CORPORATE GOVERNANCE, DYNAMIC CAPABILITIES AND BUSINESS PERFORMANCE IN COMPANIES LISTED IN BRASIL, BOLSA, BALCÃO S/A (B3 S/A)

ABSTRACT

Purpose- The main objective is to analyze the direct effect of Corporate Governance (CG) on Dynamic Capabilities (DCs) and on Business Performance (BP), and the moderating and/or mediating impact of DCs on the CG-BP relationship.

Methodology- The quantitative analysis was performed through PLS-SEM. Data were collected through a survey involving companies listed in B3 S/A from 2014 to 2016, except for companies from the financial sector. The final sample encompassed 195 companies per assessed year, thus totaling 585 observations concerning 2014, 2015 and 2016.

Findings- Confirmed the direct and positive effect of CG on DC development, as well as DC’s influence on BP and the mediating effect of DC on the CG - BP relationship. The main conclusion was that DCs are a powerful mediating influence on the CG-BP relationship. Hence, even with efficient corporate governance mechanisms, the companies must make decisions in line with their dynamic capabilities as a way to reach better business performance.

Limitations- Research cross-section method of data collection; and universe of companies listed in the Brazilian stock market.

Practical implications- For example, the rejected hypothesis about the direct effect of CG on BP and the confirmation of the indirect effect via DCs suggests the analysis of aspects related to costs with monitoring procedures applied to agency conflicts and to complementary factors that must be achieved in order to boost performance. On practical terms, the results contribute to companies that look for the best and most satisfactory performance in the markets they work in.

Keywords: Corporate Governance; Dynamic Capabilities; Business Performance; PLS-SEM.
RESUMO

**Objetivo** - O objetivo principal é analisar o efeito direto da Governança Corporativa (CG) nas Capacidades Dinâmicas (CDs) e no Desempenho Empresarial (BP), e o impacto moderador e/ou mediador dos CDs na relação CG-BP.


**Resultados** - Confirmação do efeito direto e positivo do GC no desenvolvimento do CD, influência do CD no BP e efeito mediador do CD sobre a relação CG-BP. A principal conclusão foi que as CDs são uma poderosa influência mediadora na relação CG-BP. Assim, mesmo com mecanismos eficientes de governança corporativa, as empresas devem tomar decisões alinhadas às suas capacidades dinâmicas como forma de alcançar melhor desempenho empresarial.

**Limitações** - O método de pesquisa transversal de coleta de dados e o universo de empresas listadas na bolsa de valores brasileira.

**Contribuição** - A exemplo, a hipótese rejeitada sobre o efeito direto do GC no BP e confirmação do efeito indireto via CDs sugere a análise dos aspectos relacionados aos custos com procedimentos de monitoramento aplicados aos conflitos de agência e aos fatores complementares que devem ser alcançados a fim de impulsionar o desempenho. Em termos práticos, os resultados contribuem para as empresas que buscam por melhor e mais satisfatório desempenho nos mercados em que atuam.

**Palavras-chave:** Governança Corporativa; Capacidades dinâmicas; Desempenho Empresarial; PLS-SEM.

1 INTRODUCTION

Corporate Governance (CG) became an up-to-date matter because of its importance for the construction of trust relationships, investment–capital attraction, risk reduction and business-performance promotion in the market (Ahmed & Hamdan, 2015; Wanyama & Olweny, 2013). With regard to business-performance promotion, there is the broad acknowledgement that CG increases BP (Adi, Handayani, & Rahayu, 2013) based on the assumption that the main responsibility of managers (agents) lies on adding value to shareholders (principal) (Darosi, 2014), since it guides the effectiveness of decision-making processes (Adi et al., 2013; Tao & Hutchinson, 2013).

According to the Agency Theory by Jensen and Meckling (1976), the argument for the existing relationship between CG and BP states that the adoption of CG practices increases the efficiency of monitoring processes applied to management activities by reducing agency issues. This process, in its turn, leads to better market evaluations that have positive effects on performance (Klapper & Love, 2002; Vieira & Mendes, 2006). Therefore, the adoption of CG mechanisms allows better financial decision-making in light of possible risks (Brickley & Zimmerman, 2010), since these mechanisms drive managers and shareholders’ interests (Jensen & Meckling, 1976) in decisions about investments in profitable ventures (Shleifer & Vishny, 1997) either on the short (managers’ interests) or long-term (shareholders’ interests). Thus, these mechanisms influence the price of the company in the market it works in (Boone, Field, Karpoff & Raheja, 2007) and improve its reputation in the stock market (Delgado-García, De Quevedo-Puente, & De La Fuente-Sabaté, 2010).

