

Corporate governance and financial performance: What is the relationship? The case of Moroccan companies listed on the stock exchange



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ABSTRACT

Article History

Received: 27 March 2025

Revised: 7 May 2025

Accepted: 28 May 2025

Published: 24 June 2025

Keywords

Board meetings
Corporate governance
Corporate performance
Moroccan companies
Performance determinants
The composition of the board of directors
The size of the board.

JEL Classification:

G34.

The main objective of this research is to critically examine the relationship between corporate governance and performance and to identify the true determinants of performance. This study attempts to critically examine the quality of corporate governance while analyzing the impact of internal mechanisms on performance in order to verify whether governance actually has an effect on performance. This study aimed to determine a performance-based governance score. The research question was therefore formulated as follows: What are the determinants of "good governance," based on the level of performance, in the context of Moroccan companies? The results indicate that there is, however, a governance mechanism, namely the size of the board of directors, that appears to positively influence performance. The age of the CEO and the number of meetings are not determinants of performance. This result appears to be corroborated by the analysis of significant differences between companies based on their specific characteristics. The practical implications are consistent with providing a tool that could help companies make decisions to better address low-performing individuals.

Contribution/ Originality: In this research, we attempted to critically examine the quality of corporate governance while analyzing the impact of internal mechanisms on performance. To do this, we aimed to determine a performance-based governance score for the Moroccan case.

1. INTRODUCTION

The topic of corporate governance is considered a primary concern for politicians, business leaders, journalists, and researchers (in the fields of economics, management, law, and political science). Indeed, interest in good corporate governance practices has taken on paramount importance. Many countries have implemented codes of good practice.

This growing role was appreciated following the financial scandals triggered in 2002 by: Enron in the United States, France Telecom, and Vivendi Universal in France. The latter were the point of convergence towards the adoption of a more effective governance system while adopting a set of measures. Indeed, the minimization of the opportunism of the leaders and the adoption of value-destroying strategies were the main causes of these failures. This is how the revision of corporate governance appeared essential to weaken the so-called agency costs in order to have an effective governance system.

In this context, Morocco, in turn, was regained by the debate on issues related to corporate governance in the early 1990s, particularly with the reforms affecting the financial markets and the regulatory and institutional framework related to business management. This debate resurfaced with force following the scandals that shook the financial circles of the place in the early 2000s. Despite the concordance of the regulations in force with the rules of good governance, the problem is often posed acutely at the level of the practices of companies in this area. These must be more in line with the approaches of good conduct beyond legal and regulatory constraints.

The definition of governance mechanisms encompasses multiple facets whose interest has arisen since the analysis of [Berle and Means \(1967\)](#) who identified the influence of theoretical advances on their design and the objective of defining a framework for effective governance. In recent years, a significant portion of the literature has been devoted to the study of the links between managers and their shareholders within the framework of a theory that focuses on the corporate governance system ([Jensen & Meckling, 1976](#); [Shleifer & Vishny, 1990](#)).

Indeed, many researches have tested the impact of governance on the performance of companies. They have deduced that an effective corporate governance system contributes to the improvement of performance, which has aroused the interest of economists in this subject and led them to praise its merits. Therefore, our general research theme aims to analyze the corporate governance factors that influence the performance of Moroccan companies. Our research, therefore, attempts to answer the main question: What is the existing relationship between corporate governance and company performance in the Moroccan context?

In this sense, research is increasing to identify the determinants of effective governance. [André and Schiehl \(2008\)](#) state that the literature reveals an association between governance systems and firm performance, but empirical research has not provided conclusive results. The theoretical and empirical ambiguity prompted us to explore this relationship for the Moroccan case.

This research, therefore, constitutes a critical approach to the relationship between corporate governance and performance. Furthermore, it establishes a clear link between the quality of governance and certain characteristics of the company. In doing so, this article is organized into three sections, which are as follows.

The first section is devoted to the description of the conceptual framework of the corporate governance system while highlighting the origin of this concept as well as the causal effect between the financial performance of companies and the governance system. The second section addresses the issue of the methodology we have adopted. The third section focuses more on the empirical study, which consists of an analysis of the results of this research on financial performance as well as the governance system.

2. LITERATURE REVIEW

2.1. *The Concept of Corporate Governance*

The authors define corporate governance as the set of mechanisms whereby capital providers guarantee the profitability of their actions. These authors focus their conception of governance on the protection of shareholders as the exclusive beneficiaries of value. They approach governance in terms of control over managers and the maximization of shareholder value.

Furthermore, [Pastré \(1997\)](#) considers corporate governance as “the set of operating and control rules that govern, in a given historical and geographical framework, the life of companies”. Similarly, [Charreaux \(2000\)](#) suggests a broader definition. He defines corporate governance as the set of mechanisms that govern the behavior of managers and delimit their discretionary latitude. It is a set of standards that aim to homogenize the utility functions of managers and shareholders. It thus represents “the set of organizational mechanisms that have the effect of delimiting the powers and influencing the decisions of managers, in other words, that “govern” their conduct and occupy their discretionary space”. According to [Charreaux \(2000\)](#), “(...) the primary role of a governance system is defined as that of aligning the ability to seize opportunities and the appropriation of the gains

that result from them. In other words, it is necessary to discipline (control and incentivize) the parties involved so that the potential for value creation is best realized" (Caby & Hirigoyen, 2000).

