EFFECT OF CORPORATE GOVERNANCE ON THE FIRMS' STRUCTURAL CAPITAL

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Abstract

The study seeks to understand how the firm's ownership structure and the board of directors' composition influence the structural capital. The latter is apprehended by two main levers: innovation ("R&D") and firm's reputation. By mobilizing several panel linear regressions on 274 American firms, the results show that the firms which heavily invest in structural capital are more successful and chaired by the younger and heterogeneous TMT. No disciplinary effect of the board on structural capital has been found. The results support the cognitive theory assumptions. The classic perspective failed to explain the structural capital phenomena. In order to enhance their structural capital, firms must pay a close attention to their board cognitive contribution and not to its disciplinary role.

Keywords: Corporate Governance, Cognitive Approach, Structural Capital, Innovation, Reputation

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Introduction

The main purpose of the present paper is to study the effect of firms' governance (composition of the board of directors and ownership structure) on their structural capital. The structural capital is defined as "the packaging" of the human capital. It consists in both the "organizational capital" and "the relational capital". The "organizational capital" is, in turn, composed of the "process capital" and the "innovation capital". The latter is usually measured by the R&D expenditures. The R& D activity allows the firms to improve their productivity, succeed in competitive markets and meet environmental requirements. R&D has also contributed to the development of new products and, in many cases, the creation of new markets. The "relational capital" can be apprehended by the firm's reputation. In fact, the reputation plays an important role in legitimizing the organizations, developing a relationship based on faithfulness with customers and attracting better partners.

The current work will investigate the different perspectives of the theory of corporate governance in the framework of the two main levers of the structural capital: Innovation (internal structure) and Reputation (external structure). In particular, it proposes to explain the determinants of firm's innovation and reputation. In this regard, it seeks to highlight the impact of certain mechanisms of governance on these issues.

The contribution of the article is to combine two themes belonging to different fields of study (finance: corporate governance and management: structural capital). In addition, these topics attract today the greatest attention of academicians and researchers due to the increased importance of the intangible capital and the governance issue. In fact, corporate scandals of numerous firms have maintained public and political interest in the regulation of corporate governance since the Enron collapse in 2001 (Anup & Sahiba, 2005).

The paper will be divided into two sections. The first will present the hypotheses to be tested which are based on the theoretical arguments of different approaches of governance. The second will be devoted to the description of the research models and the results which will be the subject of a detailed interpretation.

Conceptual framework and hypothesis

1.1 - The Effect of Governance on the Structural Capital: The Contractual Approach View Point

1.1.1. The Composition of the Board of Directors as the Main Determinant of the Structural Capital

Duality: According to the agency theory, the managers who hold of a dual position have an unmeasured power which allows them to satisfy their self interests by decreasing the investment in R&D which may damage the company's reputation (Jensen & Mecking, 1976). By contrast, the theory of normal succession assumes that the duality allows a better strategic decision and does not

systematically lead to harmful activities (Vancil, 1987).

Size of the board of directors: The agency theory assumes that the boards of directors of small size exercise a more effective control. These boards are likely to enhance the firm's reputation and promote innovation by taking the appropriate decisions.

Presence of outsiders: A great majority of researchers advocate "the effectiveness of the outsiders" hypothesis which is supported by the agency theory and associated the presence of the outsiders with a triple advantage: the opening of prospects, the experience and the independence (Fama, 1980; Fama and Jensen, 1983). The presence of outsiders stimulates innovation (Baysinger, Kosnik & Turk, 1991; Tylecote and Visintin, 2008). In this respect, Kosnik (1990) argued that the outsiders are more likely than the insiders to impose their choices in favor of the shareholders' interests by reducing the managers' resistance to changes and to the risky investments of "R&D".

The proponents of "the managerial hegemony" hypothesis, however, found that the managers dominate the board of directors (Lin and Hsing, 1997; Monks and Minow, 1995) and the outsiders tend to prefer the non risky projects in order to preserve their reputation. This behavior can be prejudicial to the stocks' value because "eliminating the most risky projects can in some cases lead to eliminating the most profitable ones".

