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The Impact of Corporate Governance on the Cost of Equity Capital: The Moderating Role of National Culture

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Abstract:

Purpose: *This study investigates the influence of corporate governance on the cost of equity capital in Tunisian listed firms, with a particular emphasis on the moderating role of national culture.*
Design/Methodology/Approach: *Using panel data from Tunisian listed firms over the period 2007–2016, we employ a multilevel empirical framework to examine the direct effect of corporate governance on the cost of equity capital and the moderating impact of national culture. The cost of equity capital is estimated using the Capital Asset Pricing Model (CAPM), while governance and institutional variables are constructed from firm-level and country-level indicators.*
Findings: *The results reveal that corporate governance practices in Tunisia remain relatively weak and constrained. Furthermore, national culture exerts a detrimental moderating effect on the relationship between corporate governance and the cost of equity capital, weakening the expected governance-related reductions in equity financing costs.*
Practical Implications: *These findings underscore the need for policymakers, regulators, and firms to strengthen corporate governance mechanisms while accounting for the broader cultural and institutional environment. Improving governance effectiveness, in tandem with institutional reforms sensitive to national cultural characteristics, may contribute to lowering the cost of equity capital for Tunisian listed firms.*
Originality/Value: *This study contributes to the literature by integrating national culture into the corporate governance–cost of equity capital nexus within an emerging market context. By adopting a multilevel approach, it provides novel empirical evidence on how cultural and institutional factors shape the effectiveness of corporate governance in reducing equity financing costs in Tunisia.*

Keywords: *Cost of capital equity, corporate governance, national culture, moderation, CAPM, institutional quality.*

JEL Classification: *G30, G32, G34, Z10, O16.*

Paper type: *Research article.*

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1. Introduction

The cost of equity capital is a critical issue for both investors and corporate leaders, as it directly affects firm valuation, investment decisions, and long-term performance (Arhinful *et al.,* 2024). For many companies, equity capital remains a primary source of external financing, making its cost a critical metric for treasurers to compare with debt financing (Gang and Hongrui, 2025; Harold Bierman, 2010; Hoang *et al.,* 2022; Hsiao *et al.,* 2024; Mao *et al.,* 2024; Pagkalou *et al.,* 2024).

The cost of equity capital is defined as the return expected by shareholders in exchange for bearing investment risk, the cost of equity capital rises with perceived uncertainty (Nurcahyono *et al.,* 2023). Over the recent years, both practitioners and academics have increasingly focused on how corporate governance practices influence this cost, recognizing that robust governance can enhance transparency (Bhuiyan and Hu, 2025; Gang and Hongrui, 2025), reduce agency conflicts (Bhuiyan and Hu, 2025; Fauver and McDonald, 2015), and ultimately lower the risk premium demanded by investors (Gang and Hongrui, 2025).

While the theoretical link between governance quality and shareholder wealth is well established (Bui and Krajcsák, 2023; Cassar *et al.,* 2024), empirical evidence remains mixed, particularly in emerging markets. Stewardship theory suggests that effective governance should enhance firm value and reduce financing costs (Matthias and Mattias, 2016), yet the specific mechanisms and contextual factors at play are not fully understood.

Notably, the Tunisian context has received limited attention, despite its unique institutional environment and evolving capital market. This gap is especially relevant given the growing recognition that governance effectiveness is not universal, but rather shaped by local norms, regulatory frameworks, and, crucially, national culture.

According to Hofstede (2016), national culture plays an understated but influential role in shaping organizational practices and managerial decision-making. Numerous recent studies argue that cultural factors can either reinforce or undermine the impact of governance reforms on investor confidence and capital costs (Bhuiyan and Hu, 2025; Dau *et al.,* 2022; Gul and Saeed, 2022; Hofstede, 2001; Mao *et al.,* 2024). However, few empirical works have systematically examined how national culture moderates the governance–cost of equity relationship, particularly in North African economies.

The current paper makes a significant contribution to the existing literature by examining the relationship between governance and the cost of equity capital in the specific context of Tunisian listed firms. While prior research has predominantly focused on the impact of governance on the cost of equity capital, few studies have explored the moderating role of national culture in this relationship.

By considering the Tunisian national culture, we provide valuable insights into the influence of cultural factors on the governance-cost of equity capital relationship. Therefore, this paper aims to explore the relationship between governance and the cost of equity capital, with a particular focus on the moderating role of national culture capital of Tunisian companies listed on the Stock Exchange (SET).

Moreover, this study aims to contribute to existing literature by highlighting the importance of considering both governance and national culture when assessing the cost of equity capital. To achieve these objectives, this paper will adopt a mixed-methods approach, combining statistical analysis of financial data with qualitative analysis of cultural factors. We aim to provide a comprehensive analysis of the relationship between governance, national culture, and the cost of equity capital.

Hence, the national culture is an informal institutional factor that sets the "rules of the game" that organizations tend to follow in corporate decisions that set the "rules of the game" that organizations follow in corporate decision-making. Unlike formal institutional factors, including constitutions, laws, and regulations, national culture, as an informal institutional factor, is much more difficult to grasp, as, in general, it is not written on paper, but rather, it is reflected in customs, traditions, and codes of conduct (Dau *et al.,* 2022; Gang and Hongrui, 2025; Gul and Saeed, 2022; Hofstede, 2001; Mao *et al.,* 2024).

According to Ezzi and Jarboui (2016), the financial, economic, social, and regulatory environment in Tunisia plays an important role in the evolution and development of the business activity. This study is crucial for policymakers, investors, and companies operating in a globalized economy. This research seeks to shed light on this complex relationship, offering insights that can contribute to the development of more effective governance strategies and investment decision-making processes.

