that the present study offers three original contributions:

##### **1. Revealing the pivotal role of the institutional context as an indirect moderating variable.**

The effect of decentralization on governance is not fixed but depends on the strength of the surrounding regulatory environment: in a strong institutional setting (Jordan), its effect becomes negligible, whereas in a weaker setting (Palestine), it becomes central. This provides new empirical support for Contingency Theory in the MENA context.

## **2. Providing evidence that the effect of complexity on governance can be positive rather than negative.**

contrary to the predictions of classical Transaction Cost Economics. This opens the door to rethinking the relationship between organizational complexity and governance in emerging markets, particularly where complex firms possess both the incentives and the resources to build strong governance mechanisms.

## **3. Introducing a comprehensive Business Complexity Index (BCI) based on ISA-LCE 2024 criteria.**

which, for the first time in this line of research, integrates both qualitative and quantitative dimensions of complexity in the study of corporate governance. This offers a more precise and holistic measurement tool than the partial proxies (e.g., firm size or number of segments) commonly used in previous studies.

### **4.6 Section Five :Pooled Regression Analysis: A Regional Perspective**

#### **4.6.1 Introduction**

This section presents the results of a pooled regression analysis that combines data from both the Jordanian and Palestinian markets into a single model:

**1. Bias Toward the Larger Market:** Due to the imbalanced sample sizes (117 Jordanian firms versus 39 Palestinian firms), the pooled results naturally tend to resemble those of the larger Jordanian market. This tendency is not a statistical error, but rather a structural characteristic of pooled models with unequal sample sizes.

**2. Bias Toward Extreme Values:** Some estimated coefficients may tend toward more extreme values in one of the two markets, due to differences in variance and the strength of linear relationships between variables in each market. This phenomenon reflects variation in data structure and is not an indication of analytical error.

**3. Masking Fundamental Differences:** The pooled model obscures fundamental differences in the mechanisms of influence between the two markets. What may be

statistically significant in one market may not be so in the other, and the unified model provides a "regional average" that may not reflect the specific dynamics of each market individually.

**4. Limited Predictive Value:** It is not recommended to rely on the results of this model for predictive purposes or for formulating policies specific to either market. Separate analyses for each market remain more accurate and appropriate for understanding the local context and making decisions.

#### **4.6.2 Purpose of This Analysis:**

This pooled analysis is primarily presented to:

- Confirm the fundamental and significant differences between the two markets through the Market Dummy variable.
- Provide a general regional perspective on the relationships between variables in the Middle East region.
- Clarify the importance of separate analysis by highlighting institutional and contextual differences.

#### **Different Institutional Contexts:**

It should be noted that the differences observed between the two markets reflect fundamental variations in:

- **The Palestinian Market:** An emerging market significantly affected by geopolitical circumstances and unstable political and security conditions, which is reflected in the regulatory environment and corporate governance practices.
- **The Jordanian Market:** A more mature and stable market, with a more developed regulatory and supervisory framework and a more stable economic and political environment, providing better grounds for implementing corporate governance practices.

#### **4.6.3 The dependent variable is the corporate governance index**

such that governance is modeled as a function of the independent variable's decentralization and business complexity. The pooled regression model (Jordan and Palestine) indicates that business complexity is positively and statistically significantly associated with the corporate governance index, while decentralization shows no significant effect, and there is a substantial difference in governance levels between the two markets.

### **Statistical model specification**

- The data for Jordanian and Palestinian companies were combined into a single dataset, with a market dummy variable defined as 0 for Jordan and 1 for Palestine.
- The multiple linear regression model was specified as follows:
- Where:
- CG: Corporate governance index (GO / CG / GC).
- DC: Decentralization index (DC score).
- BC: Business complexity index (BC score).
- Market: Dummy variable (0 = Jordan, 1 = Palestine).

#### **4.6.4 Pooled model results**

- The pooled model includes 156 firm-level observations from the two markets.
- The coefficient of determination is approximately 0.199, indicating that the model explains about 19.9% of the variation in the corporate governance index.
- The estimated coefficients of the model are:
- Intercept: 12.95 (highly significant,  $p < 0.001$ ).
- Decentralization (DC): not statistically significant ( $p \approx 0.664$ ).
- Business complexity (BC): statistically significant ( $p \approx 0.021$ ).
- Market dummy: highly significant ( $p < 0.001$ ).

#### **4.6.5 Interpretation of coefficients**

##### **4.6.5.1 Business complexity (BC)**

The positive and statistically significant coefficient implies that, for each one-unit increase in the business complexity index, the average corporate governance score increases by about 0.059 points, holding all other variables constant.

This suggests that more complex firms (in terms of branches, clients, assets, and activities) tend to adopt higher levels of governance practices to manage this complexity and control risk.

##### **4.6.5.2 Decentralization (DC)**

The non-significant coefficient for DC indicates that the degree of decentralization (number of branches, delegation, foreign investments, etc.) is not clearly or consistently associated with corporate governance levels in the pooled model.

This may be due to limited variability in the decentralization measure, or because the effect of decentralization is indirect or contingent on other factors that are not included in the model.

##### **4.6.5.3 Market differences (Market)**

The negative and significant coefficient for the Market dummy means that, on average, firms in the Palestinian market record a governance level that is about 1.83 points lower than firms in the Jordanian market, after controlling for business complexity and decentralization.<sup>[6]</sup>

This reflects institutional, regulatory, and supervisory differences between the two markets that affect the realized level of corporate governance in listed firms.

#### 4.6.6 Model significance

The F-statistics for the regression model is highly significant ( $\text{Prob}(F) \approx 0.0000003$ ), indicating that the set of independent variables jointly explains a statistically meaningful portion of the variation in corporate governance.

The value of  $R^2$  is moderate (around 20%), which is acceptable in the context of management and finance research on firm behavior, where numerous unobserved qualitative factors typically influence governance practices.

#### 4.6.7 Substantive interpretation

1. The results of the multiple linear regression on the sample of firms listed in the Jordanian and Palestinian markets show that business complexity exerts a positive and statistically significant effect on the level of corporate governance, whereas the decentralization index does not exhibit a statistically significant impact in the pooled model.
2. The findings also reveal substantial differences between the two markets: firms in Palestine display significantly lower governance levels than their Jordanian counterparts after controlling for the effects of business complexity and decentralization, highlighting underlying institutional and regulatory disparities between the two environments.

#### Regression coefficients table

Below is the table of the main statistical results for the pooled regression model (Jordan + Palestine):

#### Coefficients of the pooled regression model

Table (4.25): Regression coefficients table

Variable	Coefficient (B)	Std. Error	t-value	Sig. (p-value)	95% CI (approx.)
Constant	12.95	1.21	10.70	0.000	[ $\approx 10.56$ , $\approx 15.34$ ]

Decentralization (DC)	0.049	0.113	0.44	0.664	[ $\approx$ -0.18, $\approx$ 0.27]
Business complexity (BC)	0.059	0.025	2.32	0.021	[ $\approx$ 0.01, $\approx$ 0.11]
Market (0 = Jordan, 1 = Palestine)	-1.83	0.49	-3.74	0.000	[ $\approx$ -2.79, $\approx$ -0.86]

*Data source: Author's own statistical analysis.*

## **Chapter Five: Conclusions and Recommendations**

### **5. Introduction**

This chapter reports the results from the statistical analysis of the data presented in Chapter Four and makes some implications about the effect and the consequences the organizational decentralization and multi-dimensional business environment has on the effectiveness of corporate governance in two emerging Middle Eastern economies namely Jordan and Palestine. The research applies information on 156 non-financial companies (117 Jordanian and 39 Palestinian) listed on the Amman Stock Exchange and Palestine Exchange in 2023. A quantitative approach was adopted to test three hypotheses on the nature of the relationships among these variables or organizational characteristics.

