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Corporate governance and its impact on strategy diversification and growth in the Saudi non-oil sector

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ABSTRACT

The purpose of this article is to study the influence of internal governance mechanisms on the diversification and growth strategy of Saudi firms in the non-oil sector. Considering a sample of 70 Saudi companies observed over the period 2006-2014 and using the Linear Regression method, correlated panels, corrected standard errors (PCSEs). Our empirical results show the structure of the board of directors that motivates Saudi firms to run less risk and diversify all activities rather than refocus the group's activity. We have shown that the presence of the largest shareholder has a positive effect on the diversification strategy. These results support our basic assumptions that firms with a high concentration of capital favor diversification rather than the risk that accompanies the growth of the firm's overall activities. In line with our reasoning and consistent with previous research, our main contribution is that the control mechanisms are not neutral with regard to the diversification strategy. The verification of these assumptions in the Saudi context makes it possible to enrich the verification of the positive relationship between governance and the diversification of firms.

1. Introduction

Enterprise diversification is the most discussed area of research by the authors (Ramaswamy et al., 2002). It attracts the interest of researchers in several fields such as accounting (Aitken et al., 1997), economics (Wernerfelt and Montgomery, 1988), strategic management (Khanna and Palepu, 2000), and the field of finance (Amihud and Lev, 1981; Denis et al., 1997). For Jensen (1986) and Stulz (1990), the management of diversified and large companies enhances the prestige and power of the manager. Amihud and Lev (1981) suggested that diversification reduces the personal risk of the manager and offers him the opportunity to take root (Shleifer and Vishny, 1989). The manager is therefore committed to diversification even if the maintenance of diversified activities is contrary to the interests of shareholders. Thus, managers would prefer to invest surplus funds in diversification strategies (even unprofitable) instead of distributing these funds to shareholders.

One of the important questions that has been addressed in the majority of research is the one that focuses on the impact of governance mechanisms on diversification strategy. Gyan et al. (2017) found that efficiency is a factor to enhance performance, but it is not the moderating variable on the diversification-performance link. This implies that the efficiency of the firm has no connection with the link between diversification and performance. The academic investigation focused on the analysis of the effect of the ownership structure and the characteristics of the board of directors on the ratio of diversification of companies. Generally, the firm chooses to diversify when the agency costs of equity and debt are reduced (Chandler, 1977; Lewellen, 1971; Amihud and Lev, 1981; Bodnar et al., 1998; Stulz, 1990; Stein, 1997).

The objective of this article is to highlight the impact of corporate governance mechanisms on the level of diversification of a sample of 70 listed Saudi companies over the period 2006 to 2014. Unlike previous studies, we use the de Herfindahl index and the entropy index as a measure of corporate diversification. This paper is structured around 5 sections. The first section introduces the topic with the main relationships to be studied. The second section presents the literature review of the main

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governance variables and their hypotheses to be tested. Section 3 examines the choice of variables and description of the sample. Section 4 presents the results of empirical tests. Section 5 will be devoted to robustness testing. Finally, the last section concludes the work.

2. Literature review and hypotheses to be tested

The ownership structure of the company determines the extent of control exercised by the nature and weight of the shareholders over the diversification of the firm. In this context, capital concentration/dispersion, executive participation, and institutional investors can improve the firm's performance and reduce risk. Thus, the agency costs of equity and the resulting debts are reduced (Michael and William, 1976) and the interests of the various stakeholders will be improved.

Research on the link between shareholding structure and diversification has been conducted in several international contexts and has helped to inform the debate on the role of governance mechanisms in explaining the firm's diversification behavior (Amihud and Lev, 1999; Lane et al., 1999; Berger and Ofek, 1995; 1996; Denis et al., 1997). The results of the tests show that diversification is beneficial for managers and is not advantageous for shareholder control blocks because it contributes to lowering the market value of securities.