The rest of the study is structured as follows: Section 2 presents the research hypotheses. Section 3 introduces the data set and empirical method. Section 4 presents and discusses the results. Section 5 concludes by providing research limitations, managerial implications, and avenues for future research.

2. Literature Review and Hypotheses Development

Board size has long been recognized as a key factor in shaping corporate strategy and overseeing executive management. A larger board may offer diverse expertise, broader perspectives, and stronger oversight, which can enhance governance quality and investor confidence (García Martín and Herrero, 2018; Gul and Saeed, 2022; Mao *et al.,* 2024; Pearce and Zahra, 2007; Shleifer and Vishny, 1986).

Recent studies continue to support this view, suggesting that board expansion can improve transparency and reduce information asymmetry, thereby lowering the cost of equity capital. García Martín and Herrero (2018) argue that the number of directors on the board of directors has no significant impact on the company's performance. These mixed findings suggest that the effectiveness of board size may depend on contextual factors such as industry, regulatory environment, and national culture.

Bui and Krajcsák (2023) found that for certain companies to have effective oversight, it is preferable to have larger boards of directors. Shah and Butt (2009) found that the size of the board of directors is negatively related to the cost of equity capital. Anderson *et al.* (2004) argues that increasing the number of directors on a board of directors has an inverse impact on interest expenses. Khemakhem and Naciri (2015) conclude that directors sitting on a board of directors have an inverse impact on the cost of equity capital, but their result is not significant.

Previous studies support that larger boards of directors are effective, improve performance, and control of the board of directors (Zahra and Pearce, 1989). Dalton *et al.* (1999) stated that a larger board of directors is necessary for organizational growth. They argued that growing companies need resources and that larger boards of directors provide expertise and links to the external environment. Larger boards of directors benefit from resource dependence theory because they provide more competent directors and relationships, but they suffer from a strategic decision-making perspective (Goodstein *et al.,* 1994).

However, Hassan *et al.* (2018) also studied a non-financial firm listed on the Pakistan Stock Exchange and found that the size of the board of directors had a negative and insignificant impact on the cost of equity capital. Recent insights from Tonello *et al.* (2024) highlight evolving board practices, including increased diversity in professional backgrounds and a rise in directors with governance and strategic experience. These trends may influence how board size affects financial outcomes.

Additionally, Alqadi *et al.* (2024) demonstrate the role of governance in reducing equity costs, particularly when combined with non-financial factors like corporate social responsibility and environmental sustainability. Cumming *et al.* (2024) provide further evidence that internal governance reforms, including changes in board structure, can significantly reduce reliance on costly financing mechanisms. Their findings suggest that stronger governance can improve access to traditional financing and reduce capital costs.

Given the mixed empirical evidence and the evolving nature of board governance, especially in emerging markets like Tunisia, this study aims to test the following hypothesis:

Hypothesis 1: *There is a negative relationship between board size and cost of equity capital of companies listed on the Tunisian financial market.*

Several researchers agree that the board of directors is the best supervisory body for managers in the company (Fama and Jensen, 1983; Qin *et al.,* 2025; Saini *et al.,* 2025; Sidki *et al.,* 2023). The duality of the CEO refers to the situation when the CEO is also the chairman of the board. Whereas non-duality implies that different people occupy each position.

According to Baliga *et al.* (1996) assert that the duality of the CEO is the reason for poor performance and failure of companies. Indeed, the members of the board of directors serve to control management decisions. If the board chairman is also the CEO, he is more likely to overinvest, which will hurt the business and increase capital cost. In contrast, some studies argue that the duality of CEOs can help the company work more efficiently.

These companies should not wait for the CEO and the board chairman to make the same decision. The separation of management and control functions in a company provides checks and balances that prevent managers from adopting opportunistic behaviors (Qin *et al.,* 2025). Peng *et al.* (2015) document a positive role for CEO duality in the China market. Some studies suggest that there is no significant relationship between CEOs' duality, company performance, and the cost of equity capital.

Recent research continues to explore these dynamics. For instance, Bhuiyan and Hu (2025) found that the impact of CEO duality on capital costs varies across emerging markets, often depending on the strength of other governance structures.

Therefore, the second hypothesis of this study is formulated as follows:

Hypothesis 2: *There is a positive relationship between CEO duality and the cost of equity capital on the Tunisian financial market.*

The ownership concentration is favorable to exercise control by shareholders (Bethel *et al.* 1998). The problem of controlling controllers therefore becomes crucial. On the other hand, a shareholder with a majority of the capital of the company has a strong incentive to invest in the control of the management of the firm.

Because it will appropriate a not insignificant part of the additional profits thus made. Its incentive to act is the best guarantee of its effectiveness and the least expensive in terms of agency costs. This control is much more difficult and costly for individual shareholders (especially for the cost of access to information) holding a small share of the capital.

The results of empirical studies conducted on capital concentration show a positive influence of the presence of majority shareholders on firm performance (Gunasekarage *et al.,* 2007; Vintilă and Gherghina, 2014). However, Mudambi and Nicosia (1998) in the UK found a negative linear relationship between the concentration of ownership and firm performance. They believe that the expropriation behavior of block holders negatively affects the performance of the company as block owners will attempt to reap benefits at the cost of minority shareholders.

Recent research remains to examine the multifaceted relationship between CEO duality and the cost of equity capital. Ananzeh (2024) conducted an empirical study on Jordanian listed companies and found that CEO duality moderates the relationship between audit committee independence and the cost of equity capital.