According to Caby and Hirigoyen, corporate governance is "made up of the network of relationships linking several parties..." Shareholders, managers, and the board of directors are among the most active and decisive "stakeholders" within the company and in the literature.

- Shareholders: They are the holders of power in the sense of Mitchell, Agle, and Wood (1997) and are called upon to allocate it partially or totally to the corporate officers. By getting rid of management, they transfer to the manager the virtual right of ownership in exchange for receiving remuneration.
- Managers: They are linked to the shareholders by a contract and are called upon to exercise the powers allocated by the latter to maximize their interests.
- The board of directors: It is called upon to evaluate and ratify strategic decisions and to control the exercise of power and the managerial latitude of the directors.

Many definitions have been attributed to corporate governance; we borrow the one put forward by the OECD, since it seems both relevant and understandable: "*Corporate governance encompasses the formal and informal, public and private institutions of a country that together govern the relationships between those who run companies (Insiders) and all those who invest resources in companies operating in the country. These institutions include, in particular, company law, stock market law, accounting rules, business practices, and ethics in force in a country.*"

But, more than a list of actors and institutions, understanding the concept of corporate governance is essential to grasp its purpose. This purpose is based on three axes, regardless of the country.

- Facilitate and stimulate business performance by establishing and maintaining an incentive system that encourages managers to maximize the company's operational efficiency, return on assets, and long-term productivity gains.
- Restricting managers' abuse of power over corporate resources – whether such abuse takes the form of misappropriation of corporate assets (theft or diversion of corporate resources for the benefit of particular interests) or significant waste of corporate resources (so-called "agency problems") – which generally result from managers' tendency to serve themselves.
- Provide the means to monitor the behavior of managers in order to ensure corporate accountability and protect the interests of investors and society at the lowest cost against abuses by corporate managers.

2.1.1. Agency Theory

Jensen and Meckling developed agency theory, which considers the multiplicity of categories of participants in the organization and the divergences of interests that result from this. This theory defines the relationship between a principal (the principal) and an agent (the agent) as a contract in which one (or more) persons use the services of another person to perform any task on their behalf. According to these authors, three reasons have been proposed to explain the divergence of interests between managers and shareholders:

- A first source of conflict arises from the fact that managers manage the company in a way that is not aligned with the interests of shareholders, that is, by maximizing their own utility, without meeting the expectations of shareholders, who aspire to maximize the value of the firm. Managers thus grant themselves benefits in kind that further burden the company's performance. Additionally, managers try to maximize investments whose specific nature depends on their presence in the company, which allows them to optimize their utility measured in terms of wealth, notoriety, or non-pecuniary benefits.
- Secondly, managers, unlike shareholders who invest in financial capital, put their human capital into play. Thus, the behavior of the manager with regard to risk differs from that of the shareholder since the latter is less sensitive to the variability of results and the risk of bankruptcy. The risk attached to the human capital of

managers is not diversifiable, while the risk of shareholders can be minimized thanks to portfolio diversification strategies.

Indeed, if the owner bequeaths the usufruct of his property right to the company, retains the residual claim, and seeks to maximize the value of the firm, the manager, for his part, rents his property right on his work in exchange for remuneration. The efforts that are deployed by managers in favor of the company, if they are beneficial to shareholders, involve a disutility for them (Charreaux, 1997). In addition, and given that the attitude of managers towards time and risk is different from that of shareholders, they will seek by all means to increase the advantages that they derive from their position. Thus, the agency relationship does not only consist of entrusting part of one's property rights, it also invites one to distrust one's co-contractor. Can we say that the "suspicion of opportunism," the heart of the agency theory model, is the driving force behind a process of suspicion and surveillance, intended to circumscribe the agency problem? At this level, the question of opportunism deserves to be asked.

It should also be noted that the opportunism of the manager to the detriment of the owner allows him to maximize the direct benefits in kind that he obtains thanks to the company. It is in this context that Morck, Shleifer, and Vishny (1990) noted that the manager engages in numerous acquisitions from which he can derive personal benefits, even if the consequence is a decrease in the value of the firm. The manager therefore increases his profit and reduces the residual profit of the owner.

2.1.2. *The Theory of Transaction Costs*

The emergence of the managerial society is a consequence of the separation between production and management on the one hand and ownership on the other. This separation results in a weakening of the exercise of certain attributes: fructus and abusus. Thus, we are witnessing a weakening of private property since the use of the right is not exercised by the owner but by the manager.

The mitigation of ownership originates from the requirements of management capacity. Indeed, according to the transactionalist analysis, it is necessary to accumulate experience, know-how, or knowledge that we can characterize as a specific asset described "... in reference to the degree to which an asset can be redeployed for another use or by other users without loss of its productive capacity" (Williamson, 1985).