2.1. Impact of shareholder control

In the context of agency theory, the concentration of capital plays an important role in explaining the firm's strategic behavior. Indeed, and following several researchers Hill and Snell (1988), Hoskisson et al. (1991), and Denis et al. (1997); the concentration of capital has a negative effect on the diversification of the company's activity. This relationship is explained by several arguments:

- The large shareholders strengthen the firm's core business through investments in research and development.
- According to Anderson et al. (2000), diversification increases in managerial firms whose capital is diluted where the manager exercises significant control.
- A dispersed ownership structure where minority shareholders have little power promotes a diversification strategy (Jiraporn and Gleason, 2007).
- Several empirical tests have supported an inverse relationship between capital concentration and diversification strategy (Mak and Lim, 1999; Lins and Servaes, 1999; Cappa et al., 2020).
- Large shareholders prefer specialization rather than diversification because the latter contributes to the deterioration of the value of the share (Lane et al., 1998; Berger and Ofek, 1996).

Other research has proven this negative relationship in the case of family businesses. Indeed, according to Shleifer and Vishny (1986), Anderson and Reeb (2003a; 2003b), Gomez-Mejia et al. (2010), and Delbufalo et al. (2016), non-family firms are more diversified than family firms where the latter characterized by conservatism in their financial behavior that refuses any recourse to debt that increases the risk in their human and financial capital.

Empirical research has examined the importance of block or significant participation in the control of managers, and thus the reduction of agency costs. The results of this research are mixed. The effect of strategic choices expected through the concentration of ownership is unclear. After Berle and Means (1932) and into the eighties, the literature emphasized the benefits of concentration of ownership. The main concern is the cost of separating ownership and control (Michael and William, 1976). Indeed, as dispersed ownership increases in large companies, the agency problem between shareholders and eaters is becoming more acute due to the uncertainty of information that characterizes this form of contract. On the other hand, there is a broad consensus among researchers that a high degree of control by an external shareholder improves diversification. Shleifer and Vishny (1986) pointed to a weak relationship between the concentration of ownership and the choice of firms to diversify and show that large shareholders have an incentive to oversee the management of the firm and that their presence enhances strategic decisions. Tallman and Li (1996) found a positive relationship between the concentration of ownership and business diversification. However, the relationship is non-linear which indicates that concentration has effects on this choice from a certain level of ownership. Cho (1998) did not detect a significant link between majority shareholder shares and diversification. Other international studies Martín-Ugedo and Minguez-Vera (2014), in the Spanish context, reported insignificant relationships between concentrated ownership and diversification.

H1: The presence of a majority shareholder (as measured by the participation of the^{1st} shareholder) positively influences the level of diversification.

2.2. The participation of the manager and diversification

Following Morck et al. (1988) and Amihud and Lev (1981), the participation of the director in the capital of the company makes it possible to reduce the conflicts of agency of the equity and to align the interests of the manager with those of the shareholders where the creation of shareholder value will affect the wealth of the directors.

However, for certain thresholds of participation of the manager, the latter is tempted to diversify the activity of the firm to minimize the financial risk.

These investments may concern activities that have no relation to the main activity of the firm, the aim being to protect its personal interests at the expense of those of the shareholders. Several authors have distinguished three levels of critical leadership involvement:

- For low levels of participation and dispersion of the ownership structure, the leader moves towards a rooting behavior. In this context, the diversification carried out by the manager allows him to increase the size of the firm and therefore its brand image.
- For low levels of participation and control exercised by controlling shareholders, the manager is tempted by a diversification activity that allows him to minimize the financial risk of his human capital.
- For high levels of participation of the manager; the latter is tempted by the private benefits of control. In this case, the diversification is low. Empirical tests of the impact of the CEO's shareholding on diversification are inconclusive and contradictory in some cases: Denis et al. (1997) put forward a non-linear relationship where diversification decreases and then increases with the evolution of the level of managerial participation.

Other authors find a positive relationship where diversification increases with the share of the manager in the capital of the firm (Johnson et al., 1993; May, 1995; Mak and Lim, 1999)

H2: There is a positive relationship between the participation of the manager and the degree of diversification of the company.

The increase in managerial ownership should be a positive signal to the diversification of the firm because the greater the share of capital held by managers, the lower the differences of interest between shareholders and managers. However, several studies have obtained empirical evidence that shows that when the participation of the manager is at a high level, it is negatively related to the diversification strategy of the company. According to Morck et al. (1988) and Jensen and Ruback (1983), there is a non-linear relationship between executive participation and this strategy and suggests that the higher the managerial ownership, the lower the level of diversification of the company.