Specifically, when the CEO also serves as board chair, the effectiveness of independent audit committees in reducing equity costs is diminished, highlighting the nuanced impact of dual leadership structures on financial performance. *Javed et al.* (2024) provide a comprehensive bibliometric and systematic analysis of CEO duality research, revealing that the topic remains central in corporate governance literature, especially regarding agency theory, board effectiveness, and firm performance.

Their review underscores that while CEO duality is often associated with weaker oversight and higher agency costs, its actual impact varies across contexts and is influenced by other governance mechanisms and institutional factors. Qin *et al.* (2025) examined Chinese listed firms and found that CEO duality, combined with the CEO's social capital, can accelerate corporate financialization and increase financing constraints, which may indirectly affect the cost of capital.

These findings suggest that the implications of CEO duality extend beyond traditional governance concerns, influencing broader financial strategies and risk profiles. Thomsen and Pedersen (2000) show a positive relationship between firm performance and ownership concentration.

Eric Gedajlovic and Daniel M. Shapiro (2002) found a positive linear relationship between ownership and firm performance concentration. They believe that the oversight role of block holders will control the behavior of managers and therefore improve the performance of the company. Within this context, the third hypothesis of this study is formulated:

Hypothesis 3: *There is a positive relationship between concentration of ownership and the cost of equity capital in the Tunisian financial market.*

Numerous researchers examine the direct effects of foreign investors on the performance of domestic enterprises during the period of privatization (Estrin *et al.,* 2009). A systematic review by Roedder and Schmid (2025) highlights that foreign investors are actively shape firm strategies, governance structures, and operational models. In the literature, there are alternative views on the relationship between foreign ownership and firm performance.

One approach assumes an exogenous optimal ownership structure that combines with other governance mechanisms to collectively maximize the value of the business. The other approach assumes that companies choose a combination of ownership structure and other governance mechanisms to maximize performance while recognizing that ownership is affected by performance, i.e., endogenous.

Many empirical studies examined the correlation between governance and firm performance. These studies provide two opposing and contradictory views on the role of property. Significant differences may exist between companies with foreign ownership and companies with domestic ownership. Firms with foreign shareholders probably have greater access to technical and financial resources (Balaguer *et al.,* 2022).

Guner (2015) find that foreign firms established in Turkey perform better than domestic firms in return on assets. Pivovarsky (2001) find that foreign ownership is positively associated with firm performance in Ukraine. Barbosa and Louri (2005) conclude that the performance of firms in Portugal is not affected by foreign ownership after controlling for specific characteristics of the firm. These results consider that foreign investors have a positive and significant effect on the profitability of companies in Greece.

A recent study conducted by Bhakar *et al.* (2024) supports the hypothesis that foreign ownership is positively associated with the cost of equity capital on the Tunisian financial market. Their results reveal that foreign ownership, among other ownership structures, has a statistically significant impact on firm performance, and that foreign investors tend to reduce agency costs and improve governance, which in turn can lower the perceived risk and cost of equity capital.

Additionally, the broader economic context in Tunisia, as discussed by Weißenfels (2024), shows that the country's integration into European production networks and its liberalization policies have created conditions where foreign ownership plays a pivotal role in shaping firm-level financial outcomes.

Given this context, foreign investors in Tunisia are likely to influence not only firm profitability but also the cost of equity capital. Their presence may reduce perceived risk through better governance and transparency, thereby lowering the equity premium demanded by investors. This leads us to the following hypothesis:

Hypothesis 4: *There is a positive relationship between foreign ownership and the cost of equity capital on the Tunisian financial market.*

There are multiple elements that affect the ownership structure of a business (Ahrens *et al.,* 2025; Bishwas and Hossain, 2025; Ji, 2016). The State and regulation of financial markets are two important issues affecting the ownership structure. For example, the weakness of the capital market, the lack of regulation, and the weak protection rights of minority shareholders have led to a more concentrated ownership structure (Bhakar *et al.,* 2024; Gerken, 2014). More focused shareholders can affect their businesses in different ways. There are different ideas about the relationship between ownership and business performance. A new study conducted by Bhakar *et al.* (2024) provides compelling international evidence that concentrated ownership structures, particularly when control rights exceed cash-flow rights, tend to increase the cost of equity capital.

This phenomenon is attributed to the entrenchment effect, where dominant shareholders may prioritize personal interests over firm value, thereby increasing perceived risk for minority investors and external financiers. Gerken (2014) describe a positive relationship between block owners and firm performance. They believe that outside block holders' ownership has an interest in collecting information and monitoring managers.

Block owners can also affect the performance of companies through the control of the vote they hold. In addition, Gedajlovic and Shapiro (2002) indicate the existence of a positive relationship between block ownership and the financial performance of Japanese companies. Gugler *et al.* (2004) found a positive relationship between block ownership and firm performance. This is due to the motivations of the block holders to monitor the performance of the managers.

When block owner ownership exceeds a specific level, there is a negative relationship between block ownership and business performance. Anderson *et al.* (2003) found that the same is true for family businesses. They believe that family businesses are using debt at a level they perceive to be less risky. Lemmon and Lins (2003) show that family businesses perform better in times of crisis and that their tendency to fail is lower than that of other businesses. Within this context, the fifth hypothesis of this study is formulated:

Hypothesis 5: *There is a positive relationship between the concentration of control by shareholders and the cost of equity capital in the Tunisian financial market.*

The relationship between national culture and corporate financial performance has been widely researched in academic literature (Bhakar *et al.,* 2024; Gochhait, 2020). In this study, we focus on national culture as a moderate variable that shapes the relationship between corporate governance and the cost of equity capital. Culture is not just a background factor that actively influences how leaders interpret and implement governance mechanisms, which in turn affects firms' financing costs.