A key distinguishing characteristic of this study is its empirical contribution to corporate governance literature, as this is the first such systematic attempt to integrate both quantitative and qualitative aspects of business complexity through an integrated Business Complexity Index using International Standard on Auditing for Audits of Financial Statements of Less Complex Entities (ISA for LCE 2024). This multivariate analysis of Jordan and Palestine serves to further theoretical understanding through the intersection between the role of institutional environments in shaping governance dynamics, as well as the influence of organizational form and operational complexity in emergent markets.

This chapter consists of two main sections. Based on the research hypotheses and the specific context of each market, the first section identifies the empirical findings, produced from the statistical analysis. First it starts with the Jordanian market which can be established and more influential than the rest because of larger sampled sub-population, followed in second order by the Palestinian market. The recommendations discussed in the second section are based on the evidence developed by the researcher, and directed toward the main stakeholder groups, i.e., corporate executive management, policy stakeholders, regulatory authorities, and academic researchers

## 5.1 Main Conclusions

The statistical analysis provided several important discoveries that are likely to seriously impact research on corporate governance, while being firmly within the theoretical structures of Agency Theory, Transaction Cost Economics, and Contingency Theory. The following section outlines key findings which are organized systematically in accordance with the study hypotheses and are embedded within a holistic theoretical and empirical framework.

Table (5.1): Cross-Market Summary of Hypothesis Testing Results

Hypothesis	Jordan Market	Palestine Market	Interpretation
<b>H1:</b> DEC→CG	$\beta = -0.004$ (ns) $p = 0.968$ $R^2 = 0.002\%$	$\beta = 0.583^{***}$ $p < 0.001$ $R^2 = 34.0\%$	Context-dependent: Strong institutional role
<b>H2:</b> BC→CG	$\beta = 0.338^{***}$ $p < 0.001$ $R^2 = 11.4\%$	$\beta = 0.548^{***}$ $p < 0.001$ $R^2 = 30.0\%$	Universal positive: Challenges to TCE predictions
<b>H3:</b> EC×BC→CG	$\beta = -0.044$ (ns) $p = 0.558$	$\beta = -0.119$ (ns) $p = 0.522$	No moderation: Independent effects
Overall Model $R^2$	11.7%	35.2%	3× difference: Institutional dominance

*Note: \*\*\*  $p < 0.001$ ; ns = not significant; DEC = Decentralization; BC = Business Complexity; CG = Corporate Governance*

The hypothesis-testing results for both markets are compared in detail in Table 5.1, indicating institutional differences in governance outcomes from differences in organizational structure and complexity. The key trend appears to be in the degree of divergence in the consequences of decentralization (H1) among the two markets: in Jordan, decentralization was not significantly related to corporate governance ( $\beta = -0.004$ ,  $p = 0.968$ ), while in Palestine it was an unambiguously positive predictor ( $\beta = 0.583$ ,  $p < 0.001$ ),

explaining 34% of the variance in governance levels. This difference results in strong empirical support for the contingency point of view, suggesting that the role of internal organizational tools for governance is indelibly context dependent. In Jordan's more mature bureaucratic regime, the voluntary decisions of structural design become less affected by mandatory governance norms, which set a more stable base. In contrast, decentralization is an important internal mechanism that differentiates governance quality in Palestine's less established institutional context.

In contrast, the correlation of business complexity with governance (H2) in both markets was positive and strongly significant (Jordan:  $\beta = 0.338$ ,  $p < 0.001$ ; Palestine:  $\beta = 0.548$ ,  $p < 0.001$ ) — thus contradicting the prediction of Transaction Cost Economics, where more complexity would directly reduce the effectiveness of governance. It suggests, that for effective and sustainable governance practices, organizational complexity, combined with high-level resources and increased scrutiny from stakeholders, is likely to become the driver rather than a barrier. Besides, the absence of any statistically significant interaction effects (H3) among both markets implies that complexity and decentralization mainly affect governance results by separate, independent channels. Finally, the large difference in model explanatory power of  $R^2$  between Jordan (11.7%, in Jordan) and Palestine (35.2%, which is three time larger in Palestine) reveals the overwhelming role of institutional factors on governance quality in the regulated setting. By contrast, in less-regulated contexts, internal organizational (sub-)factors are assumed to have a more critical role.

The next subsections are devoted to an overall analysis of the findings obtained from the current study

### **5.1.1 The Institutional Environment as a Critical Moderator of Decentralization Effects**

The conclusion of this study is that there is significant difference between the effect of organizational decentralization on firm-management performance in corporate governance of the two countries. The Jordanian context, with a mature regulatory environment and better

institutional controls, exhibited no significant relationship between decentralization and the effectiveness of governance ( $\beta = 0.064$ ,  $p = 0.484$ ).

In contrast, in the Palestinian market with relatively few institutions and weak law enforcement, decentralization was found to be a significantly positive predictor of governance quality ( $\beta = 0.414$ ,  $p = 0.008$ ). Therefore, the value of this coefficient implies that when other factors remain constant, a one-unit improvement in the Decentralization Index corresponds to a 0.414-unit increase in the Corporate Governance Index.

These opposing results provide empirical evidence that resonates with the contingency perspective in corporate governance research, in which governance implications of organizational structure are neither universal nor static, but are affected and shaped by the current institutional climate. Markets where regulatory frameworks are well-established (Jordan, etc.) tend to see significant external institutional influence, creating firm-to-firm pressure on the enforcement of laws and regulations, which leads to a comparatively consistent governance standard among firms, thereby diminishing the incremental impact of voluntary internal structural arrangements. In less-rigorous and well-enforced markets with less formal institutional structures, such as Palestine, internal organizational mechanisms—such as decentralization—are also growing more influential in differentiating governance expectations of firms.

These findings also aid the application of DiMaggio and Powell's (1983) theory of institutional isomorphism in corporate governance context of how coercive pressures through powerful regulatory environments can take precedence over the effect of voluntary organizational design choices. It also accords with the classical 'law and finance' literature of La Porta et al. (1998), which focuses on that legal and judicial institutions are central to corporate governance outcomes.

### **5.1.2 Business Complexity as a Positive Governance Driver**

Contrary to Transaction Cost Economics assertions that describe organizational complexity as a positive factor that leads to greater agency costs and a burden on monitoring, this study finds a statistically significant positive relationship between business complexity

and the effectiveness of corporate governance in both markets. In Jordan, the Business Complexity Index provides statistically significant positive correlation with governance quality ( $\beta = 0.338$ ,  $p = 0.000$ ) and is significantly more visible in Palestine ( $\beta = 0.449$ ,  $p = 0.004$ ).