Which distinguishes the direct and indirect costs that characterize the relationship itself from the governance costs, which are the costs incurred to adapt the relationship.

The first stream of empirical work has examined the impact of a particular event on the effectiveness of a well-defined mechanism, such as the increase in the number of external directors on the board of directors (Rosenstein & Wyatt, 1990). If the event results in an increase in the price of shares, then the mechanism in question serves to improve performance. In the same spirit, other studies examine the role of poison pills (Malatesta & Walkling, 1988) and golden parachute contracts (Lambert & Larcker, 1985).

A second stream seeks the relationships that may exist between performance and the implementation of one or more control mechanisms. Several studies Demsetz and Lehn (1985), show that decisions regarding the use of certain control techniques, such as ownership of internal directors and the proportion of external directors, are made within the firm. Indeed, Demsetz and Lehn (1985) demonstrate that such decisions are optimal when the value of the firm is maximized. In this context, a mechanism is used until the marginal cost equals the marginal profit.

However, the decision on the use of other mechanisms such as the labor market and institutional ownership is made by external parties whose actions have effects on the value of the firm, limited by the actions of others. Given the existence of external effects, the mechanisms should be chosen in order to maximize the value of the firm.

A third stream tests actions based on governance that can explain the performance differential. For example, the study of Hermalin and Weisbach (1998) shows that weak performance results in the dismissal of some directors and the appointment of others in their place.

In this context, a study also reveals that a higher turnover of directors can be explained by a decrease in performance. [Rosenstein and Wyatt \(1990\)](#) highlight that a change in the board of directors affects the value of the firm. Indeed, the announcement of hiring new external directors results in an excess return. Gilson, in a study devoted to the financial distress of firms, shows that firms increase the turnover of directors when the firm's performance is weak. Cotter et al. show, for their part, that firms whose boards of directors include a majority of external directors have a return that exceeds by 20% the return of other firms.

Moreover, the theories developed recently highlight the existence of important and determining factors of the firm's performance. Among these factors, we cite information asymmetry, incomplete contracts, and internal factors such as the organization of the firm and its governance structure. Indeed, agency problems, transaction costs, and the specificity of investments can be determining and explanatory factors of the contribution of the internal organization and governance structures in determining the level of performance.

Therefore, the question that arises with ambiguity is the following: Why do firms record different levels of performance?

To do this, in this section, we will highlight the role of governance in improving performance. Indeed, we will focus on three mechanisms, namely: the board of directors, the structure of, the rights of shareholders, and the characteristics of the manager.

Moreover, theories developed recently highlight the existence of important and determining factors of the firm's performance. Among these factors are information asymmetry, incomplete contracts, and internal factors such as the organization of the firm and its governance structure. Indeed, agency problems, transaction costs, and the specificity of investments can be determining and explanatory factors of the contribution of the internal organization and governance structures in determining the level of performance. So, the question that arises ambiguously is: *Why do firms record different levels of performance?*

In any case, this section emphasizes the crucial role of governance in improving performance. Of course, the main focus is on four mechanisms, namely: board composition, board size, age of the manager, and number of meetings.

2.2. The Causal Effect between Financial Performance and the Governance System

2.2.1. Company Size and Performance

As for [Lipton and Lorsch \(1992\)](#) "although the control capacity of the board of directors increases with the number of directors, the advantage can be offset by the cost of communication and decision-making associated with the large size of this board. In the same vein, [Kiel and Nicholson \(2003\)](#) consider that the size of the board of companies does not constitute an obstacle to a system of governance. [Adams and Mehran \(2003\)](#) the relationship between the size of the board and the performance of the company controlled by Tobin's Q from a sample of banks between 1959 and 1999.

[Wu \(2000\)](#) examined the changing trend of board sizes during the period 1991-1995. The researcher concluded that board size decreased proportionally during this period, and this decrease can be partly explained by the pressure of active investors such as CALPERS. Market participants seem to believe that smaller boards exercise better control over management than larger boards. [Bhagat and Black \(2002\)](#) found a negative relationship between Tobin's Q and board size. For example, [Mak and Kusnadi \(2005\)](#) studied the impact of governance systems on firm value in Singapore and Malaysia. Using Tobin's Q, they found an inverse relationship between board size and firm value in different countries. These countries have all recently adopted good governance codes, and although these emphasize the need for an appropriate board size, these codes do not specify a particular size.

Still, Andres et al also analyze the effect of firm size and composition on firm value. Using a sample of 450 non-financial firms from ten Western European and North American countries, they show a negative relationship

between firm value and board size. Their results are consistent with previous work that does not support large boards because of poor coordination, flexibility, and communication.

Beiner, Drobetz, Schmid, and Zimmermann (2003) did not find a significant relationship between firm size and value. They suggest that Swiss companies, on average, choose the number of directors in an optimal way. However, board size in the Australian context, where boards are generally smaller, has no influence on performance (Bonn, Yoshikawa, & Phan, 2004).