The foundational work of Hofstede (1980) introduced the idea of measuring national culture through quantifiable dimensions, but his dataset does not include Tunisia. To address this gap, we draw on more recent theoretical and empirical research to construct a tailored cultural profile for Tunisian firms, building on the framework of Ben Mrad Douagi and Boussaada (2008), who highlight the central role of family in

Tunisian business culture. In Omani context, (Baatwah, 2014) highlights that culture, the quality of corporate governance, and managerial characteristics all play a significant role in determining the timeliness of financial reporting. In his study of Omani firms, cultural influence was captured through the prevalence of tribal, or family, directors.

Gochhait (2020) further note that family or tribal directors tend to accept hierarchical structures and prioritize collective interests, which can shape boardroom dynamics and information flow. There is growing consensus that Western governance models are not always directly applicable in other contexts.

Arrindell (2003) and Chen *et al.* (2011) both point out that differences in legal systems, market maturity, ownership structures, and especially national culture, can limit the effectiveness of Anglo-Saxon governance practices in developing economies. Griffin *et al.* (2017) found that the benefits of strong governance are most pronounced in countries with high individualism and low uncertainty avoidance, while in emerging markets like Tunisia, cultural values often have a stronger influence on managerial behavior than formal governance codes (Chtourou Ben Amar and Ben Romdhane, 2019).

Recent research continues to support the idea that national culture can outweigh formal governance in shaping financial outcomes. For example, Chou *et al.* (2023) show that cultural traits such as individualism or collectivism directly affect investment decisions, disclosure practices, and even the volatility of financial markets. Al Harrasi *et al.* (2024) observe that in Oman, managers often prioritize family or tribal loyalty over company interests, which can influence hiring and promotion decisions regardless of qualifications.

This underscores the importance of understanding the cultural context when assessing governance effectiveness. Culture also plays a role in shaping negotiation styles and organizational policies (Al Harrasi *et al.,* 2024). National culture influences how decision-makers perceive rules, corruption, and accountability, which in turn affects the structure and effectiveness of corporate governance.

Baatwah (2014) emphasize that investor objectives, ownership structures, and the protection of minority shareholders are all shaped by cultural dimensions. Behavioral and cultural factors are increasingly recognized as important in financial decision-making (Amore and Miller, 2024; Baatwah, 2014; Griffin *et al.,* 2017).

Chui *et al.* (2010) found that higher levels of individualism are associated with greater confidence in business decisions and increased stock market activity, while Chui *et al.* (2002) demonstrated that national culture influences leverage choices. Li *et al.* (2013) argue that strong corporate governance can help mitigate the influence of national culture on risk-taking, especially in firms with greater managerial discretion.

Bae, Chang, and Kang (2012) also find that even among countries with similar governance standards, cultural differences can lead to variations in dividend policy and capital costs. In theory, family ownership presents an ambiguous effect on firm performance. Alignment theory suggests that family shareholders may prioritize long-term value and reputation, reducing incentives for self-serving behavior at the expense of minority shareholders.

Table 1. *Variables definition*

TABLE 1 Variables definitions			
Variable	**Notation**	**Measure**	**Signe attend**
Dependent variable			
cost of equity capital	COE	$Rf + \beta\ [E(Rm) - Rf]$	
Independent variables			
The duality of the CEO	D_CEO	This is a dichotomous variable with a value of 1 if there is a separation between the function of chief executive officer and the function of chairman of the board of directors, and 0 otherwise.	(+)
Holders of control blocks	DBC	1 if the first shareholder is an individual, 2 if it is a group, 3 if it is a financial institution, and 4 if it is the State.	(+)
The size of the board of directors	TCA	Total number of board members	(+)
Concentration of ownership	C_OWN	Measure by the Herfindhal index, which is the sum of squares of the percentages of shares held by the first and second shareholders.	(+)
Foreign ownership	F_OWN	Measure by the percentage of foreign ownership to share capital.	(+)
Control variables			
Size	SIZE	The natural logarithm of the active total	(-)
Leverage	LEV	By dividing a company's total debt by its total assets	(+)
ROA	ROA	the ratio between net income and total assets	(+)

Source: *Own study.*

Amore and Miller (2025) review how trust, family values, and collectivism explain the prevalence and performance of family firms across regions, while Appleton and Pavlou (2024) highlight the importance of family social capital in shaping entrepreneurial ecosystems and access to resources. These findings reinforce that in many emerging markets cultural context can outweigh formal governance in shaping financial outcomes. Culture also plays a role in shaping negotiation styles and organizational policies (Gray *et al.,* 2013; Hu and Qi, 2022).

National culture influences how decision-makers perceive rules, corruption, and accountability, which in turn affects the structure and effectiveness of corporate governance. Recent work by Saini *et al.* (2025) further confirms that national culture moderates the relationship between sustainability performance and financial outcomes, highlighting the need for context-specific governance strategies.

In theory, family ownership presents an ambiguous effect on firm performance. Alignment theory suggests that family shareholders may prioritize long-term value and reputation, reducing incentives for self-serving behavior at the expense of minority shareholders. Thus, we formulate the following hypothesis:

Hypothesis 6: *The relationship between the quality of corporate governance and the cost of equity capital is moderated by culture, as represented by family managers.*

3. Sample and Methodology

3.1 Sample

To test our hypotheses within the Tunisian context, we constructed a sample of 24 listed Tunisian firms (see Appendix1). Financial institutions were excluded from the analysis due to the unique nature of their financial statements and regulatory requirements. Our data set covers the period from 2007 to 2016. All data was collected manually from firm disclosures available through the Financial Market Council, brokerage reports, company websites, and official publications of the Tunis Stock Exchange.