Hypothesis 1: The level of the structural capital of a firm depends on the composition of its board of directors (Duality, size and percentage of outsiders).

1.1.2 The Ownership Structure as the Main Determinant of the Structural Capital

Concentration of capital: According to the agency theory, the presence of the "Blockholders" reflects the effectiveness of the control of the board. The effect of the concentration of capital on investments in "R&D" is subject to two conflicting perspectives. According to the agency theory, the presence of blockholders should be reflected through an increase in the "R&D" investment (Cook and Deakin, 1999; Crespi, 2004; Hill and Snell, 1988). But the dominating shareholders can agree with the managers to maximize their own interests by reducing the investments in "R&D"(Pound, 1988; Shleifer and Vishny, 1997).

Managerial ownership: According to the theory of entrenchment, the managers who possess bigger share capital can take advantage of their supremacy to conduct the investment policies in the direction of achieving their own goals by reducing the amount devoted to "R&D". This is opposed by the theory of the interests' convergence (Salancik and Pfeffer, 1980).

Institutional ownership: The institutional investors have recently emerged to reduce the managerial supremacy (Gompers et al., 2003). The attitude of these institutional investors towards the risk is subject to two contradictory alternatives. According to the dominant "efficient control" hypothesis, the institutional investors who highly contribute to the capital urge the managerial coalition to act in the interest of shareholders and partners (Pound, 1988) by profiting from the "R&D" (Eng and Shackell, 2001). These comments are not valid if the institutional investors have business relationships with the managers (assumption of the strategic alignment).

According to the theory of the "myopia of the institutions", the institutional investors are considered as transitional shareholders who are looking for short-term profits (Bushee, 1998). Graves (1988) noted that the "R&D" expenses are small in the firms strongly held by institutional investors in order to limit the risk of the firm and keep the financial interests of the companies they represent (especially if these investors are creditors of the firm).

Outsiders' ownership: The more important their ownership in the company is, the more attentive the outsiders become in controlling the managers so that to lead them to undertake risky and innovative activities (Filatotchev and Bishop, 2002).

Hypothesis 2: The level of the structural capital of a firm depends on its ownership structure (presence of blockholders, institutional investors, managers and outsiders in the capital).

1.2 - The Effect of the Board of Directors on the Structural Capital: The Cognitive Approach View Point

According to the cognitive approach, the TMT tenure is considered as indicator of its competence (theory of human capital). Indeed, the relationship between the TMT and the shareholders is not hostile. Their objectives are converging towards the continuous prosperity of the company. In this context, the role of discipline of the board yielded to a role of developing and organizational learning. According to the "stewardship theory" and the "circulation of power model", the insiders are able to exercise an effective control over the TMT. On the other hand and with reference to the "CEO succession theory", duality does not systematically damage the companies' performance. The board of great size seems to be favored by the stakeholder theory because they generate cognitive conflicts and alternative political coalitions which may create a fruitful organizational learning. The vehicles of entrenchment can be seen as vehicles of skills

acquisition. Thus the role of governance is to help managers improve firm's performance by stimulating innovation and collective learning. The board of directors must have a strategic and external vision to adapt the firm to its environment. They also have to be involved in providing innovation strategies and go beyond the financial control to exercise a strategic control. Thus, the composition of directors' board and the ownership structure of the company (supposed to reflect the power of the board and the magnitude of the financial interests of directors), do not necessarily have a significant effect on innovation. According to the cognitive perspective, reputation is based on the strategic considerations of innovation, organizational learning and relational capital. This contradicts the classical theory which bases reputation on financial and economic aspects. In fact, the board must play an active role in running the company whose effectiveness mustn't be conceived in terms of independence of the control (contractual approach) but in terms of cognitive contribution. In the absence of some levers of effectiveness of the board, significant levels of "R&D" and reputation can be enrolled. Thus, it does not seem necessary to follow the standards of governance (in the shareholder meaning) so that the company can enhance its intellectual capital.

Hypothesis 3: The structural capital of a firm is not necessarily related to the effectiveness of its board of directors (in the contractual meaning).

