

Albu, Nadia; Mateescu, Ruxandra Adriana

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THE RELATIONSHIP BETWEEN ENTREPRENEURSHIP AND CORPORATE GOVERNANCE. THE CASE OF ROMANIAN LISTED COMPANIES

Nadia Albu^{1*} and Ruxandra Adriana Mateescu²

¹⁾²⁾ *Bucharest University of Economic Studies, Romania*

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Abstract

This paper offers an investigation at a micro-level of entrepreneurship in the business environment. More precisely, we conduct an empirical study of the relationship between corporate entrepreneurship and corporate governance in the case of the Romanian non-financial listed companies. We use publicly-available information (financial statements, annual reports) and we mobilize a framework derived from the agency and signalling theories to interpret our findings from the statistical analysis based on correlations. Our results suggest that there are differences between industries and between the companies included or not in the new BET-TR index in terms of corporate entrepreneurship and corporate governance practices and disclosures. Agency theory partly explains our findings. Specifically, some corporate governance mechanisms, i.e. board independence and institutional ownership, are associated in our sample with corporate entrepreneurship. We thus document that corporate governance as a controlling and management technique fosters corporate entrepreneurship in Romanian companies. Signalling theory assumptions are generally not verified for the companies in our study. There are only a few associations between high values of corporate entrepreneurship and corporate entrepreneurship disclosures, and even fewer between corporate governance practices and corporate governance disclosures.

Keywords: corporate entrepreneurship, corporate governance, Romania, agency theory, signalling theory

JEL Classification M 14, L26, G 34

* Corresponding author, **Nadia Albu**- nadia.albu@cig.ase.ro

Introduction

The increased economic globalization boosts the entrepreneurial activity all over the world, and consequently the entrepreneurship research rapidly increased in the last years. Entrepreneurial activity takes place and might be investigated at individual, organizational, and national level (Luke, Verreynne and Kearins, 2007). While the fall of communism and economic opportunities transformed the emerging economies in interesting investment destinations in the last years, few studies addressed the entrepreneurial activity in these countries, especially at the organizational level.

The aim of this study is to investigate the association between corporate entrepreneurship and corporate governance in the case of Romanian listed entities through the lens of a theoretical framework derived from the agency theory and signalling theory. Romania and a few other former communist countries are considered “modest innovators” in the European Union (Business24, 2014a), and thus research on corporate entrepreneurship is useful to understand its mechanisms. Prior research in Romania addressed the institutional quality of the business environment and discussed the impact on entrepreneurship (Marinescu, 2013), and additional research on corporate entrepreneurship should follow. We focus on listed companies because they are considered to be key to entrepreneurship and innovation worldwide (Tribbitt, 2012; Vermeulen, 2012). Also, information released by the National Institute of Statistics (Business24, 2014b) shows that the most innovative Romanian companies are the biggest ones.

Our study responds to a call for empirical research on the association of major factors that affects the corporate entrepreneurship (Hagen, Emmanuel and Alshare, 2005) and for research reconciling the traditional view based on agency theory in accounting and corporate governance with entrepreneurship (Toms, 2006). Collin and Smith (2003) discuss the importance of investigating the relationship between corporate entrepreneurship as an enabler of the firm’s development and corporate governance as a disciplining and controlling mechanism. Corporate governance mechanisms are essential for large entities. Prior research shows that corporate governance mechanisms might enhance entrepreneurship (for example, through the presence of entrepreneurial external board members) (Vermeulen, 2012), but also might hinder it because of the differences in the time perspective (the long term orientation of entrepreneurship versus the short term control triggered by corporate governance) (Liang and Meng, 2010). Investigating the relationship between entrepreneurship and corporate governance is of interest since both of them represent emergent practices in Romania.

The remainder of this paper is organized as follows. The literature review section synthesizes the prior literature on corporate governance, corporate entrepreneurship and on the relationship between them. The next section describes the research methodology, including the theoretical framework derived from the agency theory and signalling theory and the technique used for data collection. The results analysis section describes the findings of the paper and examines them in the context of the theoretical framework and prior literature. Finally, the conclusion section synthesizes the main findings and contributions.