Wintoki (2007) used the GMM method to estimate the relationship between performance (Measured by ROA) and firm size using panel data consisting of 6000 firms between 1999 and 2003. The author does not find a significant relationship between board size and firm performance. Likewise, Beiner et al. (2003) found no significant relationship between firm size and value. They suggest that Swiss firms, on average, choose the number of directors optimally. Unlike non-financial firms, the authors find that banks with large boards are not the worst performers.

Brown and Caylor (2004) show that firms with board sizes between 6 and 15 directors have high stock returns and higher profit margins than other firms. While Leblanc and Gillies (2005) find that a size between 8 and 11 directors would be optimal.

In summary, a large board can certainly reduce uncertainty thanks to the collective knowledge of its members and thus benefit from each director's experience. However, having a large number of directors can lead to communication and coordination problems, and consequently, conflicts of interest may arise, making it difficult to reach a consensus.

Hypothesis 1: There is a positive relationship between firm size and firm performance.

2.2.2. Board Composition and Performance

John and Senbet (1998) see that the independence of a board of directors is linked to its composition. Indeed, there are two types of directors. Internal directors (Insiders), who, in addition to sitting on the company's board of directors, are involved in management, differ from external directors (outsiders), who do not participate in any activities within the firm. According to John and Senbet (1998), the large number of external directors reinforces the degree of independence of the control bodies.

In this sense, and following the empirical results carried out by Rosenstein and Wyatt (1990) and Morck and Nakamura (1999), it seems that the degree of board independence and the improvement of performance are divergent. Nevertheless, other studies highlight the absence of a significant correlation between the two parameters mentioned (Fosberg, 1989; Yermack, 1996). The absence of such a relationship can be explained in two ways.

- Board composition is affected by financial performance. Firms tend to react automatically to deterioration in performance by adding outside directors to the board. Research shows that hiring independent directors is associated with an increase in stock price (Rosenstein & Wyatt, 1990).
- The benefits of hiring an outside director are easier to detect when the latter votes and gives his opinion on very specific decisions, such as those relating to an acquisition or the replacement of the manager. The performance of the company, which is strongly linked to the quality of management, is less sensitive to the composition of the board of directors.

Hypothesis 2: There is a positive relationship between board size and firm performance.

2.2.3. Council Meetings

The literature remains too timid regarding the frequency of board meetings and the company's performance. To this end, codes of good practice emphasize the need to organize several board meetings throughout the year to better fulfill their responsibilities. The British *Combined Code* recommends that the board meets regularly and frequently enough to ensure effective control. According to the *Combined Code*, annual reports must include the

number of board meetings as well as those of committees. Additionally, the code's recommendations stipulate that only directors are authorized to attend meetings.

From Jensen's perspective, board meetings are not necessarily useful because the little time that directors have would be wasted on routine tasks and not on the purpose of monitoring the management of the company. In another study, Linck, Netter, and Yang (2008) explored the impact of the Sarbanes-Oxley Act on the frequency of board meetings as well as audit, compensation, and nominating committee meetings. The authors found no significant change in the frequency of committee meetings after the law was implemented.

Yet, an opposing view by Jensen (1993) assumes that board meetings are not necessarily useful because the little time available to directors would be wasted on routine tasks and not for the purpose of monitoring the management of the company.

Hypothesis 3: There is a positive link between the number of board meetings and firm performance.

2.2.4. The Age of the Leader

Empirical studies on the link between managerial characteristics and firm performance remain rare. In the United States, the literature is mainly devoted to the definition of the corporate elite, particularly the "core elite" (Aveni & Kesner, 1993; Useem & Karabel, 1986), to a description of the leaders in place or of network effects.

In this context, Schatt and Allemand (2010) analyzed the impact of the age of the manager, taking into account simultaneously his experience, as well as the ownership structure, which determines both the manager's incentives and his constraints in decision-making. Such a study remains relatively rare in the literature. Within the same vein, Bertrand and Schoar (2003) looked at two characteristics of managers to explain their decisions: obtaining a Master's degree in Business Administration (Training) and their age (Experience).

Three main streams of literature can be used to justify the different impact of the "elitist" training of managers on the performance of firms: the theory of upper echelons, which is concerned with the characteristics of managers, in particular their training, to explain their strategic choices; the "Resource-Based View," which focuses on the key factors of business success, including managerial human capital; and, finally, the sociological analysis of networks, which analyzes the beneficial effects resulting from networks of managers (social circles, or the "small worlds of the elite").

Training, reflecting the cognitive base of the leader, would act, in the same way as other idiosyncrasies, on his perception and interpretation of the situations he is confronted with. Considering that the elitist French education system, for example, allows, on the one hand, to select students with solid analytical and synthesis skills, and on the other hand, to offer high-level training in the grandes écoles, it is then thought that leaders from the grandes écoles should be able to make better decisions than leaders who have not been able to follow the same training path.