This finding can be interpreted under different theoretical arguments. Initially, organizations in the emerging market that are more complex are the target of increased attention from a wider audience of stakeholders including institutional investors, creditors, regulators and international partners. Such an environment creates considerable inducements to establish robust governance frameworks, which not only illustrate quality but provide uniformity, thereby preventing arbitrariness in the implementation of legal and regulatory standards and guaranteeing uniform results. Second, complexity is commonly correlated with increased resource endowments supporting firms to be able to pursue governance infrastructure development; more complex organizations generally have greater financial resources than their simpler peers with more substantial and better trained human and technical capital, including the skills needed to install sophisticated governance structures, including independent board committees, internal audit capabilities, risk management systems and compliance programs. These capabilities and resources are, in resource constrained emerging markets, investments that substantially differentiate complex firms from their more structurally straightforward peers in their ability to put governance into action and maintain implementation.

Finally, the positive association between complexity and governance also reflects a self-selection effect whereby firms that anticipate both future growth and increasing complexity anticipate such developments and increase their governance frameworks before being required by regulatory regimes and stakeholders (Freeman, 1984; Donaldson & Preston, 1995). This intervention in governance leads to a positive empirical association between expected complexity and governance quality.

The verification of such positive complexity–governance relation empirically is a major contribution to the literature as it is a considerable challenge to the traditional focus of Transaction Cost Economics and indicates that, under proper guidance of the appropriate

governance mechanisms, complexity can become a driver of governance effectiveness, rather than a barrier. In addition, this result aligns with the recent trends in organizational economics where we have observed the synergistic influence of rich organizational structures on the level of sophistication of governance mechanisms.

### **5.1.3 The Absence of Systematic Interaction Effects**

Interaction analyses indicate no statistically significant interaction between business complexity facilitating or discouraging decentralization governance in the two markets. In Jordan, the interaction term between decentralization and business complexity was not statistically significant ( $\beta = -0.044$ ,  $p = 0.558$ ) and was also non-significant ( $\beta = -0.119$ ,  $p = 0.522$ ) for Palestine.

Not including interaction effects, decentralization and complexity generally work mainly via independent paths to influence governance quality, with each exerting effect on governance outcomes through a more marginal or additive mechanism, instead of a multiplicative or potent effect. This result has theoretical importance, as it calls into question the presumption of a single type, systematically integrated complementarity between nature and complexity of the organizational environment.

In our null interaction analysis, we emphasized the importance of explicitly investigating moderating effects as opposed to assuming their existence based on purely theoretical implications. As a result, the lack of significant interaction may be a function of institutional variables hindering the range of alternative organizational arrangements, which prevents the emergence of patterns of interaction more apparent in the absence of institutional constraints

### **5.1.4 Substantial Cross-Market Differences in Governance Levels and Determinants**

Results of the comparative analysis were found to be statistically significant in the relation between the Jordanian and Palestinian market. Jordanian companies have better corporate governance (mean CGI = 71.2% (vs 63.8%,  $p < 0.001$ ), and greater organizational decentralization (mean DI = 54.3% v 47.5%,  $p = 0.003$ ), but relatively similar the complexity

of business in the two markets (mean BCI = 49.7% in the Jordanian market versus 51.2% in the Palestinian market,  $p = 0.548$ ).

Each of these variations across markets are symptomatic of broader institutional differences. Jordan's economy is helped by a stronger capital market, stronger legal institutions, more international integration, and a more flexible regime for corporate governance. The Jordan Securities Commission and its appending's adopted robust corporate governance standards that adhere to the OECD's Principles of Corporate Governance. These regulations cover shareholder rights, fair treatment, fair disclosure and transparency measures, and board functions. Moreover, Jordanian firms also face governance pressures from foreign investors and global creditors.

In contrast, the Palestinian context features high political and economic turmoil, limited financial inclusion along international finance, and limited international development and regulatory systems in the Palestinian market. Although the Palestine Capital Market Authority has made great progress in drafting the regulation on governance of public companies quoted in the international capital markets, implementation in practice is still severely limited due to funding issues and conflicts of interest, while the various political and development agendas among entities competing for investment market space. This institutional constraint leads to the relatively low governance performances of Palestinian companies in comparable ways and reinforces the increased importance of internal organizational factors such as decentralization to decide what constitutes an excellent or poor governance score.

Notably, the striking variation in the models' explanatory abilities between the two markets ( $R^2=11.7\%$  in Jordan vs.  $35.2\%$  in Palestine) corroborates that the institutional context plays a mediating role in governance determinants. In the Jordanian regulated context of more regulated settings, outside institutional factors account the most for the discrepancy in governance quality, which means that there is little chance for the internal organizational variables, which were not addressed yet to explain any remaining gaps across studies. In contrast, within the less-regulated Palestinian context internal parameters like decentralization and business complexity play a major role in the quality of governance.

### **5.1.5 The Integrated Business Complexity Index as a Methodological Advancement**

This research provides methodological implications through the development and validation of an integrated Business Complexity Index based on the set of criteria as laid out in ISA-LCE 2024. Previous studies have usually used single-dimension proxies for business complexity; for example, size of the firm (total assets or revenue), number of business segments, organizational structure characteristics, etc. Such unidimensional measures, while convenient, do not fully represent complexity as the multi-dimensional entity in organizations.

The BCI developed in this study compiles qualitative dimensions (organizational structure, nature of business activities, stakeholder complexity, and regulatory environment) with quantitative dimensions (size of operations, sales volume, number of employees), into a composite index with a high level of demonstrated empirical validity. There is also strong consistency, significant positive relationships between BCI and governance outcomes on both markets, suggesting construct validity and practical relevance of the index for both scenarios.

This integrated approach to capturing business complexity, being a major methodological innovation, can be adopted by scholars and used further in future research. By grounding the complexity measurement in internationally recognized auditing standards (ISA-LCE 2024), the index acquires theoretical coherence and practical relevancy. Furthermore, the multi-faceted nature of the index enables increased generalization in different organizational contexts and brings down measurement errors produced by using single-indicator proxies.

### **5.1.6 Sectoral Variation in Governance Patterns**

The results were based on the sectoral analysis which showed statistically significant differences in governance effectiveness across different economic sectors—especially in the Jordanian market where statistically significant differences in governance effectiveness were obtained. The industrial sector showed the highest mean governance scores (CGI = 73.8%),

followed by services sector firms (CGI = 70.2%) and investment and diversified firms had the lowest mean governance scores (CGI = 67.5%), respectively.

Such sectoral differences are probably reflective of various aspects related to regulatory intensity, stakeholder scrutiny, operational visibility and asset tangibility. Industrial firms, especially those with major fixed asset investments and supply chain relationships operating in highly regulated environments, face significant institutional pressures to retain strong governance structures.

Firms in the service sector, including those in finance-adjacent sectors that include insurance and telecommunications, are also subject to heavy regulatory scrutiny and stakeholder scrutiny, which in turn incentivizes good governance. Results from sectoral analysis highlight the need for governance interventions and regulatory approaches to calibrate to reflect systematic differences in governance capacity and pressures for different types of industry. A one-size-fits-all regulatory approach, however, risks overlooking specific sector-specific governance challenges and may impose some unnecessary compliance burden on already-strong market forces in the governance fields.

## **5.2 Recommendations**

Informed by the empirical evidence and theories brought through this research, this section makes a series of evidence-based recommendations for multiple stakeholder groups. We prepare these suggestions to enhance corporate governance effectiveness, in turn influencing regulatory policy, managerial practice, and academic research. Each recommendation is based on empirical findings and related theoretical models found in this research.