1. Literature review

1.1 Corporate entrepreneurship

While the concept of entrepreneurship is widely employed, there is a lack of consensus on its definition and usage. Sharma and Chrisman (1999) indicate that the first reference to this concept was made in 1734 by Richard Cantillon in the sense of self-employment with an uncertain return. The significance of the concept evolved, and nowadays the entrepreneurship is analysed at the individual, organizational, or national level (Luke, Verreynne and Kearins, 2007) and is conceived as characteristics (such as innovation, growth etc.) or outcomes (such as creation of value) (Gartner, 1990). Sharma and Chrisman (1999) make an effort to reconcile the existing definitions and approaches and define entrepreneurship as follows: "Entrepreneurship encompasses acts of organizational creation, renewal, or innovation that occur within or outside an existing organization" (p. 17).

One of the most important areas of research in entrepreneurship is corporate entrepreneurship (CE) (Hagen, Emmanuel and Alshare, 2005). The authors consider that "a company's entrepreneurship is the sum of a company's innovation and venturing activities" and results in helping the company "acquire new capabilities, create more business, enter new business, develop new revenue stream [...], and improve its performance" (p. 469).

CE is generally investigated in a wider context. Some authors (Collin and Smith, 2003; Rauch, Wiklund, Lumpkin and Frese, 2009) relate the entrepreneurial orientation to strategy making and identify some specific activities in organizations, such as innovativeness, risk taking and proactiveness. Other authors distinguish between antecedents of CE, elements of CE, and consequences or outcomes of CE. For example, Ireland, Covin and Kuratko (2009) develop a CE model including antecedents (such as external environmental conditions), elements of CE (such as the strategic vision, organizational structure), and outcomes. A comparable approach might be found in Collin and Smith (2003) which discuss the determinants of CE, the entrepreneurial performance and the impact of this performance.

Based on an extensive literature review, Rauch, Wiklund, Lumpkin and Frese (2009) discuss the relationship between corporate entrepreneurship and performance and find that the relation is not straightforward and is impacted by moderator variables such as national culture, business size, and technological intensity of the industry.

1.2 Corporate governance

Corporate governance (CG) is a concept that developed in the early '70's in the United States as a result to a series of economic failures that had led to the loss of investors' confidence in managers' ability to lead the big corporations and public institutions (Cheffins, 2012). Since then, there has been a continuous care for improving corporate governance mechanisms worldwide, as to avoid new bankruptcies and improve companies' accountability.

An influential report (the Cadbury report in 1992) defines CG as "the system by which companies are directed and controlled" (Collin and Smith, 2003: 8). A more complex definition is found by Tribbitt (2012: 44): "a set of mechanisms used to manage the conflicting interests among stakeholders and to determine and control strategic direction and performance of organizations". This definition is particularly interesting because it anticipates the relationship between CG to CE (represented by the strategic direction).

Two CG mechanisms widely described in literature and related in many studies to CE are the board of directors and the institutional ownership. The board of directors has the responsibility of acting in the best interest of shareholders by monitoring the management team (Hitt, Ireland and Haskisson, 2009). Hooghiemstra (2012) supports the fact that the board of is one of the most important internal governance mechanisms, given that the boards' tasks include, among others, hiring and firing the CEO, setting the CEO remuneration, and supervising the corporate strategy. The board is composed of internal members and of independent board members, external to the firm.

Another important corporate governance mechanism is the presence of institutional investors which play an active role in influencing the managers' behaviour by reducing their discretionary space (Hooghiemstra, 2012; Malinowska and Gad, 2012). These owners are typically pension funds and investment firms, and they are typically classified in short-term or long-term owners (Zahra, 1996). Bushee (2004) supports the fact that the so-called 'transient investors' are rather interested in short-term returns, while the long-term investors have the financial power and the necessary expertise to support long term research and development projects. Corporate governance represents an important topic in emerging economies such as Romania, especially given the legal requirements for transparency and quality (Manolescu, Roman and Mocanu, 2011; Needles, Turel, Sengur and Turel, 2012; Dyczkowska, 2014).

1.3 The relationship between corporate entrepreneurship and corporate governance

There are an increasing number of studies relating corporate entrepreneurship to corporate governance. One of the first studies suggesting this relationship is authored by Covin and Slevin (1991). The authors do not explicitly mention corporate governance, but refer to variables such as top management team, structure, and culture which might be considered as proxies for CG mechanisms (Trebbitt, 2012).