1.3 - Other Determinants of Structural Capital

In addition to governance, the human capital and remuneration should determine the "R&D" intensity and the reputation. Indeed, the better paid managers are more likely to invest in the "R&D" and to improve the reputation of their firms (Cheng, 2001). This holds true for the "Stock options" because the managers whose compensation is focused on "stock options" are more engaged, committed and responsible. Thus, they deal attentively with the firm's "R&D" and reputation.

Hypothesis 4: The "R&D" intensity and the reputation depend on the nature and the importance of compensation granted to the TMT.

Age and tenure are not only perceived as indicators of the managers' experience but also as a proof of their narrow prospects. Thus their impact on innovation and reputation seems to be controversial (Barker and Mueller, 2002; Hayes and Abernathy, 1980; Porter, 1990; Reinmoeller, 2004; Schoenecker *et al*., 1995).

Hypothesis 5: The "R&D" intensity and the reputation depend on the TMT demographic characteristics.

Finally and according to "Upper Echelons" theory, heterogeneity generates a cognitive conflict which enriches discussions and yields better decisions. It may, however, generate affective conflicts which mess up the working conditions.

Hypothesis 6: The TMT demographic heterogeneity is linked to the "R&D" intensity and the firm's reputation.

2 - Research methodology and results

We will present in this section the models, the research variables, the methodological approach and the main results obtained.

In order to test the range of the hypotheses displayed, we need to clarify the determinants of the "R&D" intensity and the firm's reputation. This is done by using a set of linear regressions for panel data (274 American firms from the Most Admired of the "Fortune" magazine and 8 years running from 1997 to 2004).

Our basic models are the following:

Innovation (R&D) = f° (Governance, Sales, Compensation of managers, TMT Heterogeneity & Demographic Features, Control variables)

Reputation Score = f° (Governance, Performance, Sales, TMT Heterogeneity & Demographic Features, Control variable).

The 1st table describes the variables used in the regressions.

Table 1. Description of the variables used in the regressions

	Variable Name	*Measure*
Dependent Variables		
Innovation	lnrd	Napierian Logarithm of the amount of "R&D"
Reputation	score	Reputation Score published by the "Fortune" magazine
Independent Variables		
Governance		
Board Size		Number of directors in the board (insiders + outsiders)
Duality (Binary variable)		= 1 if the chairman of the board is the CEO and = 0 otherwise
Percentage of outsiders in the board		Number of outsiders / Board Size
Percentage of majority individual		Number of majority individual shareholders / Board Size

shareholders in the board		
Percentage of institutional shareholders in the board		Number of institutional shareholders / Board Size
Outsiders' ownership		Number of shares held by the outsiders / Total number of shares in circulation
Managerial ownership		Number of shares held by the managers and directors / Total number of shares in circulation
Majority ownership (Majority shareholders ownership exceeds 5%)		Number of shares held by the individual majority investors / Total number of shares in circulation
Institutional ownership		Number of shares held by the institutional investors / Total number of shares in circulation
Performance	roa	Return on Assets [(Income Before Extraordinary Items / Total Assets) * 100].
	npm	Net Profit Margin (Income Before Extraordinary Items / Revenues) * 100
	mtob	Market to Book (Unitary Price – Monthly – Close /Ordinary Equity divided by Common Shares Outstanding)
Compensation	lnrem	Napierian Logarithm of the total remuneration paid to the TMT (The 1st five senior managers)
	salr	The proportion of salary (granted to TMT) compared to their total remuneration
	bonusr	The proportion of the bonus (granted to TMT) compared to their total remuneration
	cashr	The proportion of the cash (granted to TMT) compared to their total remuneration
	bsoptr	The proportion of options (granted to the TMT) compared to their total remuneration
Demographic characteristics	age	Average TMT Age
	tenpst	Average TMT Tenure in current position
	tenfirm	Average TMT Tenure in the firm
Demographic Heterogeneity	hettp	Heterogeneity of tenure in the team (tenure max - tenure min)
Control Variables		
Firm Size	lnemp	Napierian Logarithm of Number of employees
Growth of firm Size	sevemp	Sign of evolution in the number of employees (Binary variable : takes the value 1 if the growth of employees compared to the previous year is positive and 0 otherwise)
Revenues	lnrev	Napierian Logarithm of sales
Revenues Growth	erev	It is a binary variable. It takes the value 1 if the growth of sales compared to the previous year is positive and 0 otherwise
Debt	debt	The value of the debt reported to the value of total assets
Activity Sector	isect1	It takes the value 1 if the firm belongs to the sector "Basic materials" and 0 otherwise
	isect2	It takes the value 1 if the firm belongs to the sector "Basic materials" and 0 otherwise
	isect3	It takes the value 1 if the firm belongs to the sector "Consumer Goods" and 0 otherwise
	isect5	It takes the value 1 if the firm belongs to the sector "Healthcare" and 0 otherwise
	isect6	It takes the value 1 if the firm belongs to the sector "Industrial Goods" and 0 otherwise
	isect8	It takes the value 1 if the firm belongs to the sector "Technology" and 0 otherwise