Access to certain information can also be facilitated (Haunschild & Beckman, 1998) as well as the influence exerted on regulations concerning the activities of companies, to the extent that managers from the grandes écoles have often rubbed shoulders with personalities from the political and economic world.

These three streams of literature, therefore, allow authors of this study to suggest that the elitist training of the grandes écoles, followed by certain managers, should be considered synonymous with superior performance for the companies they manage because their capacity for analysis and synthesis is superior (rare and imperfectly imitable skills), and that attending the grandes écoles facilitates access to certain social networks.

The results published by d'Aveni (1990) and Bertrand and Schoar (2003) attempt to confirm the positive impact of executive training on company performance. According to d'Aveni (1990) based on a sample of 114 American companies between 1972 and 1982, failed companies with leaders from elite backgrounds were less likely to file for bankruptcy. Furthermore, Bertrand and Schoar, examining the impact of managerial characteristics on performance from a sample of 800 Forbes CEOs between 1969 and 1999, noted that economic profitability (ROA) was higher in companies where the leader held an MBA.

Hypothesis 4: The age of the manager constitutes a “good practice” of governance that has a significant impact on the firm's performance.

3. PRESENTATION OF THE FIELD RESEARCH METHODOLOGY

This section is dedicated to the research methodology implemented during this research work. As part of our work, we opted for a statistical study that involves testing two statistical models. Indeed, these two models will allow us to demonstrate the impact of corporate governance on financial performance.

The first part of our empirical research involves collecting data from the Casablanca Stock Exchange website, referring to various activity and annual reports.

As for the second part, we will test the causal effect between corporate financial performance by using two statistical models through the linear regression method.

In the third part, we will examine the results obtained; at the same time, we will try to either confirm or reject the hypotheses formulated previously.

3.1. The Methodological Choice

Authors of the present research opted for a statistical study that involves testing two statistical models. These models will enable us to demonstrate the impact of corporate governance on financial performance. The first part of this empirical research focuses on collecting data from the Casablanca Stock Exchange website and reviewing various annual activity reports.

The year of the period of our study is chosen based on the publication of the first code of good governance practices, in order to measure the impact of the latter on the governance system of Moroccan private companies, especially those listed on the Casablanca Stock Exchange.

3.2. Sample and Data Collection

The empirical analysis focuses on Moroccan firms. The composition of the sample is based on twenty-nine (29) Moroccan companies listed on the Casablanca Stock Exchange. The data for the study were collected manually from different sources of information available on the Casablanca Stock Exchange website, as well as certain activity reports published on the websites of the companies in question.

The first year of this study period is selected based on the publication of the first code of good governance practices in 2021, to measure its impact on the governance system of Moroccan private companies, especially those listed on the Casablanca Stock Exchange. It should be noted that only companies with available financial data (performance measures and governance data) were included. The architecture of this sectoral nomenclature is composed in Table 1 as follows.

Table 1. The distribution of firms in our sample according to sector of activity.

Sectors	Companies
Building	LAFARGE
	SONASID
	CEMENTS OF MOROCCO
Health	AFRIC INDUSTRIES SA
	AKDITAL
Telecommunications	ITISSALAT AL MAGHRIB
Insurance	Wafa Assurance
	AFMA SA
Real estate	CGI
	COLORADO
Agri-food	Dairy plant
	COSUMAR

Sectors	Companies
	CARTIER SAADA
	DARI COUSPATE
Community services	LDEC
	COMMUNAL EQUIPMENT FUND
Banks	ATTIJARIWAFABANK
	BANK OF AFRICA
	PEOPLE'S CENTRAL BANK
	MOROCCAN BANK FOR COMMERCE AND INDUSTRY
Distributors	AUTO HALL
	AUTO NEJMA
	ENNAKL AUTOMOBILES
	LABEL LIFE
Transports	NATIONAL RAILWAY OFFICE
Drinks	OULMES MINERAL WATER COMPANY
	MOROCCAN DRINKS COMPANY
Chemistry	NATIONAL SOCIETY FOR ELECTROLYSIS AND PETROCHEMICAL
	TAQA MOROCCO

3.3. Definitions and Measurements of Variables

The variables used can be divided into corporate governance variables and variables related to firm performance.

3.3.1. The Dependent Variable: Company Performance

Performance, in its various dimensions, is the endogenous variable on which the other variables intervene in the authors' estimates. The main aim is to examine the effects of the explanatory variables on the company's performance. In short, two types of performance measurement were taken into account in our study, such as stock market performance assessed by the Return on Assets and the Return on Equity. The analysis of these two types of performance is important since this difference allows academics to consider the different characteristics of the company.

A- ROA (Return on Assets)

This variable represents the profitability of invested capital and expresses the capacity of this capital to generate a certain level of operating profit. This measure has been used by a very large number of authors, such as Daines (2004); Adams and Santos (2005) and Eisenberg, Sundgren, and Wells (1998).

Here is the measure retained by this study for the calculation of ROA East.

$ROA = \text{Net Profit} / \text{Equity}$.