Later, Zahra (1996) examines the influence of several types of CG on CE. More precisely, the author investigates how the structure of the board, outside director ownership, executive ownership, institutional ownership impact on CE. CE is measured through 14 items which are estimated through questionnaires. The findings suggest that there is a positive relationship between outside board members ownership, CEO duality and CE. Zahra, Filatotchev and Wright (2009) investigate how the dual role of the board (protecting shareholders wealth and creation of new wealth) stimulate CE. The paper does not test the framework with the relationships between CG and CE, but contributes to the existing literature in the area and represent a starting point for future empirical studies.

Hagen, Emmanuel and Alshare (2005) examine the impact of a company's governance mechanisms on entrepreneurship. Corporate governance system is analysed through the following dimensions: independence of the board chair, board size, board structure, alongside with stock ownership and institutional ownership. The results show that an independent board chair, the board size, and stock ownership of outside board members have a positive relationship with entrepreneurship. Regarding the way institutional investors influence the companies' CE practices, Scott (2011) concluded that they have the power and expertise to ameliorate the research and development practices.

Tribbitt (2012) reviews studies showing how CG mechanisms (such as the board of directors, ownership etc.) impact on the strategy of the firm and therefore influence the CE. This literature review concludes that this stream of research needs additional attention.

2. Research methodology

2.1 Theoretical framework

The most commonly used theory in corporate governance research is the agency theory (Hooghiemstra, 2012), the proof being the large number of studies which deal with this problem (Hooghiemstra, 2012; Malinowska and Gad, 2012; Mygind, 2007; Postma and Hermes, 2003). According to Hooghiemstra (2012), the agency theory refers to the contract between shareholders and managers, when a company's shareholders hire a manager to run the business on their behalf and delegate decision-making authority to this manager. The agency problems arise usually due to the existence of divergent goals between managers and owners, i.e. the agent and the principal, meaning that the manager stops acting to meet the shareholders' interest (Mygind, 2007), because of different risk preferences but also due to informational asymmetry (Hooghiemstra, 2012).

Wijbenga, Postma and Stratling (2007) employ the agency theory to discuss a CG-CE relationship, stating that agency theory "fosters a control approach of governing the firm, which emphasizes results-oriented management and accountability of the entrepreneurial team" (p. 261). As such, in order to manage this goal conflict, CG mechanisms are in place. For example, corporate boards have a role in strategy development and implementation, managers' control and reward systems.

In this study we employ three CG variables: board dimension (the number of directors), board independence (the percentage of independent members), and institutional investors presence (the percentage of shares held by institutional investors). In accordance with the agency theory, these control mechanisms are in place and might have an impact on CE. Based on prior literature (Ahmad and Hoffman, 2007; Luke, Verreynne and Kearins, 2007; Tribbitt, 2012) we operationalize CE through two variables: growth (of revenues, employees and profit) and research and development activity. We assume, in a manner coherent with prior research, that listed companies are entrepreneurial organizations (Tribbitt, 2012; Vermeule, 2012), and the evolution of revenues, employees and profit results from the entrepreneurial activity. Even if at the organizational level only some activities might be entrepreneurial in nature and might have a different impact on these variables, our research is based on organizations as units of study, and the variables selected reflect this methodological choice (derived also from the data publicly available).

Both CG and CE are expected to have positive impact on the company's performance (Hagen, Emmanuel and Alshare, 2005; Rauch, Wiklund, Lumpkin and Frese, 2009; Liang and Meng, 2010). Signalling theory suggests that companies with superior performance use disclosed information to send signals to the market (Campbell, Shrives and Saager, 2001; Oliveira, Rodrigues and Craig, 2005). Based on signalling theory, we hypothesize that the companies with good CG systems and with successful CE activities will disclose more information. CG disclosures are selected from the CG literature (Hagen, Emmanuel and Alshare, 2005; Zahra, Filatotchev and Wright, 2009) and include: the corporate governance section, bylaws, supervisory board, and information about managers and committees. CE disclosures are derived from the CE literature (Ahmad and Hoffman, 2007; Hagen, Emmanuel and Alshare, 2005; Ireland, Covin and Kuratko, 2009; Rauch, Wiklund, Lumpkin and Frese, 2009; Tribbitt, 2012) and include information about innovation of products, processes, how the structure supports innovation, and how innovation is related to company's growth, technology, and strategy.