By employing panel data analysis, we are able to capture both the individual characteristics of each firm and the temporal dynamics across the study period, thereby enhancing the robustness and depth of our findings.

3.2 Presentations of Variables

All the variables selected for our study, their measurement indicators, as well as the expected signs, are presented in Table 1 above

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3.3 Model Specification

To test our hypotheses, we use the following models:

$$COE_{i,t} = \beta_0 + \beta_1 DUAL_{i,t} + \beta_2 CON\_OWN + \beta_3 DBC + \beta_4 F\_OWN + \beta_5 TCA + \beta_6 LEV + \beta_7 Taille + \beta_8 ROA + \varepsilon \quad (1)$$

Where:

- COE: the cost of equity capital measured by CAPM model.
- 0: it is a constant.
- ε: represent the error.

In order to study the effect of national culture on the cost of capital of Tunisian companies, we performed a linear regression analysis on panel data. We retained the significant variables obtained during the empirical validation in our model, and we added four control variables. So, our model to look at is as follows:

Cost of equity capital = f (National culture, corporate governance, control variables).

$$COE_{i,t} = \beta_0 + \beta_1 DUAL + \beta_2 CON\_OWN + \beta_3 DBC + \beta_4 F\_OWN + \beta_5 TCA + \beta_6 LEV + \beta_7 Taille + \beta_8 ROA + \beta_9 CULTURE + \varepsilon \quad (2)$$

To study the moderating effect of the national culture, which interact with the relationship between governance and the cost of capital, we propose the following model:

$$COE_{i,t} = \beta_0 + \beta_1 DUAL_{i;t} + \beta_2 CON\_OWN_{i,t} + \beta_3 DBC_{i,t} + \beta_4 F\_OWN_{i,t} + \beta_5 TCA + \beta_6 DUAL_{i;t} * CULTURE_{i,t} + \beta_7 CON\_OWN_{i,t} * CULTURE_{i,t} + \beta_8 DBC_{i,t} * CULTURE_{i,t} + \beta_9 F\_OWN_{i,t} * CULTURE_{i,t} + \beta_{10} TCA * CULTURE_{i,t} + \beta_{11} LEV + \beta_{12} Taille + \beta_{13} ROA + \varepsilon \quad (3)$$

4. Results and Discussion

4.1 Bivariate Analysis

We will present the descriptive statistics used in our model for all the listed Tunisian companies studied in Table 2. The number of observations for all variables is equal to 240 observations.

***Table 2.** Descriptive Statistics*

Variable	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
COE	240	0.039	0.090	-1.155	0.248
CON_OWN	240	0.537	0.499	0	1
DBC	240	0.924	0.113	0.698	1.113
Foreign_OWN	240	2.166	0.831	1	5
TCA	240	0.1205	0.1783	0	0.616
lev	240	0.390	0.152	0.069	0.915
size	240	18.2109	0.9638	16.639	21.612
ROA	240	0.0450	0.1019	-0.672	0.618
C_OWN	240	1.711	4.021459	-26.804	36.075

***Source:** Own study.*

Table 2 shows that the minimum cost of equity capital is -1.155 and the maximum is 0.248. This indicates that some Tunisian companies transmit a high level of risk, prompting investors to demand higher returns to commit their funds. The average number of controlling block holders is approximately 2.166, with a minimum of 1 and a maximum of 5. In Tunisian companies, these controlling block holders are typically either a group of individuals or a financial institution.

Table 2 also reveals that, on average, 12.05% of company ownership is held by foreign investors. The size of the board of directors has an average value of 0.924, ranging from a minimum of 0.698 to a maximum of 1.113. Furthermore, CEO duality is present in 53.7% of the companies, with values ranging between 69.8% and 111.3%. Descriptive statistics indicate that Tunisian companies are generally profitable, with an average financial performance (measured by ROA) of 4.50%.

However, the minimum ROA is -67.2%, suggesting that some companies in the sample are not profitable. The average financial leverage is 1.711, implying that debt constitutes a significant portion of equity in Tunisian firms. Company size ranges from a minimum of 16.639 to a maximum of 21.612.

***Table 3.** Correlation Matrix*

	D_ CEO	**CON_ OWN**	**DBC**	**Foreig n_ OWN**	**TCA**	**lev**	**Size**	**ROA**
D_CEO	1.000							
CON_ OWN	-0.311 (0.000)	1.000						
DBC	0.166 (0.009)	0.076 (0.240)	1.000					
Foreign_ OWN	-0.207 (0.001)	-0.265 (0.000)	0.165 (0.010)	1.000				
TCA	0.022 (0.726)	0.058 (0.370)	0.320 (0.000)	0.192 (0.002)	1.000			
lev	0.017	-0.025	-0.044	0.008	0.055	1.000		

	(0.783)	(0.694)	(0.493)	(0.892)	(0.390)			
Size	0.026 (0.678)	0.103 (0.110)	0.351 (0.000)	0.235 (0.000)	0.390 (0.000)	0.263 (0.000)	1.000	
ROA	-0.146 (0.023)	-0.000 (0.999)	-0.008 (0.904)	0.165 (0.010)	-0.009 (0.891)	-0.593 (0.000)	-0.056 (0.382)	1.000

Source: *Authors' calculations.*

In this part of the research, we use the multiple linear regression method. To apply this method, it is essential to ensure the absence of multicollinearity. This issue arises when there is a strong correlation between the independent variables, which can lead to inaccurate estimates of the coefficients αi. Statistically, we specify bivariate multicollinearity.