B-ROE (Return on Equity)

It represents the return on equity and expresses the capacity of the capital invested by shareholders to generate a certain level of net profits. Several authors have also used this performance measure, such as Brown and Caylor (2004) and Lehman and Weigrand (2000). The measure chosen by the researchers of this study to measure ROE is as follows.

$ROE = \text{Operating Profits} / \text{Total Assets}$

3.3.2. Independent Variables: Corporate Governance Variables

The variables related to corporate governance were defined and operationalized in light of the literature review on the subject and the rating criteria used by rating agencies in this area.

It is worth noting that Morocco does not have a corporate governance index for the authors of this study refer to a Canadian study on the governance of listed Canadian companies, which formulated a governance index taking into account the main determinants of governance. This research aimed to determine the governance of the

company based on variables available to the authors. However, due to a lack of information, the authors were unable to obtain certain data, such as the remuneration of managers. Therefore, the following variables have been retained.

- The composition of the board of directors (TCA).
- The age of the manager (AGE).
- The size of the board (T).
- Board meetings (BM).

These four characteristics constitute the four sub-indices of this study's overall index of governance. These components reflect the companies' criteria for answering specific questions.

The following section explains and presents each sub-index separately.

- The Composition of the Board of Directors (TCA)

A first continuous variable (SIZE) makes it possible to determine the number of directors on the board of directors.

- Age of the Leader (AGE)

The age of a company is a variable that can significantly affect its performance. Generally, this variable is expressed by the number of years the company has been active or the duration the manager has held this position.

- Company Size (T)

Firm size is also considered a determining variable in explaining performance.

- Board Meetings (BM)

The number of board meetings of the firm reflects the debt burden borne by the company, which can affect the discipline of the managers.

All the adopted variables are classified in Table 2, presented.

Table 2. Summary table of study variables.

Variables	Measure
<i>ROE (Return on equity)</i>	Net profit/Equity
<i>ROA (Return on assets)</i>	Operating profits / Total assets
The composition of the board of directors (TCA)	TCA = Number of people on the board of directors
Age of the leader (AGE)	AGE = Log (Number of years)
The size of the company (T)	T = Log (DU Turnover)
Board meetings (BM)	BM = Log (Number of meetings)

3.4. Analysis Model

In order to meet the explanatory requirements of the methodology, linear regressions by least squares were implemented. Based on the different hypotheses formulated and the related explanatory and control variables, the models tested were as follows.

$$\text{Model 1 : } ROE = cte + \alpha_1 AGE + \alpha_2 T + \alpha_3 BM + \alpha_4 TCA + \varepsilon_i$$

The first regression model examines whether there is a linear relationship between the level of performance, calculated by the ROE indicator, and the determinants of corporate governance, which include the composition of the board of directors, the size of the company, the number of meetings, and the age of the company.

$$\text{Model 2 : } ROA = cte' + \alpha_1' AGE + \alpha_2' T + \alpha_3' BM + \alpha_4' TCA + \varepsilon_i$$

Or

TCA: The composition of the board of directors;

T: The size of the board of directors.

AGE: The age of the leader.

BM: Number of meetings.

C: The constant.

ε : The error term.

4. DISCUSSIONS AND ANALYSIS OF RESULTS

The first part will test the causal effect between corporate financial performance by using two statistical models through the linear regression method; whereas the second part will examine the results obtained. At the same time, it will try to either confirm or reject the hypotheses formulated previously.

From the above-mentioned data, the researchers of this study seek to explain the financial performance. For this, they use the multiple regression method. It should be noted that the calculations and results of the multiple regression were carried out using SPSS software, which yielded the following results.

What follows, then, is the examination of the correlation between the variables in this study, followed by an analysis of the different results of the two statistical models.

4.1. The Statistical Results

The correlation of the variables will be tested, R - two coefficient, the variance, and finally the statistical model adjustment.

Table 3. Correlations.

Variables		TCA	DET	T ₋	AGE	ROE	ROA
TCA	Pearson correlation	1	-0.083	0.114	0.289	0.418	-0.212
	Sig. (Unilateral)		0.416	0.385	0.225	0.132	0.292
	N	9	9	9	9	9	9
BM	Pearson correlation	-0.083	1	-0.428	0.032	-0.082	0.155
	Sig. (Unilateral)	0.416		0.125	0.468	0.417	0.345
	N	9	9	9	9	9	9
T	Pearson correlation	0.114	-0.428	1	0.480	-0.417	-0.687 *
	Sig. (Unilateral)	0.385	0.125		0.096	0.132	0.020
	N	9	9	9	9	9	9
AGE	Pearson correlation	0.289	0.032	0.480	1	-0.196	-0.235
	Sig. (Unilateral)	0.225	0.468	0.096		0.307	0.271
	N	9	9	9	9	9	9
ROE	Pearson correlation	0.418	-0.082	-0.417	-0.196	1	0.212
	Sig. (Unilateral)	0.132	0.417	0.132	0.307		0.292
	N	9	9	9	9	9	9
ROA	Pearson correlation	-0.212	0.155	-0.687 *	-0.235	0.212	1
	Sig. (Unilateral)	0.292	0.345	0.020	0.271	0.292	
	N	9	9	9	9	9	9

Note: *. The correlation is significant at the 0.05 level (one-tailed).