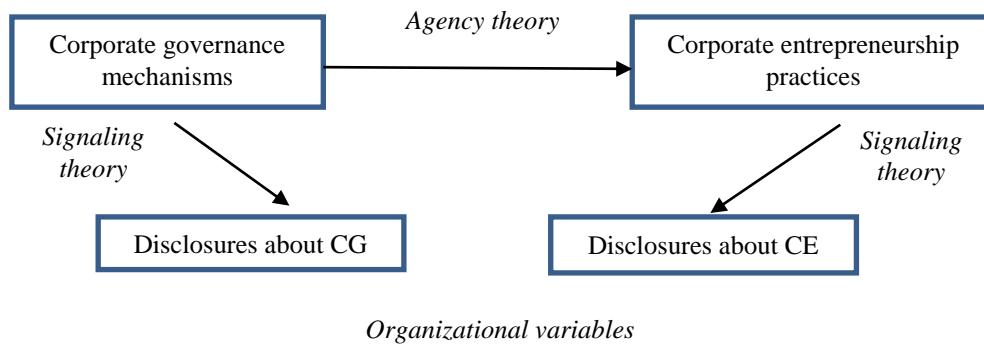


Figure no. 1: Theoretical framework derived from agency theory and signalling theory

The framework includes organizational variables because they impact on both CG and CE. The organizational variables analysed are the size, financial leverage, profitability, type of auditor, and industry. Size, financial leverage and profitability are variables used in all the studies concerned with organizations (Hagen, Emmanuel and Alshare, 2005; Ireland, Covin and Kuratko, 2009; Oliveira, Rodrigues and Craig, 2005). Industry is an important variable because the degree of innovation is dependent in many cases on the industry. The type of auditor is important especially in the case of Romania (as an emerging economy) because it represents an additional disciplining mechanism.

This framework is applied in our research to a sample of Romanian listed entities in order to propose an informed explanation of the results that will be observed for the relationship between CG and CE.

2.2 Data collection

As stated in the introduction, the focus in our paper is on Romanian listed entities. At least in the case of Romania it is more likely that these entities adopt and disclose CG practices (Feleagă, Feleagă, Dragomir and Bigioi, 2011). The first tier of the Bucharest Stock Exchange includes 29 companies, of which 10 are financial institutions. We exclude the financial institutions from our sample because they have particular norms and behaviours. This practice is consistent with other studies on Romanian listed companies, especially those investigating CG or disclosure practices (such as Caloian, 2013). Also, we exclude two companies, Concefa and Olchim, because of their economic bad situation (failed privatization, significant losses, insolvency etc.). Therefore we have 17 companies in our final sample. Recently, the Bucharest Stock Exchanged introduced BET-TR index including the best 10 performers of the local market (of which four banks and financial institutions), which generate over 86% of the market capitalization (BVB, 2014).

Data were collected from publicly available sources (mainly from the annual report) for the 2013 financial year. Prior research on CE and CG-CE relationship used data collected through questionnaires (such as Zahra, 1996) but also publicly available information (such as Tribbitt, 2012). Each type of data has advantages and disadvantages. Data collected through questionnaires is more subjective since it is not checked before being released as the publicly disclosed information is. On the other hand, companies might adopt strategies

about their disclosures. Smith, Gannon and Sapienza (1989) provide some methodological suggestions for conducting research in the CE area. They recommend the use of objective data for public entities, for the analysis of behaviours (and not intentions), and post-hoc analysis. Therefore, the use of publicly-available data is an appropriate methodological choice in our case.

The data collection procedure for the variables included in the theoretical framework is detailed in Appendix A. The description of the sample used is in Table no. 1.

Table no. 1: Descriptive statistics for organizational variables

	Mean	Standard deviation	Median	Minimum	Maximum
Size (total assets in mil. lei)	4913.53	9446.42	511.57	110.56	38144.62
Profitability	0.027	0.11	0.055	-0.262	0.169
Leverage	0.199	0.225	0.094	0.011	0.683
Dichotomous	=0	=1			
Big 4 auditor	7 (41.2%)	10 (58.8%)			
BET-TR Index	11 (67.7%)	6 (35.3%)			
Industry	No.	% of total			
Pharmaceuticals	3	17.6%			
Energy and gas	7	41.2%			
Others	7	41.2%			

Besides descriptive statistics, the statistical analysis includes Spearman correlations. Correlation analysis is a technique used to observe the existence and the direction of a relationship between two variables.