2.3. Effect of institutional investors

The shareholding structure today is essentially based on the existence of institutional investors who today hold the highest fraction of securities listed on the financial markets, namely Insurance Companies, Banks, Undertakings for Collective Investment in Transferable Securities, and Pension Funds. Conflict of interest assumptions and alignment strategies suggest a negative relationship between institutional ownership and the company's diversification strategy. Bathala et al. (1994) and Seetharaman et al. (2001) suggested that institutional investors have a significant impact on management activities as well as on solving agency problems. Pound (1988) and Mcconnell and Servaes (1990) argued that institutional ownership serves as a signal for strategic decisions. As a result, the greater the institutional ownership, the better the diversification of the company. Pound (1988) put forward the idea that the presence of institutional investors in the ownership structure reinforces the control exercised over the manager at a lower cost and forms a source for the most wealth-creating strategies. Ramaswamy et al. (2002) showed a sample of Indian companies and different forms of shareholders whose institutional investors hold a significant stake in some countries, and there is no systematic diversification profile that is associated with a well-defined form of shareholding.

H3: The participation of institutional investors INST: Measured by the percentage of capital held by financial institutions (banks, insurance, etc.) positively influence the diversification strategy.

2.4. Impact of board size

According to Faleye (2004), a council is simply a group of individuals who work together to achieve a common goal. Hence, its success depends on the dynamics of this group and its interaction. The size of this board is a very important feature as it can have an impact on this dynamic. By combining board size with company diversification measures, Yermack (1996) demonstrated that there is a significantly negative relationship. Hence the hypothesis:

H4: The size of the board of directors has a positive impact on the diversification strategy.

2.5 Participation in AEXT

An external director must not have significant contractual relations with the company, he is supposed to play a more important role than an internal director in the control of managers since he is not a shareholder or former manager in the company. According to Fama (1980), an external director is a professional arbitrator whose main task is to stimulate and control competition among the company's senior management. Thus, they are more effective than internal directors in controlling and disciplining executives (Rosenstein and Wyatt, 1990; Byrd and Hickman, 1992). Indeed, Godard and Shatt (2004) put forward the idea that external directors have an important role in the sustainability of the effectiveness of the board, hence the diversification of the company.

H5: The presence of external directors has a positive effect on the diversification of companies.

3. Choice of sample and measurement of variables

3.1. Description of the data

3.1.1. Sample description with characteristics of Saudi context

The sample of the study includes 70 Saudi companies listed on the TADAWUL Stock Exchange, observed over a period of 9 years (2006-2014) or 630 company-year observations. We chose this period because it was marked by a wide range of cross-cutting and sectoral initiatives aimed at modernizing and diversifying the economy. The continuation of these initiatives aimed at improving the competitiveness of the non-oil sector remains important. In addition, Saudi Arabia has abundant natural resources and a booming consumer market, and ideal tax conditions to develop growth and strategic activities. The data is obtained manually on the "Argaam.com" website and the "Tadawul.com" website. We exclude financial institutions because banks and insurance companies are subject to specific rules and regulations and their growth plans are different from industrial firms and other sectors.

Table 1 shows sample distribution by the business sector.

Table 1: Sample distribution by business sector

Business sector	Frequency
chemical Industries	12
Cement	8
Agriculture and Food Industries	13
Industrial Investment	12
Building and Construction	12
Retail	8
Others (Real Estate Development, Telecommunication, and Information Technology)	5
	70

3.2. Choice of variables

3.2.1. Diversification's strategy

To assess the degree of diversification of a firm between its different activities, previous research has proposed two possible approaches:

- Let be a typology of Rumelt (1974).
- Either a measure based on indices such as the Herfindahl index or the entropy index.

According to Pupion (1996), the use of a strategic index to measure diversification must respect at least four characteristics or axioms: (i) an index is between 0 and 1, (ii) it is 1 if there is a specialization on a pole of activity, (iii) it is 0 if there is perfect diversification, (iv) a preorder relationship where it is possible to check whether $x_i<y_i$ it implies $I_i<I_j$ (where, x_i is share of activity and I_i is level of investment).

In order to ensure the consistency of the analysis, we retain in the following the second approach based on indices (Ramaswamy et al. 2002; Delios and Wu, 2005). According to Bethel and Liebeskind (1993), both measures are frequently important in analyses of diversification or industrial group refocusing strategies.