The problem of bivariate multicollinearity arises when two independent variables are strongly correlated, whereas multivariate multicollinearity arises when several independent variables are correlated. The detection of the bivariate multicollinearity is done from the study of the Pearson correlation matrix. If the correlation coefficient is greater than 0.7, the limit set by Kervin (1992), we conclude that a serious problem of multicollinearity is present.

This critical value is limited to 0.8 for Kennedy (1985). In our study, we retain the more demanding limit set by Kervin (1992). The correlation matrix that we have identified is presented in Table 3. The results show that the different correlation coefficients are less than 0.7, which indicates the absence of bivariate multicollinearity between the different independent variables. The results show the absence of bivariate multicollinearity between the different independent variables, which allows us to apply the multiple linear regression models.

4.2 Multivariate Analysis

4.2.1 The effect of corporate governance on cost of equity capital

Table 4 presents the relationship between the cost of equity capital of Tunisian listed companies and selected corporate governance and financial variables. The model's R-squared value is 0.148, indicating that approximately 14.8% of the variation in the cost of equity capital is explained by the independent variables. However, the Fisher statistic yields a p-value greater than 0.370, suggesting that the overall model lacks statistical significance.

Table 4. *Panel regression of the effect of corporate governance on the cost of equity capital of Tunisian listed firms*

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Constante	0.00541	0.00541	1.0012	0.318
D_CEO	0.00030	0.00048	0.6305	0.529
CON_OWN	0.00236	0.00097	2.4358	**(0.015)****
DBC	0.00024	0.00024	1.0063	0.315

Foreign_OWN	0.00090	0.00151	0.5955	0.552
TCA	0.00012	0.00168	0.0707	0.943
LEV	0.00015	0.00039	0.3940	0.694
Size	-0.00038	0.00027	-1.3974	0.164
ROA	0.00014	0.00092	0.1506	0.880
Observations	240			
R^2	0.148			
F-statistic	1.079			
Prob(F statistic)	0.370			

Notes: *This table shows the effect of corporate governance on the cost equity of capital of the 24 non-financial companies listed on the BVMT over the period between 2007 and 2016. The independent variable is the cost of capital Kcp. The dependent variables: D_CEO: this is duality; CON_OWN: this is the concentration of ownership. DBC: this is the controlling bloc measure, Foreign_OWN: this is foreign ownership, TCA: this is the board size, lev: this is the leverage. Size: the size. ROA: measures the return on total assets ratio. THEFT: it's volatility. *** The correlation is significant at the 0.1% level, ** the correlation is significant at the 1% level, * the correlation is significant at the 5% level.*

Source: *Estimates made by the author using Eviews software.*

The coefficient for CEO duality is positive but statistically insignificant. This implies that when the roles of chairman and CEO are combined, there is no significant impact on the cost of equity capital. This finding aligns with Ananzeh (2024), who found that CEO duality moderates the effectiveness of audit committee independence in reducing equity costs. Although duality may enhance strategic alignment, it can also weaken board independence, thereby limiting its governance effectiveness.

Ownership concentration exhibits a positive and statistically significant relationship with the cost of equity capital. This suggests that as ownership becomes more concentrated, the cost of equity increases. This result is consistent with Bishwas and Hossain (2025), who found that high ownership concentration negatively affects firm performance in emerging markets. The implication is that dominant shareholders may prioritize personal gains over minority interests, increasing perceived risk and investor-required returns.

Blockholder concentration shows a positive but statistically insignificant effect on the cost of equity capital. Recent research by Dissanaike *et al.* (2023) indicates that institutional blockholders can enhance firm performance through improved monitoring, especially in acquisition contexts.

However, in the Tunisian context, this monitoring effect may be limited due to weaker institutional frameworks or collusion risks between block holders and management. Our results are inconsistent with that found by Shleifer and Vishny (1986). They find a positive relationship between block owners and business performance. They believe that block holders have an interest in collecting information and monitoring managers. Block owners can also affect the performance of companies through the control of the vote they hold.

Foreign ownership has a positive but statistically insignificant effect on the cost of equity capital. Roedder and Schmid (2025) highlight that foreign investors can influence governance and strategy, but their impact varies depending on the institutional environment. In Tunisia, foreign investors may face information asymmetry and regulatory constraints, reducing their ability to influence governance and lower capital costs.

Board size is positively associated with the cost of equity capital, though the relationship is statistically insignificant. Ji (2016) found that larger boards can reduce information asymmetry and improve investment efficiency. However, in the Tunisian context, larger boards may lead to coordination issues and diluted accountability, offsetting potential governance benefits.

As for control variables, we found that the coefficient of leverage have a positive but statistically insignificant effect on the cost of equity capital. Abubakar and Anyonje (2025) confirms that excessive leverage increases financial distress risk, which can elevate equity costs. While leverage may offer tax benefits, it also signals higher risk to equity investors, especially in markets with limited access to long-term debt. Firm size shows a negative and statistically insignificant relationship with the cost of equity capital.

Gormsen and Huber (2023) found that larger firms tend to have lower perceived equity costs due to better access to capital and reduced information asymmetry. This supports the notion that larger Tunisian firms may benefit from economies of scale and investor confidence. ROA has a positive but statistically insignificant effect on the cost of equity capital. Attahiri *et al.* (2025) suggests that firms with high ROIC must maintain capital discipline to sustain shareholder value. In Tunisia, higher ROA may signal profitability but also increased risk-taking, which could elevate equity costs if not accompanied by sound governance.