Note: The Technology sector (8) is omitted in the different regressions in order to eliminate the problem of Collinearity. The interpretation will be conducted relatively to this sector. The financial sector (4) is eliminated because it is subject to specific regulations and the services' sector (7) containing a single firm in our sample is reclassified and assigned to the sector 2 of the conglomerates.

To perform our regressions, we applied a specific procedure for the panel regression[12]. We will present the adopted estimations after detecting and solving the problems. For the sake of clarity,

[12] We have applied the following approach:
Perform the test of VIF to detect a potential problem of collinearity
analyze the type of relationship (linear, quadratic or cubic) between the dependent variable and each independent variable
Estimate the model by individual fixed effects (test of Fisher)
Estimate the model by individual random effects (Lagrange Multiplication Test of Breusch & Pagan)
Specify the model (fixed or random effects) by using the Hausman Test
Conduct the "post – estimation tests " to reveal the potential problems of heteroskedasticity and auto correlation of errors
and finally correct the detected problems by performing the Least Squares Quasi Generalized

we separate the interpretation of the regressions in three different paragraphs considering the three levers of the structural capital.

2.1 - "R&D" Investments: Main lever of the Internal Structural Capital

In order to study the effect of board of directors on innovation, we should clarify the main determinants of "R&D" using the panel linear regressions. We suggest to re-estimate the basic model (model 1) by varying the measures of remuneration. The main results related to the four regressions are reported in the following table.

Table 2. Determinants of R&D

Model	*Model 1*	*Model 2*	*Model 3*	*Model 4*
Board Size	0,004	0,004	0,004	0,004
Duality	-0,023	-0,023	-0,021	-0,021
Outsiders' Percentage	0,128	0,115	0,097	0,115
Majority shareholders Percentage	-0,361**	-0,349**	-0,320**	-0,338**
Institutional Percentage	-0,054	-0,053	-0,052	-0,055
Managerial Ownership	0,070	0,080	0,102	0,094
Outsiders' Ownership	-0,032	-0,033	-0,028	-0,033
Institutional Ownership	0,018	0,014	0,010	0,013
Revenues	0,329***	0,333***	0,326***	0,332***
Total Compensation	0,021**			
Age	-0,006**	-0,006**	-0,006**	-0,006**
Tenure in position	0,008**	0,007*	0,006	0,007*
Tenure in firm	0,007***	0,006***	0,005***	0,006***
Tenure Heterogeneity (in position)	0,003**	0,003**	0,003**	0,003**
Firm Size	0,255***	0,257***	0,260***	0,257***
Debt	-0,006**	-0,006**	-0,006**	-0,006**
isect 1	-1,675***	-1,685***	-1,677***	-1,678***
isect 2	-1,081***	-1,085***	-1,080***	-1,075***
isect 3	-0,681***	-0,693***	-0,703***	-0,691***
isect 5	-0,585***	-0,580***	-0,553***	-0,566***
isect 6	-0,706***	-0,711***	-0,704***	-0,702***
Salary		-0,017		
Bonus			-0,029	
Cash				-0,023
Constant	10,040***	10,234***	10,355***	10,243***
N	2192	2192	2192	2192