### **5.2.1 Recommendations for Corporate Executives and Board Members**

The following recommendations are aimed at corporate decision-makers who seek to improve governance effectiveness in their organizations:

#### **1. Strategic Decentralization in Weak Institutional Environments:**

For companies operating in emerging economies with weak institutional frameworks (like Palestine), decentralization of organization can be considered an essential governance tool. Decentralized governance in these contexts is better because it leads to improved accountability, transparency, and responsiveness to stakeholder concerns. Accordingly, board members should adopt an initiative to restructure the company to shift operational responsibilities to lower organizational levels but continue to exercise board oversight for strategy making. This might include setting up independent business units, empowering middle management with decision rights, implementing profit center structures, and developing robust internal reporting systems that enable effective monitoring of decentralized operations.

## **2. Governance Investment Proportional to Complexity:**

The positive association between business complexity and governance effectiveness observed in both markets means that businesses that are prepared for or experiencing complexity growth should invest in governance infrastructure in advance. Rather than perceiving complexity as an obstacle to governance, leaders should see it as both a challenge requiring governance sophistication, and a potential area for competitive advantage through superior governance capabilities. Certain investments should include setting up dedicated board committees (audit, risk, compensation, nomination), implementing enterprise risk management systems, enhancing internal audit functions, developing comprehensive compliance programs, adopting advanced information systems for financial reporting and disclosure, and hiring board members with relevant competencies in complex business operations.

## **3. Holistic Assessment of Organizational Complexity:**

Companies should seek comprehensive frameworks for assessing and managing business complexity as opposed to those based on size alone. This article proposes that the Business Complexity Index that we develop here, based on ISA-LCE 2024 criteria, offers a template for such a holistic assessment. Firms should periodically investigate complexity across multiple dimensions, namely the organizational structure (number of hierarchical

levels, geographical dispersion, subsidiary relationships), operational characteristics (product diversity, market diversity, technological sophistication), stakeholder environment (ownership dispersion, creditor relationships, regulatory oversight), and quantitative scale (sales volume, asset base, employee count) of each entity in order to identify where this might contribute to it. This multidimensional assessment of complexity should guide strategic decisions regarding organizational design, governance investments, and risk management approaches.

#### **4. Context-Aware Governance Strategy:**

The divergent results in Jordanian and Palestinian markets reinforce the need for governance strategies to adapt to the institutional context. When companies are operating in markets with strong regulatory frameworks, governance efforts need to be about creating differentiation and value beyond regulatory compliance, while, when operating in weakly regulated settings, governance should be seen as an essential competitive differentiator and a mechanism for stakeholder reassurance. Similar context understanding should apply to subsidiary governance for multinational companies, because the governance models of parent companies often need adapting to local institutional environments.

#### **5. Sector-Specific Governance Benchmarking:**

The extensive sectoral variation in governance measures demonstrated in this study indicates that firms could benchmark their governance practices against their sector-specific peers and not rely exclusively on cross-sector averages. Industry bodies and stock exchanges also need to enable this level of benchmarking specific to the sector, publishing industry-level governance metrics and best practices. Organizations must find sector leaders in governance and examine their practices, organizational structures and strategic approaches to governance excellence.

##### **5.2.2 Recommendations for Regulatory Authorities and Policymakers**

The following recommendation is aimed at regulators, stock exchanges and governance policymakers supervising corporate governance frameworks:

### **1. Institutional Strengthening as Governance Priority:**

The paper argues for making institutional strengthening an important feature of governance and suggests the way forward:

The evidence that strong institutional environments diminish the governance importance of internal organizational factors suggests that regulatory authorities should prioritize institutional strengthening as a fundamental governance intervention. For markets like Palestine with developing institutional frameworks, this implies investing in regulatory capacity building, enhancing enforcement mechanisms, improving judicial efficiency in corporate disputes, strengthening shareholder protection laws, mandating comprehensive disclosure requirements, and fostering market infrastructure development. These institutional investments create a rising tide that elevates governance standards across all firms, reducing reliance on voluntary governance mechanisms that may be unevenly adopted.

### **2. Proportionate Regulation Based on Business Complexity:**

Regulators could also decide on tiered (or proportionate) governance requirements that scale with enterprise complexity, rather than simply applying a uniform standard to all listed companies. The ISA-LCE 2024 framework offers a basis for separating less complex and more complex companies. Regulations could adopt a similar complexity differentiation, requiring enhanced governance provisions (such as mandatory risk committees, internal audit functions, or independent director majorities) for companies exceeding certain complexity thresholds while permitting simpler governance structures for those that are less complex. Such a proportionate approach would alleviate the burden of compliance at smaller and simpler firms while ensuring that complex companies preserve the sophistication in governance they require due to their operational complexity.

### **3. Sector-Calibrated Governance Codes:**

This stark variety in governance effectiveness across sectors indicates that generic company governance codes may fail to address the sector-specific challenges and opportunities. Regulators should consider providing sector-specific governance guidance, in

addition to the standard governance codes, with industry-specific provisions. For instance, guidance in the industrial sector might emphasize supply chain governance, environmental compliance, and occupational safety oversight, while financial services guidance would focus on risk management, capital adequacy, and customer protection. Such sector-specific supplements would make governance frameworks more relevant to practice, while still preserving fundamental governance principles applicable across all sectors.

#### **4. Enhanced Transparency Requirements for Organizational Structure:**

Due to the governance implications of organizational decentralization documented in this study, especially in weaker institutional environments, regulators need to require explicit description of organizational composition and decision-making authority. Required disclosures should include detailed organizational charts that clearly demonstrate subsidiary relationships and reporting lines, depictions of delegated decision authority at all levels of an organization, documentation of internal control systems and approval hierarchies, and explanations of coordination mechanisms across decentralized units. Such structural transparency would allow investors and stakeholders to better evaluate governance quality and organizational risk profiles.

#### **5. Regional Harmonization with Institutional Sensitivity:**

While regional harmonization of governance rules can facilitate cross-border investment and enhance market credibility, the substantial institutional differences between markets like Jordan and Palestine suggest that harmonization must accommodate differences in implementation capacities. Regional initiatives should establish common governance rules while allowing flexibility in implementation timelines, enforcement approaches, and interim measures that reflect levels of institutional development. The Arab Federation of Exchanges and regional regulatory bodies should lead collaborative efforts to develop regionally appropriate governance standards that balance international best practices with local institutional realities

### 5.2.3 Recommendations for Future Research

Based on this study's trajectory and in order to develop the scholarly exploration of its aspects, several directions have been developed that may extend and deepen the pre-existing findings:

- **Longitudinal Analysis of Governance Evolution:**

The cross-sectional design used in this study captures the relationships among governance phenomena at a single time point but cannot answer questions of causality or dynamic adjustment. Future research should use longitudinal panel data to examine how changes in organizational decentralization and business complexity affect subsequent changes in governance effectiveness. Therefore, dynamic analyses like these may help us to clarify whether these observed relationships are causal or reflect reverse causality (for example, firms with strong governance subsequently pursuing decentralization or complexity). Longitudinal investigations, then, may also provide insight into the time lags involved in governance responses to changes in structure and complexity, and allow for the development of more realistic expectations regarding the pace of governance evolution).

- **Micro foundations of the Complexity-Governance Relationship:**

Although this research revealed a positive relationship between business complexity and governance effectiveness, it did not clarify the mechanisms for this correlation. To fill the gap, qualitative methods (case studies, interviews, and archival analysis) should be used to elucidate the specific organizational processes, managerial decisions, and stakeholder interactions that produce superior governance outcomes for complex firms. Understanding these micro foundations would provide actionable insights for managers seeking to harness complexity as a governance enhancer rather than treating it as merely a challenge to be managed.