- Diversification measured by the Herfindahl Index (DivHerf): This measure uses the Herfindahl Concentration Index to measure diversification.

$$\text{DivHerf} = 1 - H \quad (1)$$

$$\text{H} = \sum_{i=1}^{n} Pi^2 \quad (2)$$

where P_i measures the proportion of the turnover of the activity (x_i)in relation to the income of industry, n being the number of activities of the enterprise. Herfindahl's diversification appears to be complementary to the concentration of the company's activities, which means according to this measure that the total diversification and concentration must be equal to unity. Several authors have used this method (Lang and Stulz, 1994; Comment and Jarrell, 1995; Denis et al., 1994).

$$\text{DivHerf} = 1 - \sum_{i=1}^{n}(\text{xi}/X)^2 \quad (3)$$

- Diversification measured by the entropy index (Entropy): This is a measure proposed by Palepu (1985).

$$ENTROPIE = \sum_{i=1}^{n} \text{Pi}\ log\tfrac{1}{\text{Pi}} \quad (4)$$

where P_i represents the share in the turnover of the enterprise in the ith industry. This index cancels out when the enterprise is active in a single industry and takes the log value n when its total income is distributed equitably between n industries in which it is active. The advantage of such a measure lies in its property of decomposing the value of the index into types of constituent elements corresponding to the different levels of activity.

3.2.2. The growth strategy

The rate of change, or growth rate, is an economic indicator used to measure the growth of the Enterprise from one year to the next. It is defined by the following formula that connects the turnover of year N and year N-1:

$$\text{Growth} = {(CA_t - CA_{t-1})}/{CA_{t-1}} \quad (5)$$

The evolution of turnover is an essential parameter in strategic analysis. Depending on whether this turnover is growing strongly, stagnating, or decreasing, the company's problems will not be the same. In very strong growth, the company will, for example, be faced with an increase in operating expenses and financial needs. The evolution of turnover is calculated based on the difference between the turnover of year N and that of the previous year or N-1. The result obtained is then multiplied by 100 before being divided by the

turnover of N-1. Different analyses can be conducted, in volumes or quantities sold, depending on prices, internal or external growth, or exchange rates. In addition, Nickell (1996) found that there is some evidence that increased competition in the market for goods and services is associated with the firm's strong productivity growth. Similarly, Demsetz (1983) showed that the lack of competition between market goods and services and the low level of corporate governance are the two important reasons for the disappearance of productivity growth in Europe. In the same vein, Demsetz (1983) showed that the diversion of company resources by managers has a remarkable effect on production costs. As a result, the company loses its competitiveness, and its risk of bankruptcy will be greater.

3.2.3. Explanatory variables

Governance variables at the literature level and various internal corporate governance mechanisms are well documented (Vijayakumaran, 2019). It is mainly the stakeholders in the operation of the company who can control the decisions made by the leaders.

We distinguish between the concentration of shareholding, the presence of reference shareholders, the participation of the director and that of institutional investors, and the composition and size of the board of directors.

a. The ownership structure encompasses three main variables:

-The concentration of the control block by the first shareholder
-The participation of the manager
-Participation of institutional investors

b. Characteristics of the Board of Directors**:**

-The size of the board
-Independence of the Board

c. Control variables: In accordance with previous empirical studies and consider the importance and financial and economic relevance of these variables in our study size, debt, and profitability. These three variables are assessed based on the consolidated amounts.

The size of the company: The main characteristics of a large company are diverse (the ability to exploit economies of scale, and the formalization of procedures). These characteristics, by making the implementation of operations more efficient, allow large firms to generate superior performance compared to small firms (Penrose, 1959). Other views suggest that size is correlated with market power, leading to relatively lower results. The size of the enterprise is considered an indicator of economies of scale. If these savings exist in the firm's activities. The size of the enterprise: SIZE=it *is* measured by the Natural Logarithm of total assets. Amit and Wernerfelt (1990), Rajan and Zingales (1995), Huang and Song (2006), and Nguyen and Ramachandran (2006) showed the positive impact of company size on diversification strategy across ownership structures. In contrast, Titman and Wessels (1988) and Booth et al. (2001) found evidence of a negative relationship between firm size and firm diversification.