Notes:
Significance levels: †p < .10; *p < .05; **p < .01; ***p < .001. P-values greater than .05 but less than .10 are considered marginally significant. P-values greater than .10 are considered insignificant.
For all models, the dependent variable is the natural logarithm of R&D. Among the independent variables, the first model integrates the total compensation but the other models integrate respectively the salary, the bonus and the stock options.
The use of "bsopt" instead of "cashr "does not change the estimation, only the regression coefficient of "bsoptr" becomes the opposite of the "cashr" (since bsopt = 1 - cashr).
We have reported 3 decimal places for statistics because the ß values are very weak.

Effect of Governance: For all the models, the variables of governance (except the percentage of the majority individual shareholders) do not have a significant effect on the amount of "R&D". Accordingly, the directors' board does not seem to play the disciplinary role as assigned by the agency theory. In fact, it is not necessary for the firm to have a powerful board to be able to improve its process of innovation. In other words, the control mechanisms (reflecting the board power) do have neither a positive nor a significant effect on the motivation of managers towards the risky investments. A tight control could be exerted by the external mechanisms (the financial market, the public power, the goods and services market and the labor market). The mixed results and the non-

significance of board variables support the cognitive approach of governance.

Effect of TMT Compensation: Generally speaking, the effect of remuneration on innovation is positive (ß = 0,021; p < 0,01). The firms which grant the higher compensation to their managers tend to invest heavily in "R&D". Nevertheless, our results highlighted the expected positive effect of stock-options (H_4 confirmed).

Effect of TMT Demographic Attributes: The results indicate that older managers are the least likely to innovate because they are risk-averse (ß = -0,006, p < 0,01 in all). The investments in "R&D" may adversely affect the firm profitability and thus their compensation. In addition, these managers are not motivated to invest in "R&D" because they have a limited employment horizon and the yields of such investments are to be achieved in the long run. This result supports the presumptions of the "Upper Echelons" and the agency theories and therefore confirms H_5. The effect of TMT tenure on innovation is generally positive and significant for all the models (ß = 0,007 in model 1; 0,005 in model 3 and 0,006 in models 2 & 4, p < 0,001 in all). The older managers are more experienced and therefore more likely to run the innovation process (Hayes & Abernathy, 1980).

Effect of TMT Demographic Heterogeneity: The effect of heterogeneity is, in all cases, significant and favorable (ß = 0,003; p < 0,01 in all). The heterogeneity of the TMT tenure implies a diversity of experiences and perceptions. It strengthens the intellectual conflict necessary for any innovation. The TMT discontinuity improves the quality of decisions. This result is highly supported by Hambrick and Mason (1984) work and validates H_6.

Control Variables: Large firms are usually endowed with many ways to promote and enhance the innovation activities. The negative effect expected from debt is verified. The "activity sector" seems to influence the amount devoted to the investment in "R&D". Seemingly, the firms which do not belong to the technology sector invest less in "R&D". With reference to the nature of its activity, this sector evidently ranks high in terms of innovation.

2.2 - The Firm's Reputation: Main Lever of the External Structural Capital (Relational Capital)

To identify the effect of directors' board on the relational capital, we applied, similarly, a set of multiple linear regressions for panel data which explains the determinants of firm's reputation. In fact, the latter is hardly measured as it is qualitative and abstract. In this work, it has been apprehended, by the scores published by the "Fortune" American Magazine. The exogenous variables reflect:

- The governance variables
- Performance
- Innovation
- The TMT compensation
- The sales growth
- The TMT demographic features
- And other control variables: size, debt and the activity sector of firms.

We will estimate the basic model by varying the components of compensation (the overall remuneration and the component cash) and the performance measures (ROA, NPM and MTOB). In sum, six regressions are employed. The results are summarized in the 3th table.