The reduced size of the sample is one of the limits of the study, and it obstructs a more detailed statistical analysis. For the same reason, we did not formulate hypothesis to be tested, because this approach would have implied a high expected level of statistical rigor. We consider this study as being rather exploratory, and the use of the agency and signalling theory to interpret data comes to compensate for the statistical limitations. The scope of the paper is to enhance the understanding of the Romanian context and not to lead to statistical generalizable results. Also in line with the exploratory-type research, we do not differentiate between dependent and independent variables. We analyse the potential association between variables which might be further investigated in future research.

3. Research results

The first step of our analysis consists in the investigation of the CE and CG practices as they are reflected in the annual reports. The general results are presented in Table no. 2.

Table no. 2: Descriptive statistics for CE and CG variables

Statistics	CG Board Dim	CG Board Ind	CG InstOwn	CE Growth Rev	CE GrowthPr	CE Growth Empl	CE R&D
No. of observations	17	17	17	17	17	17	17
Minimum	5.000	0.000	0.000	-28.400	-100.000	-23.100	0.000
Maximum	14.000	85.7	91.000	19.700	482.600	11.700	7.500
Median	5.000	57.1	54.280	0.060	15.700	-1.500	0.200
Mean	6.471	47.6	47.682	-0.473	41.229	-2.582	1.106
Standard deviation	2.294	25.1	31.908	11.027	124.952	8.109	2.053

The results show that the number of board members ranges from 5 to 14, and the percentage of independent members ranges from 0 to 85.7. The values for CE variables suggest that the growth manifested differently in what concerns the revenues, the profits, and the number of employees. Some companies registered a decrease of one, two or all three CE measures.

An additional analysis of the database (Appendix B) reveals that 8 companies (47% of the sample) registered a decrease in revenues, 4 companies (23.5% of the sample) a decrease in profits, and 12 companies (70.6% of the sample) a decrease in the number of employees. Only one company registered a decrease for all three CE measures. These results indicate that these three measures of the company's growth reflect different facets of the CE. While the literature (Ahmad and Hoffman, 2007; Luke, Verreynne and Kearins, 2007; Tribbitt, 2012) points to the importance of CE for growth of revenues, profits, and job creation, our results show that the companies are concerned more with the growth in profits. This might be explained by the fact that these are listed companies, for which profits represent the main performance indicator for investors and shareholders. On the other hand, we notice that almost two third of the sample experienced a decrease of the number of employees. This result should be interpreted taking into consideration the effects of the economic crisis and the pressures for efficiency. However, this results show that even if the companies perform in some areas of CE, most of them fail to support job creation. We further investigate if there is a difference between industries and between the BVB performers and the other companies (Table no. 3).

Table no. 3: Descriptive statistics for CG and CE variables, differentiated by the inclusion or non-inclusion in BVB index and by industry

Statistics	CG BoardDim	CG BoardInd	CG InstOwn	CE GrowthRev	CE GrowthPr	CE GrowthEmpl	CE R&D
Companies included in BVB index							
Mean	7.500	59.5	65.047	2.083	99.817	-0.883	1.983
Standard deviation	3.332	14.7	19.470	11.725	194.961	5.963	3.049
Companies not included in BVB index							
Mean	5.909	41.0	38.210	-1.867	9.273	-3.509	0.627
Standard deviation	1.375	27.7	34.057	10.943	52.849	9.206	1.175
Companies in the Pharmaceutical industry							
Mean	5.667	61.0	61.570	6.033	13.433	2.067	0.867
Standard deviation	1.155	18.6	28.220	6.732	9.505	3.323	0.981
Companies in the Energy and Gas industry							
Mean	7.429	59.2	64.271	1.794	71.271	-1.686	1.700
Standard deviation	3.047	13.5	17.891	10.730	193.336	5.843	2.883
Companies in Industry							
Mean	5.857	30.2	25.140	-5.529	23.100	-5.471	0.614
Standard deviation	1.574	28.0	33.453	11.705	49.022	10.772	1.373

The companies included in the BET Total Return index have more members in the board, more independent board members, and a higher percentage for the institutional owners. All the values for the CE measures are higher in the case of the companies included in the BVB index. The results also confirm the existence of differences between industries in terms of CG practices as they are reflected in the annual report, but mainly in terms of CE practices.