Debt: The role of debt in corporate performance, has been one of the main objectives of contemporary research for more than fifty years. However, this role remains a questionable topic that attracts the attention of many researchers such as Goddard et al. (2005), Berger and Di Patti (2006), Weill (2008), Margaritis and Psillaki (2010), and Kebewar (2012). In theory, the debt ratio can be measured in different ways, total debt ratio, short-, medium- and long-term debt ratio. In our study, we define the total debt ratio by dividing the sum of long-term debt by total assets (Chang and Hong, 2000; Gedajlovic and Shapiro, 2002). Chkir and Cosset (2001) concluded that diversification is associated with high levels of debt. Singh and Nejadmalayeri (2004) found a significantly lower level of indebtedness, also confirmed by Burgman (1996) and Chen et al. (1997), the latter observe a negative link between diversification and indebtedness. We measure this variable by the ratio of Non-Current Liabilities to Total Assets.

We assume a negative effect of debt on diversification:

Profitability: Prof=return on equity–interest rates. According to order theory, profitable firms tend to raise more funding from internal than external resources. Highly profitable firms, in need of capital, generally give priority to the use of available internal resources (Myers and Majluf, 1984). Therefore, profitability and diversification should be negatively correlated.

3.2.4. Variables to be explained

- It appears that the average value of diversification measured by the Herfindahl index of 0.4 reflects a situation of Saudi companies not highly diversified and this is also confirmed by the maximum value of this variable which reaches a value of 0.5 (differ from 1 totally diversified).
- The second measure of diversification proposed by the Entropy Index confirms our conclusions about the average diversification of Saudi companies since the average value of this variable did not exceed 60% in absolute terms.

3.2.5. Explanatory variables

Property Structure Variables: Table 2 also shows institutional investors such as banks, insurance

companies, financial companies, and investment companies have a significant stake in the capital of Saudi companies since the average value of these investors exceeds 20% with a maximum value of 85%. These investors, given the importance of their participation, can go beyond their traditional role of supervising managerial actions. For majority shareholders, the average value of this variable exceeds 70%, which explains a high level of concentration of Saudi companies that can in some cases a capital held entirely by the majority shareholders. For the variable participation of managers, descriptive statistics show that the situation of the director of Saudi companies oscillates between a salaried director who has no stake in the capital and a majority shareholder manager whose participation can reach 75%.

Variable of the Board of Directors: Regarding the variable board size, our sample shows that Saudi companies are characterized by an average board size of 8 members with a maximum of 20 and a minimum value of 3 members. According to some authors, Lipton and Lorsch (1992) suggested an ideal board size of between 8 and 9 directors.

This idea is not confirmed by Jensen (1993) who argued that a board size exceeding 7 members and easily controlled by the leader and therefore less effective. In addition, the percentage of external directors is equal to the average for Saudi companies of 34% with a minimum value of zero and a maximum value of 100%. Unlike other studies, these values do not confirm with certainty that independent shareholders play an important role in the governance of Saudi companies.

3.3. Descriptive statistics

Table 2 shows descriptive statistics.

Table 2: Descriptive statistics

Stats	Mean	Min	Max	p50	Skewness	Kurtosis
divherf	.4020717	.0428015	.5	.4329266	-1.223369	4.15795
divtropi	-.5871295	-.6931472	-.1052662	-.6244874	1.517327	5.486647
inst	.2060635	0	.855	.11415 .	1.022059	2.839261
bloc	.7191547	.039	1	.8025	-.7440623	2.29088
ind_ca	3410872	0	1	.3333333	.2036727	2.177828
Siz_ca	8.085714	3	20	7	.7884119	3.058112
Bolc1	.4896184	.0511	.96	.4982	-.0460719	2.262294
mow	.1620994	0	.758	.0237	1.272064	3.232852
size	9.28262	7.730839	11.53153	9.234464	.602616	3.32746
tdebt	.1756666	0	2.586795	.1232891	3.877036	39.05768
Prof	.0964986	-.3138876	1.102755	0913228	1.626017	17.98053