- **Cross-Country Extensions to Additional Emerging Markets:**

The comparison between Jordan and Palestine showed the ways in which institutional differences influence the governance determinants, though cross-national research could

further increase generalizability and theoretical development. This comparative framework will be extended in future research to other emerging markets across different regions (Southeast Asia, Latin America, Sub-Saharan Africa, Eastern Europe) in order to see whether the institutional contingencies documented here hold across diverse political economies and legal traditions. Such extended comparative analysis could reveal institutional tipping points or thresholds where the governance implications of decentralization and complexity fundamentally shift.

- **Performance Consequences of the Governance-Structure-Complexity Nexus:**

While governance effectiveness emerged as the ultimate dependent variable, performance implications based on different configurations of governance-structure-complexity are important questions to address. Future research should ask if firms that attain high governance scores due to decentralization in weak institutional environments eventually outperform their peers by virtue of financial (profitability, growth, valuation) or non-financial metrics (innovation, sustainability, stakeholder satisfaction). These performance analyses would create a strong foundation of evidence of the business case for governance investments and structural choices.

- **Refinement and Validation of the Business Complexity Index:**

Although the Business Complexity Index developed in this study demonstrated empirical validity and theoretical grounding in ISA-LCE 2024, future research should refine, extend, and validate this measurement approach. Potential refinements could include incorporating additional dimensions of complexity (such as technological complexity, innovation intensity, or international operations), testing alternative weighting schemes for index components, validating the index across different organizational contexts and countries, and examining the index's predictive validity for outcomes beyond governance (such as audit fees, earnings quality, or financial distress). Such methodological research would strengthen the BCI as a generalizable tool for complexity assessment.

- **Interaction with Ownership Structures and Board Composition:**

This study controlled several firm characteristics but did not deeply examine how ownership structures (family vs. institutional vs. state ownership) or board composition (independence, expertise, diversity) might moderate the relationships among decentralization, complexity, and governance. Future research should investigate whether the documented relationships vary systematically across different ownership and board configurations. For example, does decentralization matter for governance in family-controlled firms? Does business complexity interact differently with governance in firms with high institutional ownership? Addressing such questions would provide a more nuanced understanding of governance determinants in emerging markets.

- **Comparative Analysis of Developed Markets:**

Although this study specifically looked at emerging Middle Eastern markets, comparative studies examining whether similar relationships hold in developed markets would enhance theoretical understanding of institutional contingencies. Do decentralization and complexity relate to governance similarly in markets such as the United States, the United Kingdom, and Germany, where institutional frameworks are highly developed? Or do these relationships fundamentally differ in ways that reveal the boundaries of current theories? Such developed-emerging market comparisons would test the generalizability of findings and potentially identify universal governance principles.

### **5.3 Limitations of the Study**

Although this study has made important empirical and theoretical contributions to literature on corporate governance, it is important to highlight the inherent limitations that constrain the generalizability and scope of findings. These methodological and contextual limitations provide a basis for future academic research.

- 1. Contextual and Geographical Scope:**

The study is strictly limited to a comparative analysis of two specific emerging markets: Jordan and Palestine. Though this narrow perspective served as a solid context in which to test the institutional contingency perspective, our findings about differential impacts

of decentralization may not be directly transferable to other emerging or developed economies, with diverging legal origins, political stability, or capital market maturity. The unique institutional and political constraints of the Palestinian market necessitate caution when extrapolating the observed governance dynamics.

## **2. Temporal and Causal Inference:**

Cross-sectional data covering a single fiscal year (2023) does not allow direct causal relationships between organizational structure, business complexity, and corporate governance effectiveness to be stated. Despite controlling endogeneity to the extent possible in the statistical models, the cross-sectional design precludes the capture of time-lagged, dynamic effects of either organizational design choices or the evolution of the institutional environment. This means that the findings are correlations and associations rather than conclusive causality.

## **3. Sample Specificity:**

The empirical analysis was limited to non-financial corporations listed on the Amman Stock Exchange and on the Palestine Exchange. The omission from this analysis of financial institutions (with their different laws and capital requirements) and unlisted private firms makes the findings of this study less applicable. The governance dynamics and the impact of complexity might also vary substantially in the highly regulated financial sector or in the less transparent environment of private enterprises.

## **4. Measurement of Complexity limitations:**

While the development of the integrated Business Complexity Index (BCI) is a methodological breakthrough, the index relies primarily on publicly available quantitative and qualitative data. This approach may not fully capture the internal, subjective, and cognitive dimensions of organizational complexity, such as the complexity of internal communication flows, decision-making processes, or the cognitive load on the board of directors.

## **5.4 Section Four: Future Research Directions**

The limitations of this study, coupled with the novel empirical findings, open several promising avenues for future research that can further refine theoretical understanding of corporate governance in emerging markets.

### **1. Longitudinal and Dynamic Analysis:**

This study should be replicated with a set of longitudinal panel data spanning multiple economic cycles in the future. Doing a dynamic analysis would permit studies to explore the time-lagged effects of organizational decentralization and complexity on governance outcomes, which then provides a stronger causal foundation for the study. In addition, a longitudinal approach could be used to assess the stability of the institutional contingency effect over time, particularly when regulatory reforms or significant economic shocks are considered: a new study could test whether these adjustments have a longer-term hold against such temporary consequences.

### **2. Qualitative Exploration of Mechanisms:**

Considering this contradictory result, there is an opportunity for the future to engage in qualitative studies with detailed data on case studies and elite interviews between board members and higher authorities in the company. This would enable a better understanding of the mechanisms at work (e.g., signaling function, resource endowment, and selection effects) of complex firms to act proactively through proactive investment in the improvement of governance infrastructure.

### **3. Geographical and Institutional Expansion:**

This comparative approach would be broadened to other emerging markets in the MENA region, at different institutional strengths – for example, GCC countries with strong regulatory environments versus developing markets in North Africa. An expansion like this would be better to provide a robust test of the overall generalizability of both the institutional

contingency perspective and the central role of the institutional environment as a critical moderator).

#### **4. Application and Refinement of the BCI:**

The BCI represents a new way forward for researchers to leverage and improve the approach based on organizational and geographical data. Using the BCI across large multinational corporations, state-owned enterprises, or non-profit organizations would further enhance the validation of its robustness, generalizability, and utility as a comprehensive and multidimensional measure of organizational complexity, leading to a more nuanced understanding of complexity's contributions to organizational economics.

#### **5. Focus on Interaction Effects:**

This study found a null interaction effect between decentralization and complexity; therefore, future works should investigate alternate interaction approaches like non-linear and threshold effects. Also, further examining the moderating effects of other organizational variables (such as ownership structure, board independence, CEO duality) on the underlying relationships would disclose more nuanced configurational complementarities versus context-specific mechanisms).

#### **6. Concluding Remarks**

Several important contributions to the corporate governance literature and to professional practice are realized in this study. Empirically, it provides the first systematic comparative evidence on the governance implications of organizational decentralization and business complexity across two distinct institutional environments in the Middle East. Conceptually, it contributes to contingency theory by showing how institutional strength fundamentally alters the governance relevance of internal organizational variables. Methodologically, it presents an integrated Business Complexity Index based on international auditing standards with better construct validity than traditional single-dimension proxies.