4.2.2 Moderating influence of national culture on the relationship between corporate governance practices and cost of equity capital

Numerous studies have demonstrated that managerial behavior is significantly shaped by national culture (Fauver and McDonald, 2015) Cultural norms and values not only influence individual moral philosophies and decision-making criteria but also affect the ethical orientation and behavior of managers.

The cultural environment, combined with individual characteristics, plays a crucial role in shaping corporate decisions, including those related to governance and financial strategy. From a broader perspective, culture exerts a long-term influence on formal institutions and corporate governance practices.

As Hofstede (2001) argue, cultural values evolve over decades, embedding themselves into institutional frameworks and shaping governance mechanisms at the corporate level.

Previous empirical research (Antonczyk and Salzmann, 2014; Cassar *et al.,* 2024; Chui *et al.,* 2002; Fauver and McDonald, 2015) has highlighted the impact of cultural and behavioral factors on managerial decisions and the valuation of the cost of equity capital. These studies suggest that national culture can act as a moderate variable in the relationship between corporate governance and financial outcomes.

To explore this dynamic, we extended our base model by incorporating a variable of national culture. This variable is operationalized as a binary indicator reflecting whether a director is a family member of a major shareholder. This proxy captures the influence of familial ties and cultural norms on governance behavior.

Table 5. *The Moderating role of the national culture*

Variable	**Model 1**	**Model 2**
Constant	-0.0001 (0.156)	-0.0005 (0.141)
D_CEO	**6.88E-05 (0.050)***	**0.0001 (0.000)*****
CON_OWN	-0.0001 (0.295)	-0.0001 (0.347)
DBC	**-7.29E-05 (0.001)*****	**-9.16E-05 (0.000)*****
Foreign_OWN	0.0002 (0.288)	0.0002 (0.1157)
TCA	**0.0003 (0.034)****	**0.0003 (0.059)****
Lev	-4.82E-05 (0.268)	-5.88E-05 (0.176)
Size	**4.10E-05 (0.036)****	**4.37E-05 (0.033)****
ROA	-0.0003 (0.087)	-0.0002 (0.229)
VOL	**0.0008 (0.000)*****	**0.0007 (0.000)*****
CULTURE	-3.73E-05 (0.376)	
D_CEO * CULTURE		**-0.0003 (0.002)*****
CON_OWN* CULTURE		**0.0004 (0.021)****
DBC* CULTURE		0.0002 (0.724)
Foreign_OWN* CULTURE		-0.0003 (0.111)
TCA* CULTURE		-0.0003 (0.141)
Observations	240	240
Prob > F	0.000	0.000
R^2	0.189	0.229

Notes: *This table shows the moderating effect of culture on the relationship between corporate governance and the cost of capital of the 24 non-financial companies listed on the BVMT over the period 2007-2016. The independent variable is the cost of capital Kcp. The dependent variables: D_CEO: this is duality; CON_OWN: this is the concentration of ownership. DBC: this is the controlling bloc measure, Foreign_OWN: this is foreign ownership, TCA: this is the board size, lev: this is the leverage. Size: the size. ROA: measures the return on total assets ratio. CULTURE: measures national culture. ***, ** and*

** represent statistical significance at the 1%, 5% and 10% level, respectively. The values in parentheses are the p-values.*
***Source:** Estimates made by the author using Eviews software.*

Table 5 presents the results of the multivariate regression analysis incorporating the moderating effect of national culture on the relationship between corporate governance mechanisms and the cost of equity capital for Tunisian listed companies.

The heteroskedasticity test reveals a p-value of 0.000, significantly below the 0.05 threshold, leading to the rejection of the null hypothesis of homoscedasticity. Consequently, the generalized least squares (GLS) method was employed to correct for heteroskedasticity in the residuals.

Column 1 shows that Tunisian national culture—proxied by a binary variable indicating whether a director is a family member of a major shareholder—has a negative but statistically insignificant effect on the cost of equity capital. This suggests that cultural factors, while present, do not exert a direct long-term influence on capital costs.

These findings are consistent with Fauver and McDonald (2015) and Gray *et al.* (2013) , who argue that cultural dimensions such as individualism and uncertainty avoidance have nuanced effects on financing decisions, particularly in emerging markets. Similarly, Hu and Qi (2022) found that individualistic cultures tend to favor risk-taking and leverage, while uncertainty-avoidant cultures are more conservative in financial structuring.

Column 2 explores the moderating role of national culture on the relationship between governance variables and the cost of equity capital. We found that national culture significantly moderates the relationship between CEO duality and cost of equity capital, with a negative coefficient significant at the 1% level.

This supports agency theory, which posits that combining the roles of CEO and chairman increases agency costs due to concentrated decision-making power. Recent evidence from Phuong *et al.* (2024) confirms that CEO duality weakens governance effectiveness and exacerbates agency problems.

The interaction between national culture and ownership concentration is positive and statistically significant at the 5% level. This aligns with Doidge et al. (2007), who found that concentrated ownership can both mitigate and exacerbate governance issues depending on cultural and institutional contexts. In cultures with strong familial ties, concentrated ownership may lead to entrenchment and rent-seeking behavior.

The moderating effect of national culture on block holder concentration is positive but statistically insignificant. This suggests that cultural norms may dilute the expected monitoring benefits of block holders, as decisions may be influenced by familial or ethnic loyalties rather than economic rationale.

The interaction between national culture and foreign ownership is negative and statistically insignificant. Roedder and Schmid (2025) argue that foreign investors often face cultural and informational barriers that limit their influence on governance and financial decisions.