4.1.1. Correlation Coefficients

It can be discerned from Table 3 that there is a very high and significant correlation between the number of meetings and age, as well as between the size of the company and the size of the board of directors. Attention should be paid to the relationships between the independent variables. If the correlation between two of these variables were 0.9 (or – 0.9), there would be a significant risk of multicollinearity. Researchers of this study would have introduced two variables that measure roughly the same thing.

According to the statistical information output, the dependent variable **ROA** is significantly correlated at the 5% threshold with the size of the board of directors, and the variable **ROE** is correlated with debt.

Indeed, it is first worth checking whether the first step of the model explains more significant variability. Then, it is of equal importance to ensure that all the variables introduced contribute to significantly improving the variability explained by the final model.

4.1.2. Coefficient of Determination R-Two

The model is considered significant, the model summary table determines the effect of each block of variables. Table 4 shows the cumulative R² at each step of the model (R-two column) and the specific impact of each block (R-two variation column).

Table 4. Summary of models.

Model	R	R-two	Adjusted R-two	Standard error of the estimate
1(ROE)	0.684 ^a	0.467	-0.065	0.25061
2(ROA)	0. 749 ^a	0.561	0.121	0.1216184

Note: a. Predicted values: (Constant), DET, AGE, TCA, T.

Table 4 has several beneficial information. First, the value of the multiple correlation (R) corresponds to the clustering of the points in the simple regression. Second, it represents the strength of the relationship between the dependent variables and the combination of the independent variables of each model cited after.

The R-squared calculated with SPSS software is 0.467 for ROE and 0.561 for ROA. The four explanatory variables therefore explain 46.7% of the variation in ROE performance and 56.1% of ROA. The coefficient of multiple determination tends to increase with the number of explanatory variables. To overcome this drawback, an adjusted coefficient of determination is calculated, which takes into account the number of explanatory variables (p) and the sample size (n). The adjusted R-squared is therefore more appropriate for comparing explanatory variables. The calculated adjusted R-squared is -0.065 for ROE and 0.121 for ROA. The four variables do not explain the variation in performance, especially for ROE.

4.1.3. Analysis of Variance

The purpose of analysis of variance is to assess the quality of the adjustment; it involves carrying out a global test on all the explanatory variables.

Table 5. "ANOVA" variance.

Model1		Sum of squares	ddl	Mean squares	D	Sig.
1	Regression	0.220	4	0.055	0.877	0.549 ^a
	Residue	0.251	4	0.063		
	Total	0.472	8			
ANOVA ^b						
Model2		Sum of squares	ddl	Mean squares	D	Sig.
1	Regression	0.075	4	0.019	1.275	0.410 ^a
	Residue	0.059	4	0.015		
	Total	0.135	8			

Note: a. Predicted values: (Constant), TCA, BM, AGE, T.

b. Dependent variable: ROE.

The hypotheses to be tested are.

H0: $\alpha_1 = \alpha_2 = \alpha_3 = \alpha_4$.

H1: At least one of the coefficients α_i is different from zero.

Table 5 presents statistics (D=1.275 for ROA, D=0.877 for ROE) that largely exceed the critical value read from the Fisher law table at 5 and 19 degrees of freedom, for a significance threshold of 5%. By comparing the associated significance, the authors of this study reach the same conclusion that at least one of the four explanatory variables significantly explains the financial performance.

4.2. Model Adjustment

The model checks whether each of the four explanatory variables significantly explains financial performance.

Table 6. The coefficients.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		HAS	Standard error	Beta		
1	(Constant)	1.533	0.657		2.334	0.080
	BM	-0.258	0.391	-0.256	-0.660	0.546
	AGE	-0.141	0.069	-0.900	-2.047	0.110
	T	-0.118	0.185	0.265	0.640	0.557
	TCA	-0.011	0.019	-0.207	-0.594	0.585
Coefficients						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		HAS	Standard error	Beta		
2	(Constant)	1.692	1.353		1.251	0.279
	BM	-0.536	0.806	-0.284	-0.665	0.542
	T	-0.167	0.142	-0.568	-1.172	0.306
	AGE	-0.043	0.380	-0.051	-0.112	0.916
	TCA	0.049	0.040	0.473	1.231	0.286

Note: a. Dependent variable: ROA.
TCA: The composition of the board of directors.
T: The size of the company.
AGE: The age of the leader.
BM: Number of meetings.

Table 6 shows point estimates and confidence intervals are provided by SPSS software. The multiple regression model estimated by least squares is found in the table identified by the term "coefficients", in the second column titled "unstandardized coefficients" and reads as follows.

ROA model: $Y_1 = 1.533 - .141AGE - .118T - .258 BM + .011 TCA$.

ROE model: $Y_2 = 1.692 - .536 BM - .167 T - .043 AGE + .049 TCA$.