Table 3. Determinants of Reputation

Model	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Board Size	0,036***	0,034***	0,035***	0,037***	0,035***	0,036***
Duality	0,034	0,032	0,041	0,032	0,030	0,039
Outsiders' Percentage	-0,605***	-0,622***	-0,571***	-0,604***	-0,618***	-0,573***
Majority shareholders Percentage	0,177	0,186	0,216	0,180	0,195	0,205
Institutional Percentage	0,210	0,231	0,157	0,213	0,237*	0,162
Managerial Ownership	-0,624***	-0,576**	-0,716***	-0,602***	-0,554**	-0,698***
Outsiders' Ownership	0,038	0,033	0,001	0,035	0,032	-0,007
Institutional Ownership	-0,809***	-0,793***	-0,742***	0,817***	-0,804***	-0,750***
ROA	0,010***			0,011***		
Innovation	0,038***	0,035***	0,045***	0,037***	0,034***	0,046***
Total Compensation	0,033*	0,028	0,037**			
Sales growth	0,038	0,036	0,046**	0,041*	0,039*	0,049**
Revenues	0,134***	0,140***	0,118***	0,140***	0,145***	0,125***
Age	-0,003	-0,003	-0,005	0,004	-0,003	-0,005
Tenure in position	0,011**	0,011**	0,01*	0,01**	0,01**	0,009*
Tenure in firm	0,012***	0,012***	0,011***	0,012***	0,012***	0,011***

Growth in number of employees	-0,081***	-0,08***	-0,08***	0,081***	-0,08***	-0,081***
Debt	-0,001	-0,001	-0,002*	-0,001	-0,001	-0,002*
isect 1	-0,082	-0,111	-0,153	-0,089	-0,115	-0,163
isect 2	0,016	0,009	-0,009	0,012	0,009	-0,017
isect 3	-0,057	-0,098	-0,052	-0,061	-0,103	-0,059
isect 5	-0,110	-0,134*	-0,144***	-0,109	-0,129*	-0,147**
isect 6	0,094	0,084	0,085	0,095	0,088	0,081
NPM		0,01***			0,011***	
MTOB			0,001			0,001
Cash				-0,103**	-0,104**	-0,085*
Constant	2,303***	2,277	2,642***	2,708***	2,639***	3,045***
N	2190	2190	2190	2190	2190	2190

Notes:

Significance levels: †p < .10; *p < .05; **p < .01; ***p < .001. P-values greater than .05 but less than .10 are considered marginally significant. P-values greater than .10 are considered insignificant.

The first three models considering the overall compensation while the three latest models incorporate the party cash of remuneration as exogenous variable.

Model 1 is the model which has for endogenous variable reputation score and integrates among its exogenous variables the variable "R0A" as a measure of performance and total compensation ("lnrem") as a measure of the managers' compensation.

Model 4: is the model which has for endogenous variable reputation score and integrates among its exogenous variables the variable "ROA" as a measure of performance and the component cash ("cashr") as a measure of the managers' compensation.

Model 2 & 3 are similar to the model 1 but they integrate respectively Npm & MTOB.

Model 5 & 6 are similar to the model 4 but they integrate respectively Npm & MTOB.

Effect of Governance: The variables of governance do not have unanimous positive significant effect on the firms' reputation[13]. This result can be interpreted in two ways.

On the one hand, the firms that enjoy the best reputations are not necessarily those which conform to the instructions of the good governance within the shareholder approach. In other words, the market does not quote favorably a firm because it has a rigorous board that is able to thwart the arbitrary actions of managers. Thus, the direct effect of governance on firm's reputation has not been observed in our sample. On the other hand, the most anxious boards to comply with the standards of good governance do not seem to intervene effectively in the management in order to steer them towards the right choices. Accordingly, we can say that the boards of our sample did not exercise an indirect effect on the reputation by influencing the strategic decisions of firms.