Description of the models to be estimated: Based on previous empirical studies, we considered the following specification:

$$Diversification_{it} = \alpha_0 + \alpha_1 \text{Governance} + \alpha_2 \text{Control Variables} + \varepsilon_{it} \quad (6)$$

$$Growth_{it} = \beta_0 + \beta_1 \text{Governance} + \beta_2 \text{Control Variables} + \varepsilon_{it} \quad (7)$$

for a sample of 70 companies observed over a period of 9 years, allows us to write the econometric form of our models:

$$\text{DiveHerf}_{it} = C + b_1 INST + b_2 BLOC1 + b_3 MOW + b_4 SIZE + b_5 Tdebt + b_6 Prof + u_{it} \quad (8)$$

$$\text{DivEntropy}_{it} = C + b_1 INST + b_2 BLOC1 + b_3 MOW + b_4 SIZE + b_5 Tdebt + b_6 Prof + u_{it} \quad (9)$$

$$\text{Growth}_{it} = C + b_1 INST + b_2 BLOC1 + b_3 MOW + b_4 SIZE + b_5 Tdebt + b_6 Prof + u_{it} \quad (10)$$

$$\text{DiveHerf}_{it} = C + b_1 TAILLE + b_2 IND\ CA + b_3 SIZE + b_4 Tdebt + b_5 Prof + u_{it} \quad (11)$$

$$\text{DiveEntropy}_{it} = C + b_1 TAILLE + b_2 IND\ CA + b_3 SIZE + b_4 Tdebt + b_5 Prof + u_{it} \quad (12)$$

$$\text{Growth}_{it} = C + b_1 TAILLE + b_2 IND\ CA + b_3 SIZE + b_4 Tdebt + b_5 Prof + u_{it} \quad (13)$$

with i=1, …, 70; t= 2006-2014.

The models (8) (9) and (10) are estimated respectively in the regressions (reg1, reg2) and (reg3, reg4) of Table 3. The models 11, 12, and 13 are estimated respectively in the regressions (reg5, reg6, reg7, and reg8) of Table 4.

4. Results of estimates and interpretations

The results of the estimates also show that the variable (INST), has a positive and significant effect in regression 1 (of the DivHerf) and a significant negative in regression 2.

Table 3: Impact of the ownership structure on the diversification strategy and growth of Saudi companies

	Regréssion1 DIVHERF	Regression2 DIVENTROPAND	Regréssion3 GROWTH>0	Regréssion4 GROWTH<0
C	.5964557 [a]	-.8082803 [a]	.1256551	-.9335997 [a]
INST	.0429187 [a]	-.0501103 [a]	-.1229845	.0177813
BLOC1	.0461339 [a]	-.0529511 [a]	.0678508	.0871661
MOW	.0374256 [a]	-.0443156 [a]	-.1564356	.0082822
SIZE	-.0267339 [a]	.0305177 [a]	.014757	.0671342 [b]
TDEBT	-.0065895	.0059522	.2279971	-.2568256 [a]
PROF	.180687 [a]	-.2046033 [a]	-.1025799	.1279761
R^2	0.1172	0.1147	0.0242	0.0499

Note: Significance thresholds for variables (1%)[a], (5%)[b], (10%)[c]

This confirms (for the first measure of diversification) the study carried out by Omri (2003), which showed that institutional investors holding significant shares of capital are more involved in the control and management of companies. In addition, these institutional investors influence the ways in which companies are organized through their skills in multiple areas, which consequently improves firms' diversification strategy. Our result for the second measure of diversification confirms the work of Denis et al. (1997) which validated the existence of a negative relationship between the degree of diversification and the presence of institutional investor control blocks.

Regarding the growth of the company's core business, our results show that institutional investors are not significant for both forms of growth.