4.3. Analysis of the Results

From this data, the authors of this study aim to explain financial performance using four variables. To achieve this, the multiple regression method was employed. The calculations and results of the multiple regression analysis were conducted using SPSS software, which provides the results below.

At first glance, it is obviously noted that these results can be explained primarily by the fact that the authors' estimates are of the "Cross-section" type, that is, based on a sample of different companies for a given period. The second point is that performance is a multidimensional variable. It is therefore very difficult to find and integrate all its determinants into a single model. It is noted, then, that according to the two estimates, governance does not have an effect on financial performance. Indeed, the determinants of corporate governance are not significant in the two models. Therefore, the general hypothesis is not verified.

The coefficient of the variable "the composition of the board of directors" shows the expected positive sign for (ROA and ROE), and it appears statistically significant at the 5% threshold. This observation suggests that the size of the boards of directors is one of the structural characteristics likely to influence company performance; therefore, the size of the board has a positive effect on financial performance. Consequently, it seems possible to maintain hypothesis H1.

In this context, several laws have been established regarding governance to enhance the effectiveness of the board of directors, including the requirement to have a board composed mainly of independent members. However, the findings of this study indicate that age has a negative and significant impact on performance. This finding is consistent with that of Colonel (2001) who suggests that an elderly manager can have a negative impact on the performance of the firm. This result is also confirmed by Westphal (2002) and Black and Gillies (2004).

The figures in the table show that the AGE variable is not significant for the financial performance measures (-.043 for ROE and -.141 for ROA). Therefore, it is impossible for us to decide from these results on the effect of the AGE variable on the performance of Moroccan companies. This result is not consistent with the authors'

expectations and with the results found by other authors and in other contexts. Ben Cheikh and Zarai (2007) for example, find that, for the Tunisian context, the age variable significantly influences (at the 1% threshold) and positively affects the accounting performance (ROA) of companies. Their result was also consistent with the results of Cameron and Whetten (1981).

The firm size variable T is considered negative in both models using ROE (-.167) and ROA (-.011). This is consistent with research suggesting that board size has a positive effect on financial performance. Many authors have found similar results to those of Durnev and Kim (2003) and Bohren and Odegaard (2001) who find, in different contexts, a positive concordance between board size and performance. This addition is due to the role of control carried out by large companies. Thus, the study by Adjaoud, Zeghal, and Andaleeb (2007) shows that the variable size of the board has a positive and significant impact on firm performance.

The variable number of board meetings (BM) is significant at the 5% level in both equations, which supports studies indicating that the number of meetings has a negative effect on financial performance. A study that was supported by André and Schiehl (2004) who found negative and significant coefficients at the 1% level. The number of board meetings is therefore a variable that is likely to reduce company performance. Moreover, this result is refuted by that of Peter, Young, and Schapiro (2005).

5. CONCLUSION

The regression shows that there is no significant relationship between governance and performance. Indeed, the findings of this study indicate that there is nevertheless a governance mechanism, which is the size of the board, that seems to positively influence performance. The size and the number of meetings are not determining factors of performance. This result appears to be supported by the analysis of the significant differences that exist between companies at the level of their own characteristics.

This article aims to clarify good practices of Moroccan corporate governance while basing itself on financial performance. The interest that prompted us to understand this work is twofold. Indeed, in recent decades, the word corporate governance has attracted the attention, more than ever, of business leaders, politicians, researchers, and investors. The latter have found a free material in order to draw their research themes and praise the merits of governance. The field of research relating to governance does not lack continuous production of articles and publications enriching this field and claiming that it improves the performance of companies and conveys a good image to investors.

In our opinion, we, the authors of this study, believe that the issue of governance is merely a fad because it is mainly used by firms to convey a certain image (signal) and respond to pressure from the media and institutions. At the same time, we cannot deny the importance of governance.

Due to a lack of information, we were not able to collect all the data necessary to test the other hypotheses, so in this case, we will be content with the studies and analyses carried out by researchers in the field.

It should be noted that the determinants of governance are not limited to the data mentioned in the table above, but we can also incorporate the remuneration of the manager, which constitutes an essential variable and has an important dimension in measuring corporate governance. However, since the remuneration of the Chairman and CEO remains a confidential variable that the board of directors cannot disclose, it could not be integrated into this study. But if this variable were available, we would strongly note that it impacts performance because of the study conducted in the Australian context, Shleifer and Vishny (1990) undertook a study of 150 of the largest Australian companies and concluded that there was a positive link between high remuneration and performance. The authors argue that excessive remuneration policies for managers are not necessarily effective in encouraging managers to perform better.

Now, the track that remains to be further developed is the following: Has corporate governance in Morocco achieved its expected results in light of the code of good governance practices? How can we raise awareness among institutional investors of the growing importance of governance?

Funding: This study received no specific financial support.

Institutional Review Board Statement: Not applicable.

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Data Availability Statement: Upon a reasonable request, the supporting data of this study can be provided by the corresponding author.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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