The companies in the pharmaceutical industry have all three CE measures positive, and the highest value for the growth revenue. This result is supported by the financial media which points that this industry is the most innovative in Romania (Business24, 2012). The companies in the energy, oil and gas industry also have good values for the CE measures, especially for the growth in profits. Also, these companies have good investments in R&D.

As the existing literature suggests the existence of a relationship between the CG and CE practices, we conduct a correlation test to check for the potential associations. The correlation tests provide the results in Table no. 4.

Table no. 4: Spearman correlation matrix regarding the relation between CGvariables, CE variables and the organizational variables

Variables	CG Board Dim	CG Board Ind	CG InstOwn	CE Growth Rev	CE Growth Pr	CE Growth Empl	CE R&D	Size	Profit.	Leverage
CG BoardDim	1									
CG BoardInd	0.068	1								
CG InstOwn	0.405	0.689***	1							
CE GrowthRev	-0.200	0.514**	0.543**	1						
CE GrowthPr	-0.035	-0.129	-0.141	-0.306	1					
CE GrowthEmpl	0.260	0.296	0.557**	0.338	-0.221	1				
CE R&D	0.213	-0.024	0.214	0.132	-0.066	0.755***	1			
Size	0.099	0.289	0.132	0.172	-0.201	0.267	0.127	1		
Profitability	-0.377	0.359	0.152	0.625***	0.054	0.157	-0.066	0.387	1	
Leverage	-0.166	-0.040	-0.012	0.255	-0.431*	-0.135	-0.227	0.297	-0.145	1

Significant correlation coefficients are indicated in bold.

*, **, *** represent $p < 0,1$, $p < 0,05$, $p < 0,01$

The results show a positive association between some CG variables and CE variables, thus providing some support for the agency theory. The board independence and the institutional ownership are positively related to the growth in revenues, and the institutional ownership is positively related to the growth in the number of employees. The CE variables are not correlated (with one exception, i.e. the R&D and the growth in the number of employees), which suggests the complexity of the CE concept and the need to employ several variables to capture more dimensions. Organizational variables generally have no association with CG or CE practices, only leverage and profitability having one statistical significant association.

We further investigate the manner in which CE information is communicated. The results for the CE disclosures are shown in table no. 5.

Table no. 5: The extent of CE disclosures

	CE Discl Prod	CE Discl Proc	CE Discl Struct	CE Discl Growth	CE Discl Tech	CE Discl EntrStruct	CE Discl EntrStrat
No. of companies	11	9	5	14	15	10	15

The companies disclose more information about entrepreneurial strategy, investments in technology, growth and less about structure. Some examples of disclosures in the CEO letters follow:

“Company will extend its range of products by creating new generic products, acquiring licences from other producers or manufacturing contract, having the main objective the strengthening of BIOFARM position on the pharmaceutical market from Romania and in foreign markets by developing a competitive portfolio, based on real needs of the market.” (Biofarm) (disclosures about products innovation)

“In line with our strategy, we are developing a performance-based organizational culture and skill pool to achieve business growth.” (OMVPetrom) (disclosures about an entrepreneurial structure aligned to strategy)

The values for the total disclosure score are shown in Table no. 6.

Table no. 6: Descriptive statistics for the total disclosure score by industry

	Min	Max	Mean	Standard deviation
Total sample	0.143	1.00	0.664	0.252
Pharma	0.571	1.00	0.810	0.218
Energy and gas	0.429	1.00	0.694	0.192
Others	0.143	0.857	0.571	0.309

We notice the differences between industries in the CE disclosures, the companies from the pharmaceutical industry disclosing more. In order to check the signalling effects, we analyse the correlations between the CE measures and CE disclosures (Table no. 7).

Table no. 7: Spearman correlation regarding the relation between CE disclosures, CE variables and operational variables

	CE GrowthRev	CE GrowthPr	CE GrowthEmpl	CE R&D	Size	Lev	Profit
CEDiscProd	0.075	0.352	0.276	0.141	0.000	-0.176	0.151
CEDiscProc	-0.120	-0.096	0.241	0.012	0.120	0.024	-0.024
CEDiscStruct	-0.026	-0.053	-0.053	0.174	-0.290	-0.105	-0.132
CEDiscGrowth	0.283	-0.031	0.567**	0.577**	0.189	0.031	0.094
CEDiscTech	0.410	-0.373	0.559**	0.304	0.447*	0.335	0.037
CEDiscEntrStruct	0.293	-0.634***	-0.073	-0.137	0.000	0.122	0.122
CEDiscEntrStrat	0.335	-0.335	0.522**	0.455*	0.149	0.149	-0.149

Significant correlation coefficients are indicated in bold.