In this test (Table 3) we consider the problem of the presence of large shareholders in the ownership structure and its impact on the company's diversification behavior. We expect ownership concentration to reduce capital agency conflicts, limit executive discretionary behavior, and improve the company's strategic decisions. We note that the participation of the 1st shareholder has a significant positive impact (for the first measure) and a negative and significant impact (for the second measure) on the diversification strategy. This result is verified in the two diversification measures: DivHerf or Entropy. However, the values of the coefficients taken in the first measure of diversification are higher than those obtained in the second. This result invalidates our basic hypothesis for the Herfindahl measurement and confirms the measurement of entropy. These conclusions confirm those obtained by Shleifer and Vishny (1986). Claessens et al. (2000) have shown in the context of the Czech Republic that the concentration of ownership has improved the level of profitability and diversification of firms. On the other hand, Goud (2002), in a study of 25 countries of the Soviet Union did not find significant results, due to the presence of the problem of endogeneity. Similarly, Kuznetsov and Murav'ev (2001) analyzed Russian family businesses and concluded that the concentration of ownership at high technical efficiency, however, has a negative impact on the diversification of the enterprise. Pervan et al. (2015) examined the relationship between the choice of a diversification strategy and business ownership in Croatia and argue that concentration of ownership is negatively related to diversification. Other European studies have measured the impact of ownership concentration on the diversification of companies listed on the Budapest Stock Exchange and have found that the presence of large holders of blocks of shares makes it possible to increase the profitability and efficiency of companies strongly and monotonously. However, when the concentration of ownership is represented by smaller blocks, this relationship is not statistically important. Anderson et al. (2004) explored the relationship between ownership structure and diversification between firms in Sweden and find no conclusive results. In addition, the participation of the 1st shareholder has a positive but not significant effect on the growth of the company. This finding supports our hypothesis that control blocks favor the risk that accompanies the growth of the core business rather than diversifying the company's overall activities.

We also note that the participation of the manager in the capital (MOW) is significant in the models studied above, where it has a positive effect for Herfindahl and negative for entropy, which confirms our hypothesis H3 and invalidates the study conducted by Morck et al. (1988) and Jensen and Ruback (1983), which suggested that the participation of the director is negatively related to the strategic choice of the company.

For Nguyen (2018), the results showed that if executive ownership for CEOs is increased, then the extent of diversification is likely to be reduced. Our result is that managerial participation is associated with a divergence of interests with large shareholders. This observation supports the idea of risk aversion of the manager who hesitates to take additional risks when they hold a share of the capital. This conclusion is not consistent with the work of Agrawal and Mandelker (1987), Hill and Snell (1988), Johnson et al. (1993), and Denis et al. (1997). Nahda and Rahmadana (2021) showed that cost advantages occur in diversified firms, including higher debt ratios in the firm's capital structure. The participation of the manager has a negative and significant effect on the growth of the main activity this result confirms the study conducted by Morck et al. (1988) and Jensen and Ruback (1983), which suggested that the participation of the manager is negatively related to the strategic choice of the company and positively to the growth of the main activity.

Table 4: Consulting impact on the diversification strategy and growth of Saudi companies

	Regréssion5 DIVHERF	Regression6 DIVENTROPIE	Regréssion7 GROWTH>0	Regréssion8 GROWTH<0
C	.1828621	-.3023951[c]	4.032827[a]	7.221436[a]
AC SIZE	.0035514[b]	-.0040372[b]	-.0144655	-.0084278
IND CA	-.0300528[c]	.0385785[c]	-.0499292	-.0551215
SIZE	.0210743	-.0279289	-.4075462[b]	.7618309[a]
TDEBT	-.0324468[c]	.0355151	.268429	.0623623
PROF	.1121291[b]	-.1267881[b]	.992812[c]	.1687174
R^2	0.0284	0.0277	0.0401	0.2611

Note: Significance thresholds for variables (1%)[a], (5%)[b], (10%)[c]

We note that the empirical results of the variable board size (TCON), show a significantly negative relationship with Entropy and which confirms the work of Jensen (1993), Yermack (1996), and Wintoki (2007), who have successfully proven the existence of a negative relationship between the size of the board and the strategic choice of diversification. However, our results prove a significantly positive relationship with DIVHERF, and this is in line with our basic assumption (H4), and with those of Adams and Mehran (2003) and Louizi (2006) stating that the size of the board of directors has a positive impact on the strategic choice.

For the impact of the board size on the growth of the main activity, we notice a negative effect in both forms of growth but not significant. This result confirms our initial inferences of the importance of governance mechanisms in explaining diversification rather than growth in core activity.

The percentage of external directors (AEXT) have positive and significant relationships with diversification measured by ENTROPY, which corroborates with our hypothesis (H5)

This result is not verified by the measure of the DIVHERF which shows a significant negative effect on diversification where the presence of these directors makes it possible to increase the control and supervisory actions and therefore limits any possibility of extension accompanied by a discretionary behavior of the director.