Cultural misalignment between foreign owners and domestic managers may lead to inefficiencies and increased capital costs. Previous work by (Demirgüç-Kunt and Maksimovic, 1999; Jõeveer, 2013; Venanzi, 2017) established a strong association between a country's official institutions and decisions about the capital structure of its domestic firms.

We find that national culture negatively moderates the relationship between board size and capital cost, though the effect is statistically insignificant. Ahrens et al. (2025) found that larger boards face coordination challenges, especially in collectivist cultures where consensus is valued but difficult to achieve. This may hinder decision-making and increase governance-related costs.

5. Conclusions and Policy Implications

This paper investigates the impact of corporate governance on the cost of equity capital in Tunisian listed companies, with particular attention to the moderating role of national culture. National culture is considered a key informal institutional factor that shapes managerial behavior and decision-making processes. The study draws on a sample of 24 Tunisian firms listed on the stock exchange, covering the period from 2007 to 2016.

By analyzing companies across strategic sectors such as banking, manufacturing, and telecommunications, the research highlights how governance structures such as board composition, ownership concentration, and transparency can affect investor perceptions and equity risk premiums. In highly regulated industries like banking, robust governance mechanisms tend to reduce the cost of equity capital significantly.

In contrast, in less regulated sectors, cultural norms and values may either reinforce or weaken the effectiveness of governance practices. These findings suggest that governance reforms in Tunisia should be tailored to sector-specific needs and cultural realities to enhance their impact on financial performance and investor confidence.

Our findings suggest that although the overall quality of corporate governance tends to be positively associated with the cost of equity capital in Tunisian listed companies, this relationship is not statistically significant. However, ownership concentration emerges as a significant factor influencing equity costs, indicating that governance practices in Tunisia remain relatively fragile and underdeveloped. This fragility may hinder efforts to attract external investors, as weak governance structures can increase perceived risk.

To further explore this issue, we introduced national culture as an additional variable, recognizing its growing importance in shaping managerial behavior and decision-making. The results show that Tunisian national culture has a negative but statistically insignificant effect on the cost of equity capital, suggesting that its influence may be short-term or context dependent.

This aligns with the findings of Fauver and McDonald (2015), who observed that culture does not significantly affect equity costs in emerging markets. To better understand the nature of this cultural impact, we examined its moderating role in relation to specific governance components.

Notably, the interaction between national culture and CEO duality showed a positive and significant effect on the cost of equity capital, while other interactions revealed a negative and significant influence. These results highlight that corporate governance practices in Tunisia are deeply embedded in the country's social fabric, shaped by prevailing values, norms, and traditions. Managerial decisions are not made in isolation but are influenced by cultural expectations and societal structures.

The results of this study provide noteworthy policy implications for regulators and financial authorities in Tunisia. Strengthening corporate governance frameworks can contribute to lowering the cost of equity capital, thereby enhancing firms' access to market-based financing.

Moreover, the moderating role of national culture suggests that governance reforms should be culturally sensitive and adapted to local norms to ensure effectiveness. Policymakers should consider sector-specific governance guidelines, especially for industries like banking and telecommunications, where investor confidence is closely tied to governance quality.

However, the study is subject to several limitations. The sample size is relatively small and limited to listed companies, which may not capture governance dynamics in private or state-owned enterprises. Additionally, the use of national-level cultural indicators may overlook intra-country cultural diversity and firm-level behavioral factors. Future research could expand the scope by including a larger and more diverse sample, conducting longitudinal analyses to observe changes over time, and integrating qualitative assessments of organizational culture.

Comparative studies across MENA countries or emerging markets would also provide broader insights into how cultural and institutional contexts shape the governance-cost of equity relationship. Sector-specific investigations, especially in high-growth industries like fintech and renewable energy, would also enrich the understanding of governance impacts on equity financing. Future research may then focus on alternative national culture features likely to control the practice of corporate governance and hence to negatively influence and monitor managerial behavior on behalf of the firm's owners.

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Appendix 1: *Selected sample of Tunisian listed companies for the period 2007 to 2016 (0: industrial company, 1: commercial or service company).*

Code	Sector	Abbreviation	Name
1	1	Magasin générale	Magasin générale
2	1	Monoprix	Monoprix
3	0	Siphat	Société des Industries Pharmaceutiques de Tunisie
4	0	ASSAD	ASSAD
5	1	Electrostar	Electrostar
6	0	GIF	GIF FILTER
7	1	STEQ	Société Tunisienne d'Equipement
8	0	STIP	Société Tunisienne des Industries de Pneumatique

9	0	SOTRAPIL	Société de transport des hydrocarbures par pipelines
10	1	SOMOCER	SOMOCER
11	1	SIAME	Société Industrielle d'Appareillage et de Matériels Electriques
12	0	ICF	Industries Chimiques du Fluor
13	1	AIRLIQUIDE	AIR LIQUIDE
14	0	ALIKIMIA	ALIKIMIA
15	1	SOTETL	Société Tunisienne d'Entreprise et Télécommunication
16	1	SOTUMAG	Société Tunisienne des Marchés de Gros
17	0	SOTUVER	Société Tunisienne de Verreries
18	1	TUNISAIR	Société tunisienne d'Air
19	0	SFBT	Société de Fabrication des Boissons de la Tunisie
20	1	SIMPAR	Société Immobilière et de Participations
21	1	SITS	Société Immobilière Tunisio-Saoudienne
22	1	ESSOUKNA	ESSOUKNA
23	1	ADWYA	ADWYA
24	0	TPR	Tunisie Profilés Aluminium