, **, * represent $p < 0,1$, $p < 0,05$, $p < 0,01$*

The predictions of the signalling theory are not obvious in our sample. There are only four significant positive associations between CE measures and CE disclosures. The disclosures related to growth and to the entrepreneurial strategy are correlated with the growth in the number of employees and R&D investments, and the disclosures about technology are correlated with the growth in the number of employees. Surprisingly, the growth in profit is negatively correlated with all but one disclosure measures, but only one correlation (with the entrepreneurial structure) is statistically significant. This finding might suggest that when companies experience a decrease in profits they disclose more information about CE, as a promise for future profits, using rather a legitimizing theory instead of signals for the

current performance. Again, organizational variables generally are not associated with CE disclosures. Only size is positively associated with disclosures about entrepreneurial technology (Table no. 8).

Table no. 8: Descriptive statistics for CG disclosures

Variables	No. of observations	Min	Max	Mean	Median	Standard deviation
CGDiscSection	17	0	2	1,12	1	0,86
CGDiscBy	17	0	2	1,06	1	0,55
CGDiscSuperv	17	0	2	1,35	1	0,61
CGDiscMan	17	0	2	1,18	1	0,73
CGDiscCom	17	0	2	0,65	0	0,79

We observe that CG disclosures are quite diverse in our sample. The most present disclosures are about the supervisory board, and the least disclosed information is about committees. An additional analysis reveals that only one company discloses all the information, and only one does not disclose any of the information.

We further analyse the correlations between the CG dimensions and the CG information disclosed in order to check the effects of the signalling theory (Table no. 9).

Table no. 9: Spearman correlation regarding the relation between CG disclosures, CG variables and operational variables

	CG BoardDim	CG BoardInd	CG InstOwn	Size	Lev	Profit
CGDiscSection	-0.452*	0.348	-0.240	0.141	-0.172	0.196
CGDiscBy	-0.250	-0.046	-0.341	-0.047	0.130	-0.058
CGDiscMan	-0.132	0.015	0.111	-0.280	0.199	-0.185
CGDiscSuperv	0.078	0.191	0.281	-0.422*	0.043	-0.202
CGDiscCom	0.143	0.011	0.139	-0.497**	-0.073	-0.535**

Significant correlation coefficients are indicated in bold.

, **, * represent $p < 0,1$, $p < 0,05$, $p < 0,01$*

As in the case of CE disclosures, the signalling theory is not supported by the CG disclosures practices. Interestingly, the only statistical significant association is negative, and it concerns the size of the board and the disclosure of CG section. Organizational variables present three negative significant associations with CG disclosures. This implies that the results in our sample do not support the general assumption that larger companies or more profitable companies disclose more information.

Conclusions

This study investigated the association between corporate entrepreneurship and corporate governance in the case of Romanian listed entities. We used publicly available information (data collected from financial statements, annual reports, and BSE website) and employed a theoretical framework derived from the agency theory and signalling theory in order to have a richer understanding of the results obtained.

First, we provide evidence about CG and CE practices of the Romanian listed companies. We document the existence of differences between the companies from different industries and between the companies included or not in the BET-TR index of the BSE. Therefore,

our results confirm the superiority of the performers included in the BET-TR index in terms of both CG and CE practices and disclosures. This is one of the first studies investigating the differences between the companies included or not in this index. We also confirm that the companies in the pharmaceutical sector and in the energy, oil and gas sector are more entrepreneurial and disclose more information than the others.

Second, we find significant variations in the values for various CE and CE disclosure measures. We therefore document that CE is a very complex concept, and complex methodologies and measures should be employed in order to grasp it in practice. While the CE literature acknowledged the complexity of the concept (Covin and Slevin, 1991; Gartner, 1990; Ireland, Covin and Kuratko 2009), we confirm the difficulty of operationalizing it in empirical research.