It seems that boards do not play the disciplinary role advocated by the contractual approach of governance to restore the firms' reputation. This confirms the negative effects of the percentage of outsiders and the managerial and institutional ownership. In addition, larger boards sound to have a favorable impact on reputation as they enrich the decisions and strengthen the cognitive conflict. The cognitive contribution of the board is more important than its contribution in the control and supervision. Furthermore, the market believes that the board of directors is not the police officer in the company but it must rather play the role of an adviser to the management. The directors and managers should maintain cooperative relations to help one another while running firms.

Effect of Firm's Performance: The effect of performance (for the two facets of performance: profitability and market value) is always positive (ß = 0,01 in models 1, 2, 4 & 5, p < 0,001 in all). The financial data are very important in the assessment of firms despite the powerful assumptions of theories that emphasize the relevance of the social and societal data and intangible goods.

Effect of "R&D" intensity: The effect of "R&D" is significant and positive in all the models (p < 0,001 in all). It is obvious that the analysts favor the firms which devote big amounts to "R&D".

Effect of sales growth: The firms which have the higher sales are usually well perceived by the market (ß = 0,049, p < 0,01). This seems also obvious as the sales growth reflects the important efforts made by firms to satisfy their consumers (quality of products, originality of services, economic, social and societal responsibilities).

Effect of TMT Demographic Attributes: The negative effect of the managers' age has been checked in all the models but it is not statistically significant. Possibly, the market perceives age as a vector of entrenchment, resistance to change and aversion to risk. The market believes that the firms directed by older managers are unable to confront the challenges imposed by the current changes of the environment. In addition, the effect of tenure (in the post and in the firm) is positive and significant in all the models (for example ß = 0,011, p < 0,001 in model 6). This result shows that the market perceives tenure as an indicator of experience and professionalism.

[13] Some variables are non-significant (duality, the outsiders' ownership, the presence of the majority investors: individual or institutional) for all models and other variables have adverse effect on the reputation (the presence of outside directors in the board, the managerial and institutional ownership).

Effect of TMT Compensation: The results indicate that the market does not appreciate the firms which depend on the "cash" component to compensate their managers (ß = -0,085, p < 0,05). By contrast, the market considers the stock options as an effective means to strengthen the commitment of these managers.

Control Variables: First, the results prove that the firms which increase the number of their employees have a deteriorated reputation since they seem to go beyond the interval of the optimal size and will help in amplifying their salary charges (ß = - 0,08, p < 0,001 in all models). Then, the most indebted firms are the firms which have the most moderate level of reputation (ß = - 0,002, p < 0,05 in models 3 & 6). These firms are suffering from financial difficulties. Finally, the non-significant signs of the latest binary variables predict that the firms' reputation is not explained by their activity sector.

Conclusion

The objective of this work is to apprehend the effect of the firms' ownership structure and the directors' board characteristics on the structural capital.

To do this, we have studied two levers of the structural capital (innovation and reputation) in order to identify their key determinants. So, we have conceptually mobilized the two main governance approaches (contractual and cognitive) and empirically tested a set of multiple linear regressions for panel data.

In addition to the governance variables, other exogenous factors were considered: the performance, the size of firms and the indicators of human capital. In order to enrich the interpretations, we have subdivided the compensation and we have varied the measures of the performance. The results appear to be reliable because they do not depend on the proposed measures. They indicate that the companies that invest so much in structural capital have higher returns and they are chaired by the youngest and most heterogeneous TMT. Then, the control variables related to the size of firms, the debt, the activity sector and the year of research also influence the structural capital.

Nevertheless, the more surprising result is the remarkable absence of the disciplinary effect of governance mechanisms on the firms' structural capital. This result supports the presumptions of the cognitive theory of governance and refutes the arguments of the financial theory (H_3 verified). The "R&D" intensity and the firms' reputation do not depend on the rigor of the control of board. The modern approaches of governance seem to be more suitable in explaining the managerial behavior. The classical theory (financial and stakeholder theory) failed to explain the importance of the structural capital because its arguments contradict the requirements and characteristics of the firms which have a tendency to innovate. Finally, the results highlight the foresight and the relevance of the market assessments: it is a long-term vision of the cognitive approach based on the challenges of innovation and organizational learning and not on the control and discipline of the managers advocated by the contractual theory.

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