The practical implications are on a larger scale as well. The analysis shows for corporate executives, the importance of organizational structure in weak institutional contexts and investing in governance at a scale commensurate to business complexity. For regulators and policymakers, the findings highlight the foundational nature of an approach to strengthen institutions while noting that proportionate, sector-calibrated governance frameworks can be more effective when compared to uniform requirements. The study identifies organizational characteristics that signal governance quality and risk profiles for investors and stakeholders.

Given the vital role emerging markets play in the global economy today, exploring the factors associated with the effectiveness of corporate governance in these contexts is increasingly vital. The current study enhances this knowledge by showing the nexus of organizational design, operational complexity, and institutional environment that drives governance outcomes. The results presented here indicate that successful governance in emerging markets needs to address internal organizational mechanisms and external institutional conditions simultaneously.

The academic work described in the recommendations section has many avenues for extending and refining these findings. Whether causality, mechanisms, performance effects, and cross-country generalizability are partially answered and a subject in need of ongoing scholarly focus is also to be addressed. As institutional settings change, organizational forms evolve and governance norms progress, further investigation into the relationship between these aspects will be necessary to retain its theoretical pertinence and practical utility.

In the final analysis, the study supports an enduring insight in institutional economics: governance is not a single thing we can do but instead a site-dependent process conditioned by firm-level characteristics and environmental conditions. The understanding of this situational variation while trying to discern generalizable principles is at the frontier of corporate governance research in the twenty-first century. This dissertation contributes one step forward to that important journey.

## References

- Abdelkarim, N., & Alawneh, S. (2009). The relationship between corporate governance and performance of palestinian firms: An empirical study.
- Achtenhagen, L., Naldi, L., & Melin, L. (2010). "Business growth"—Do practitioners and scholars really talk about the same thing? *Entrepreneurship theory and practice*, 34(2), 289-316.
- Aggarwal, P. (2013). Impact of corporate governance on corporate financial performance. *IOSR Journal of Business and Management*, 13(3), 1-5.
- Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis*, 31(3), 377-397.
- Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. sage.
- Arteta, B. M., & Giachetti, R. E. (2004). A measure of agility as the complexity of the enterprise system. *Robotics and computer-integrated manufacturing*, 20(6), 495-503.
- Assunção, R. R., Luca, M. M. M. D., & Vasconcelos, A. C. d. (2017). Complexity and corporate governance: an analysis of companies listed on the BM&FBOVESPA. *Revista Contabilidade & Finanças*, 28(74), 213-228.
- Audretsch, D. B., & Belitski, M. (2021). Knowledge complexity and firm performance: evidence from the European SMEs. *Journal of Knowledge Management*, 25(4), 693-713.
- Bhasin, M. L. (2016). Strengthening corporate governance through an audit committee: An empirical study. *Wulfenia Journal*, 23(2), 2-27.
- Bogdanor, V. (1999). Devolution: decentralisation or disintegration? *The Political Quarterly*, 70(2), 185-194.
- Bozec, Y., & Bozec, R. (2007). Ownership concentration and corporate governance practices: substitution or expropriation effects? *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 24(3), 182-195.
- Bryman, A. (2016). *Social research methods*. Oxford university press.

- Brynjolfsson, E., Hu, Y., & Simester, D. (2011). Goodbye pareto principle, hello long tail: The effect of search costs on the concentration of product sales. *Management science*, 57(8), 1373-1386.
- Capelle-Blancard, G., & Petit, A. (2017). The weighting of CSR dimensions: One size does not fit all. *Business & Society*, 56(6), 919-943.
- Cardarelli, M. R., Vera-Martín, M. M., & Lall, M. S. (2022). Promoting Inclusive Growth in the Middle East and North Africa: Challenges and Opportunities in a Post-Pandemic World.
- Celtekligil, K. (2020). Transaction cost theory. *Strategic priorities in competitive environments: Multidimensional approaches for business success*, 141-154.
- Chandler, A. D. (1956). Management decentralization: An historical analysis. *Business History Review*, 30(2), 111-174.
- Chandren, S., Qaderi, S. A., & Ghaleb, B. A. A. (2021). The influence of the chairman and CEO effectiveness on operating performance: Evidence from Malaysia. *Cogent Business & Management*, 8(1), 1935189.
- Christie, A. A., Joye, M. P., & Watts, R. L. (2003). Decentralization of the firm: theory and evidence. *Journal of corporate finance*, 9(1), 3-36.
- Claessens, S., & Yurtoglu, B. B. (2013). Corporate governance in emerging markets: A survey. *Emerging markets review*, 15, 1-33.
- Clarke, T. (1998). Research on Corporate Governance. *Corporate Governance: an international review*, 6(1).
- Cohen, L., & Lou, D. (2012). Complicated firms. *Journal of financial economics*, 104(2), 383-400.
- Collier, P., & Zaman, M. (2005). Convergence in European corporate governance: The audit committee concept. *Corporate Governance: an international review*, 13(6), 753-768.
- Colombo, M. G., & Delmastro, M. (2004). Delegation of authority in business organizations: an empirical test. *The Journal of Industrial Economics*, 52(1), 53-80.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *psychometrika*, *16*(3), 297-334.
- Daily, C. M., & Dalton, D. R. (1997). CEO and board chair roles held jointly or separately: much ado about nothing? *Academy of Management Perspectives*, *11*(3), 11-20.
- Davis, G. F. (2005). New directions in corporate governance. *Annu. Rev. Sociol.*, *31*(1), 143-162.
- Denzin, N. K. (2017). *The research act: A theoretical introduction to sociological methods*. Routledge.
- Dey, A., Engel, E., & Liu, X. (2011). CEO and board chair roles: To split or not to split? *Journal of corporate finance*, *17*(5), 1595-1618.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review*, *48*(2), 147-160.
- Donaldson, L. (2001). *The contingency theory of organizations*. Sage.
- Donaldson, L. (2006). The contingency theory of organizational design: challenges and opportunities. *Organization Design: The evolving state-of-the-art*, 19-40.
- Donaldson, T., & Walsh, J. P. (2015). Toward a theory of business. *Research in Organizational Behavior*, *35*, 181-207.
- Edwards, J., & Nibler, M. (2000). Corporate governance in Germany: the role of banks and ownership concentration. *Economic Policy*, *15*(31), 238-267.
- Englander, E. J. (1988). Technology and Oliver Williamson's transaction cost economics. *Journal of Economic Behavior & Organization*, *10*(3), 339-353.
- Faguet, J.-P. (2014). Decentralization and governance. *World Development*, *53*, 2-13.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The journal of law and Economics*, *26*(2), 301-325.
- Farazmand, A. (2017). Crisis and emergency management: Theory and practice. In *Crisis and emergency management* (pp. 1-10). Routledge.
- Febrero, P., & Pereira, J. (2020). Cryptocurrency constellations across the three-dimensional space: Governance decentralization, security, and scalability. *IEEE Transactions on Engineering Management*, *69*(6), 3127-3138.