Third, the results obtained can only partially be explained through the agency and even to a lesser extent through signalling theory. The board independence and the institutional ownership are positively related to some growth measures, suggesting that these controlling mechanisms are associated with CE. These results provide support for the idea that CG enhances CE which was advanced in literature but tested in few countries (Vermeulen, 2012). Also, few statistically significant correlations exist between CE and CE disclosures measures, and CG and CG disclosures measures, thus offering a reduced support for the signalling theory. Additional theories or methodologies should be employed in future research in order to investigate the complex phenomena of CG and CE in the case of an emerging economy such as Romania.

The results are of interest for the capital market participants. The practitioners might have a general image about the CE and CG practices as they are reflected by the annual report. As the annual report is considered to be one of the main communication tools of listed companies, the capital market regulators and auditors might be more concerned about the communication practices and about the compliance with the mandatory transparency requirements.

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Appendix 1

Variable	Variable label	Description	Source of the data
CE variables			
Growth of revenues	CEGrowthRev	The percent increase in revenue from 2012 to 2013	Financial statements
Growth of profit	CEGrowthPr	The percent increase in profit from 2012 to 2013	Financial statements
Growth of employees	CEGrowthEmpl	The percent increase in the number of employees from 2012 to 2013	Financial statements
Research and development	CER&D	The percent of research and development activity costs in total assets	Financial statements
CG variables			
Board size	CGBoardDim	The number of the board of directors	Company's website, annual report
Board independence	CGBoardInd	The percent of independent board members	Company's website, annual report
Institutional ownership	CGInstOwn	The percent of shares held by institutional investors	BVB website
CE disclosures			
Product innovation	CEDiscProd	Dummy variable, takes the value of 1 if information about product innovation is disclosed, 0 otherwise	CEO letter; annual report
Process innovation	CEDiscProc	Dummy variable, takes the value of 1 if information about process innovation is disclosed, 0 otherwise	CEO letter; annual report
Structure innovation	CEDiscStruct	Dummy variable, takes the value of 1 if information about structure innovation is disclosed, 0 otherwise	CEO letter; annual report
Growth	CEDiscGrowth	Dummy variable, takes the value of 1 if information about growth resulting from innovation is disclosed, 0 otherwise	CEO letter; annual report
Investments in technology	CEDiscTech	Dummy variable, takes the value of 1 if information about investments in technology for innovation is disclosed, 0 otherwise	CEO letter; annual report
Entrepreneurial structure	CEDiscEntrStruct	Dummy variable, takes the value of 1 if information about how the structure supports innovation (through rewards, training, culture) is disclosed, 0 otherwise	CEO letter; annual report

Variable	Variable label	Description	Source of the data
Entrepreneurial strategy	CEDiscEntrStrat	Dummy variable, takes the value of 1 if information about how the strategy supports innovation is disclosed, 0 otherwise	CEO letter; annual report
CG Disclosures			
CG section	CGDiscSection	Dummy variable, takes the value 0 if corporate governance information is not available on the company's website, 1 if they can be found in different sections of the website, 2 if the website has a separate corporate governance section	Company's website
CG bylaws	CGDiscBy	Dummy variable, takes the value 0 if the company does not disclose any of its bylaws, 1 if it discloses the bylaws in the national language and 2 if they are available in English	Company's website
Supervisory Board	CGDiscSuperv	Dummy variable, takes the value 0 if the company discloses no information concerning its supervisory board, 1 if they only disclose the name of the supervisory board members and 2 if they disclose the members' names and their independence	Company's website
Management	CGDiscMan	Dummy variable, takes the value 0 if the company discloses no information concerning its managers, 1 if they only disclose the name of the managers and 2 if they disclose the members' names and their professional experience	Company's website
Committees	CGDiscCom	Dummy variable, takes the value 0 if the company discloses no information about the supervisory board's separate boards, 1 if it only discloses the names of the members or the committees' responsibilities and 2 if it discloses the names of the members, their independence and the committees' responsibilities	Company's website
Organizational variables			
Size	Size	Ln of total assets	Financial statements
Leverage	Lev	Long term liabilities divided by shareholders equity	Financial statements
Profitability	Profit	Profit divided by shareholders equity	Financial statements
Auditor type	Audit	1 if a Big four auditor, 0 otherwise	Annual report
Industry	Ind	The following classification of industries is employed: Pharmaceuticals, Energy and Gas, and Industry.	Annual report
BVB-TR	BVB	1 if included in the Total Return BVB Index, 0 otherwise	BVB

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