Regarding the impact of firm size on diversification (SIZE), some authors consider larger firms often achieve greater diversification: economies of scale, economies of range, market power, learning, and experience effect. A firm's credit score is less dependent on international diversification for large firms, firms in the manufacturing sector, and firms distant from London (Halabi et al., 2021). In addition, these large firms have the means and capabilities to invest in the most efficient and sophisticated governance systems, since they have the significant resources to easily enter new markets. For our case, the relationship is positive and significant for the two measures of diversification entropy and DivHerf and growth. This result is confirmed by the tests carried out by De Miguel et al. (2004) which showed a significant effect of size in explaining the diversification strategy.

Our results show a negative impact of debt on the level of diversification. The level of indebtedness does not seem to play a fundamental role in the choice of a diversification strategy. The decline in the use of debt less and less is explained by the fact that owners, whether large shareholders, institutional investors, or family shareholders, are averse to any form of debt-financed international expansion whose financial risk is added to the other categories of risk related to diversification. The negative and significant effect of debt also reflects financing situations by self-financing or by issuing shares are more likely than the use of debt to meet strategic investment needs. This result is contrary to the hierarchical financing theory which supports a priority of indebtedness over the use of share issuance. In this context, our results also show that the profitability variable is significantly positive, and this does not corroborate with our hypothesis and with the work from which they suggested that profitability and diversification should be negatively correlated.

However, many researchers have agreed that there is no agreement on the precise nature of the relationship between diversification and performance (Makidies and Williamson, 1994; Palich et al., 2000). Some have shown that the study of diversification improves profitability over time (Thomas and Chang, 1989; Lubatkin and Rogers, 1989) where researchers have demonstrated that diversification decreases performance (Michel and Shaked, 1984) while other studies have shown that the diversification performance link depends on the firm cycles (Collin and Bengtsson, 2000; Nguyen, 2018). Becerra and SantalÃ (2004) conceptually explained and provided empirical relationships (positive, negative, or even quadratic) that exist between diversification and performance.

Table 5 shows the Robustness tests usage governance score.

Table 5: Robustness tests usage governance score

	Regréssion1 DIVHERF	Regression2 DIVENTROPAND	Regréssion3 GROWTH
C	.5111323 [a]	-.7064404 [a]	-.71607 [a]
GOVS	-.0079536	.0097583 [c]	.008246
SIZE	-.0103759	.0111364	.0795212 [a]
TDEBT	-.031935 [c]	.0347278	.0398725
PROF	.1170404 [a]	-.1323919 [a]	.4130948 [b]
R^2	0.15	0.1478	0.0842

Note: Significance thresholds of variables (1%)[a], (5%)[b], (10%)[c] , SGOV = sum of dummy ow variables and sum of dummy council variables

Our results show that the quality of governance as measured by GOVSCOR is significant and plays an important role in explaining the diversification of Saudi companies. In this context, firms characterized by a good governance system are more willing to reduce the overall risk by diversifying all the activities of the company, in addition, the quality of governance limits the discretionary behavior and the private benefit of control of large shareholders by developing the activities of the firm rather than seeking a riskier concentration.

5. Conclusion

The purpose of this paper is to analyze the effect of internal governance mechanisms on the firm's diversification and growth strategy. Empirical testing of our baseline results involved 70 Saudi firms in the non-oil sector.

We have shown that the presence of the largest shareholder has a positive effect on the diversification strategy. These results support our basic assumptions that firms with a high concentration of capital favor diversification rather than the risk that accompanies the growth of the firm's overall activities.

These implications are also verified by the presence of institutional investors who are involved in the control and management of firms through their skills, which reduces risk and improves diversification. On the other hand, the participation of managers in the capital of the firm motivates them to reduce risk and further develop the growth of the firm.

Regarding board characteristics, our empirical results show that board size has a significantly positive effect on the diversification ratio. About the percentage of external directors also has positive relationships, which corroborates our assumptions that the board of directors makes it possible to increase control and supervisory actions and therefore limits any possibility of excess risk through a better diversification strategy.

Finally, all our empirical tests validate the hypothesis that governance mechanisms via the characteristics of the ownership structure and that of the board of directors promote better control of the firm's risk through the development of diversification strategies for all the firm's activities.

In line with our reasoning and consistent with previous research, our main contribution is that the control mechanisms are not neutral with regard to the diversification strategy. The verification of these assumptions in the Saudi context makes it possible to enrich the verification of the positive relationship between governance and the diversification of firms.

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Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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