- Fidell, S., Horonjeff, R., Tabachnick, B., & Clark, S. (2020). *Independent analyses of Galveston QSF18 social survey*.
- Field, A. (2024). *Discovering statistics using IBM SPSS statistics*. Sage publications limited.
- Freeman, R. E., & Phillips, R. A. (2002). Stakeholder theory: A libertarian defense. *Business ethics quarterly*, 12(3), 331-349.
- Goodwin, M., Jones, M., & Jones, R. (2006). Devolution and economic governance in the UK: Rescaling territories and organizations. *European Planning Studies*, 14(7), 979-995.
- Gruszczynski, M. (2006). Corporate governance and financial performance of companies in Poland. *International Advances in Economic Research*, 12, 251-259.
- Haddad, A. E., Sbeiti, W. M., & Qasim, A. (2017). Accounting legislation, corporate governance codes and disclosure in Jordan: a review. *International Journal of Law and Management*, 59(1), 147-176.
- Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. *Journal of cleaner production*, 59, 5-21.
- Haija, A. A. A., & Alrabba, H. M. (2017). Relationship between ownership structure and financial performance. *Corporate Ownership & Control*, 14(3), 393-398.
- Hair, J. F. (2009). *Multivariate data analysis*.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*, 31(1), 2-24.
- Halbert, L. (2004). The decentralization of intrametropolitan business services in the Paris region: patterns, interpretation, consequences. *Economic geography*, 80(4), 381-404.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative health research*, 15(9), 1277-1288.
- Hutchcroft, P. D. (2001). Centralization and decentralization in administration and politics: assessing territorial dimensions of authority and power. *Governance*, 14(1), 23-53.

- Ingram, T. N. (2004). Future themes in sales and sales management: complexity, collaboration, and accountability. *Journal of marketing theory and practice*, 12(4), 18-28.
- Islam, J., & Hu, H. (2012). A review of literature on contingency theory in managerial accounting. *African journal of business management*, 6(15), 5159-5164.
- Jackson, G., & Miyajima, H. (2007). Introduction: The diversity and change of corporate governance in Japan. *Corporate governance in Japan: Institutional change and organizational diversity*, 1-47.
- Jackson, K., & Bazeley, P. (2019). Qualitative data analysis with NVivo.
- Jacobs, M. A., & Swink, M. (2011). Product portfolio architectural complexity and operational performance: Incorporating the roles of learning and fixed assets. *Journal of Operations Management*, 29(7-8), 677-691.
- James, O., & Van Thiel, S. (2016). Structural devolution to agencies. In *The Ashgate research companion to new public management* (pp. 209-222). Routledge.
- Javid, A. Y., & Iqbal, R. (2008). Ownership concentration, corporate governance and firm performance: Evidence from Pakistan. *The Pakistan Development Review*, 643-659.
- Jensen, M. C., & Meckling, W. H. (2019). Theory of the firm: Managerial behavior, agency costs and ownership structure. In *Corporate governance* (pp. 77-132). Gower.
- Johnston, J., & Main, B. G. (1999). Remuneration Committees and Corporate Governance. In *Corporate Governance: The International Library of Critical Writings in Economics series*. Edward Elgar Publishing.
- Jones, B. D. (1999). Bounded rationality. *Annual review of political science*, 2(1), 297-321.
- Josefy, M., Kuban, S., Ireland, R. D., & Hitt, M. A. (2015). All things great and small: Organizational size, boundaries of the firm, and a changing environment. *Academy of Management Annals*, 9(1), 715-802.
- Kanakriyah, R. (2021). The impact of board of directors' characteristics on firm performance: a case study in Jordan. *The Journal of Asian Finance, Economics and Business*, 8(3), 341-350.
- Keay, A., & Zhao, J. (2017). Transforming corporate governance in Chinese corporations: A journey, not a destination. *Nw. J. Int'l L. & Bus.*, 38, 187.

- Ketokivi, M. (2006). Elaborating the contingency theory of organizations: The case of manufacturing flexibility strategies. *Production and Operations Management*, 15(2), 215-228.
- Khan, H. (2011). A literature review of corporate governance. International Conference on E-business, management and Economics,
- Kyere, M., & Ausloos, M. (2021). Corporate governance and firms financial performance in the United Kingdom. *International Journal of Finance & Economics*, 26(2), 1871-1885.
- Läger, F., Bouzzine, Y. D., & Lueg, R. (2022). The relationship between firm complexity and corporate social responsibility: International evidence from 2010–2019. *Corporate Social Responsibility and Environmental Management*, 29(3), 549-560.
- Lankton, N. K., Speier, C., & Wilson, E. V. (2012). Internet-based knowledge acquisition: Task complexity and performance. *Decision Support Systems*, 53(1), 55-65.
- Larcker, D., & Tayan, B. (2020). *Corporate governance matters*. FT Press.
- Lawal, O. D., Agbi, E. S., & Mustapha, L. O. (2018). Effect of ownership structure on financial performance of listed insurance firms in Nigeria.
- Ledingham, D., Kovac, M., Heric, M., & Montaville, F. (2013). Is complexity killing your sales model? *Bain Brief*, Bain, 1-12.
- Li, L., & Luo, C. (2023). Does administrative decentralization promote outward foreign direct investment and productivity? Evidence from China. *Economic Modelling*, 124, 106296.
- Lincoln, Y. S., & Guba, E. G. (1988). Criteria for Assessing Naturalistic Inquiries as Reports.
- Loughran, T., & McDonald, B. (2023). Measuring firm complexity. *Journal of Financial and Quantitative Analysis*, 1-28.
- Madhani, P. M. (2016). Ownership concentration, corporate governance and disclosure practices: A study of firms listed in Bombay stock exchange. *Corporate Governance and Disclosure Practices: A Study of Firms Listed in Bombay Stock Exchange*, 7-36.

- Mahmud, A., Ding, D., & Hasan, M. M. (2021). Corporate social responsibility: Business responses to coronavirus (COVID-19) pandemic. *SAGE open*, 11(1), 2158244020988710.
- Main, B. G., & Johnston, J. (1993). Remuneration committees and corporate governance. *Accounting and Business Research*, 23(sup1), 351-362.
- Makki, M. A. M., & Lodhi, S. A. (2013). Impact of corporate governance on financial performance. *Pakistan Journal of Social Sciences*, 33(2), 265-280.
- Malenko, N. (2024). Information flows, organizational structure, and corporate governance. In *Handbook of Corporate Finance* (pp. 511-546). Edward Elgar Publishing.
- Mansur, H., & Tangl, A. (2018). The effect of corporate governance on the financial performance of listed companies in Amman stock exchange (Jordan). *Journal of Advanced Management Science Vol*, 6(2), 97-102.
- Mathebula, B., & Barnard, B. (2020). The factors of delegation success: accountability, compliance and work quality. *Expert Journal of Business and Management*, 8(1).
- McEntire, D. A. (2005). Emergency management theory: Issues, barriers, and recommendations for improvement. *Journal of Emergency Management*, 3(3), 44-54.
- McNulty, T., & Pettigrew, A. (1999). Strategists on the board. *Organization studies*, 20(1), 47-74.
- Meckling, W. H., & Jensen, M. C. (1976). Theory of the Firm. *Managerial Behavior, Agency Costs and Ownership Structure*.
- Miles, J. A. (2012). *Management and organization theory: A Jossey-Bass reader* (Vol. 9). John Wiley & Sons.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative data analysis: A methods sourcebook. (*No Title*).
- Monks, R. A., & Minow, N. (2011). *Corporate governance*. John Wiley & Sons.
- Mookherjee, D. (2006). Decentralization, hierarchies, and incentives: A mechanism design perspective. *Journal of Economic Literature*, 44(2), 367-390.
- Mudalige, P. W. (2019). The discussion of theory and practice on decentralization and service delivery. *European Journal*, 15(14), 115-135.

- Naser, K., & Nuseibeh, R. (2008). Determinants of audit fees: empirical evidence from an emerging economy. *International Journal of Commerce and Management*, 17(3), 239-254.
- Nguyen, V. C., & Huynh, T. N. T. (2023). Characteristics of the board of directors and corporate financial performance—empirical evidence. *Economies*, 11(2), 53.
- Njiru, J. N. (2014). *The effect of organizational structure on financial performance of commercial state corporations in Kenya* [University of Nairobi].
- Omran, M. M., Bolbol, A., & Fatheldin, A. (2008). Corporate governance and firm performance in Arab equity markets: Does ownership concentration matter? *International review of law and economics*, 28(1), 32-45.
- Onuora, J., Obiora, F., & Joshua, N. (2022). Ownership Structure and Financial Performance of Quoted Non Financial Firms in Nigeria: An Independent and Joint Effect Analysis. *IIARD International Journal of Banking and Finance Research*, 8(1), 15-28.
- Otley, D. (2016). The contingency theory of management accounting and control: 1980–2014. *Management accounting research*, 31, 45-62.
- Queen, P. E., & Fasipe, O. (2015). Understanding the Impact of Business Complexity on Executive Management Characteristics and Firm Performance. *Journal of Accounting & Finance (2158-3625)*, 15(3).
- Rindfleisch, A. (2020). Transaction cost theory: past, present and future. *AMS Review*, 10(1), 85-97.
- Saldaña, J. (2021). *The coding manual for qualitative researchers*.
- Sampson, T. (2016). Dynamic selection: an idea flows theory of entry, trade, and growth. *The Quarterly Journal of Economics*, 131(1), 315-380.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.
- Shahwan, T. M. (2015). The effects of corporate governance on financial performance and financial distress: evidence from Egypt. *Corporate Governance*, 15(5), 641-662.
- Shanikat, M., & Abbadi, S. S. (2011). Assessment of corporate governance in Jordan: An empirical study. *Australasian Accounting Business and Finance Journal*, 5(3), 93-106.

- Siljanovska, Z., & Shalevska, E. (2019). OECD PRINCIPLES FOR GOOD CORPORATE GOVERNANCE AND THEIR IMPACT ON PROCESS OF STANDARDIZATION. *International Journal*, 34.
- Singh, S., Tabassum, N., Darwish, T. K., & Batsakis, G. (2018). Corporate governance and Tobin's Q as a measure of organizational performance. *British journal of management*, 29(1), 171-190.
- Škrinjar, R., Bosilj-Vukšić, V., & Indihar-Štemberger, M. (2008). The impact of business process orientation on financial and non-financial performance. *Business process management journal*, 14(5), 738-754.
- Sporn, B. (2007). Governance and administration: Organizational and structural trends. In *International handbook of higher education* (pp. 141-157). Springer.
- Suwaidan, M. S., Al-Khoury, A. F., Areiqat, A. Y., & Cherrati, S. O. (2021). The determinants of corporate governance disclosure: the case of Jordan. *Academy of Accounting and Financial Studies Journal*, 25(2), 1-12.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Experimental designs using ANOVA* (Vol. 724). Thomson/Brooks/Cole Belmont, CA.
- Trisnaningsih, S., & Ariadi, D. (2022). Literature Review: Decentralization Analysis in Improving Managerial Performance. *Journal Research of Social Science, Economics, and Management*, 2(5), 884–888-884–888.
- Turley, S., & Zaman, M. (2004). The corporate governance effects of audit committees. *Journal of management and governance*, 8, 305-332.
- Ughulu, E. S., & Igabor, O. T. (2021). Applicability of emergency management theory in the management of Covid-19 health pandemic in Nigeria. *Global Journal of Social Sciences*, 20(1), 87-97.
- Wang, K., & Shailer, G. (2015). Ownership concentration and firm performance in emerging markets: A meta-analysis. *Journal of Economic Surveys*, 29(2), 199-229.
- White, R. E. (1986). Generic business strategies, organizational context and performance: An empirical investigation. *Strategic management journal*, 7(3), 217-231.
- Wieland, J., & Fischer, D. (2020). Transaction cost theory and business legitimacy. In *Handbook of Business Legitimacy: Responsibility, Ethics and Society* (pp. 1147-1167). Springer.

- Williamson, O. E. (1981). The economics of organization: The transaction cost approach. *American journal of sociology*, 87(3), 548-577.
- Williamson, O. E. (1988). Corporate finance and corporate governance. *The journal of finance*, 43(3), 567-591.
- Wu, Y., Frizelle, G., & Efstathiou, J. (2007). A study on the cost of operational complexity in customer–supplier systems. *International Journal of Production Economics*, 106(1), 217-229.
- Yamane, T. (1973). *Statistics: An introductory analysis*.
- Yli-Renko, H., Sapienza, H. J., & Hay, M. (2001). The role of contractual governance flexibility in realizing the outcomes of key customer relationships. *Journal of Business Venturing*, 16(6), 529-555.
- Young, M. N., Peng, M. W., Ahlstrom, D., Bruton, G. D., & Jiang, Y. (2008). Corporate governance in emerging economies: A review of the principal–principal perspective. *Journal of management studies*, 45(1), 196-220.
- Zabojnik, J. (2002). Centralized and decentralized decision making in organizations. *Journal of labor economics*, 20(1), 1-22.

## التأثير المزدوج للامركزية وتعقيد الأعمال على فعالية حوكمة الشركات

هلال نظمات توفيق ربايعة

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### ملخص

توفر هذه الدراسة تحقيقاً تجريبياً شاملاً في التأثيرات الفردية والمختلطة لتعقيد الأعمال (BC) واللامركزية (DEC) على فعالية الحوكمة المؤسسية ضمن سياقات مؤسسية مميزة لسوقين عربيين ناشئين. تستخدم الدراسة منهجية كمية صارمة، حيث حلت عينة من 149 شركة غير مالية (110 من ASE، 39 من PEX) للسنة المالية 2023. تقدم الدراسة مؤشراً جديداً متعدد الأبعاد لتعقيد الأعمال (BCI) استناداً إلى المعيار الدولي لتدقيق للكيانات الأقل تعقيداً (LCE-ISA، 2024)، ودمج الأبعاد النوعية (مثل الهيكل التنظيمي، وطبيعة الأنشطة) والكمية (مثل حجم المبيعات، الأصول الثابتة). يتم قياس CG من خلال مؤشر مركب من أربعة معايير: الإفصاح والشفافية، مجلس الإدارة، حقوق المساهمين، واللجان الدائمة. يتم تقييم اللامركزية من خلال مؤشرات التشتت الجغرافي وتفويض السلطة. خلصت الدراسة إلى أنه في الأسواق الناشئة ذات المؤسسات التنظيمية القوية (مثل الأردن)، تهيمن الضغوط الخارجية على نتائج الحوكمة، بينما في البيئات المؤسسية الأضعف (مثل فلسطين)، يصبح التصميم التنظيمي الداخلي، وخاصة اللامركزية، رافعة حاسمة لتعزيز الحوكمة.

الكلمات المفتاحية: الحوكمة المؤسسية، تعقيد الأعمال، اللامركزية.