However, given the competitive rivalry in the current macro-economic scene and the continuous environmental changes, March (1991) and Sutton (2002) suggest that companies need to, simultaneously, improve their current capabilities (exploitation) and search for new ones (exploration) by operating within multiple deadlines (Gavetti & Levinthal, 2000) with flexibility and efficiency (Brown & Eisenhardt, 1998; Tushman & O’Reilly, 1996;
Volberda, 1996). Accordingly, based on Prahalad and Hamel (1990), companies can reach sustainable competitive advantages by developing the dynamics of their “exploitation” and “exploration” capabilities (Eisenhardt & Martin, 2000; March, 1991; Teece, Pisano, & Shuen, 1997). Thus, one can understand the relevance in promoting the companies’ capacity to reconfigure themselves (Teece, 2007, 2009).

However, according to Teece (2007, 2009), the occurrence of this resource combination and reconfiguration process (promotion of reconfiguration capability) depends on governance mechanisms, knowledge management, co-specificities and power decentralization. With regards to governance, companies need to establish a structure that enables the constant reconfiguration and combination of their business model, besides promoting governance activities that minimize agency issues to establish appropriate incentive systems and prevent revenue dissipation (Teece, 2007, 2009). Mechanisms configuring CG tend to provide greater chances that decisions about investments are made in a balanced way in order to improve these DCs (Meirelles & Camargo, 2014; Teece, 2007, 2009).

Briefly, because the decision-making process is a high-priority requisite to balance and coordinate conflicting activities and adjustments (O’Reilly & Tushman, 2011), the adoption of CG practices would pass through more consistent decisions (O’Reilly & Tushman, 2011) about investments, which would be lined-up to these requisites. This process would give companies the capacity to simultaneously explore its current environment (exploitation) and future opportunities (exploration) in order to reach higher performance (Levinthal & March, 1993; Michel & Picot, 2013; Shleifer & Vishny, 1997; Tushman & O’reilly, 1996).

In light of the foregoing, three relevant premises are defined in the present research: first, CG is related to company performance in the market they work in, since it drives interests concerning decision-making about investments (Boone et al., 2007; Jensen & Meckling, 1976; Shleifer & Vishny, 1997); second, when companies’ DCs are promoted, they guide companies satisfactory performance, as well as to long-term growth (Boone et al., 2007; Jensen & Meckling, 1976; Shleifer & Vishny, 1997); and third, CG (as “microfoundation”) aims at promoting DC development (Teece, 2007, 2009).

Thus, the following question is formulated: what are the effects evidenced by means of CG - DC relationships on the business performance of companies listed in Brasil, Bolsa, Balcão S/S (B3 S/A)? In order to answer this question, one finds the following general aim: assessing the direct effect of CG on DCs and BP (Business Performance), and the moderating and/or mediating impact of DCs on the CG-BP relationship. In order to do so, the current research will fulfill an important theoretical gap by combining CG, DC and BP in a single conceptual model to infer possible dependence relationships among them. This gap results from the fact that, although there are parallel and independent studies about the CG-BP (Love, 2011; Škare & Hasic, 2016) and DCs and BPs relationships (Fainshmidt, Pezeshkan, Lance Frazier, Nair and Markowski (2016), their results are fragmented and contradictory. In addition, there was no study assessing the herein evaluated model in the herein conducted in-depth review of the national and international literature.

Besides this introduction, the current article has the following structure: section 2 presents the main review of the literature that led to the defined conceptual model; section 3 presents the methodological procedures followed during the research; section 4 presents the analyses of results recorded during the tests; and, finally, section 5 presents the main conclusions.
The theoretical basis substantiating the present study derives from the Agency Theory (Jensen & Meckling, 1976; Shleifer & Vishny, 1997) and from the Theory of DCs (Eisenhardt & Martin, 2000; March, 1991; Teece, 2007, 2009), according to which, BP results from the mitigation of existing agency conflicts (by means of internal CG mechanisms), besides generating balanced and consistent decisions about DC promotion (either exploitation, exploration or ambidextrous) in companies. This model also results from empirical evidences of these theoretical propositions.

2.1 The CG - BP relationships

It is necessary adopting CG practices to minimize conflict of interests in order to monitor management behavior in terms of results and decision-making in relation to the destination given to company resources. Thus, it is evident that CG mechanisms aim at encouraging decision makers to act towards maximizing company price and lining-up the interests of conflicting parts (Catapan, Colauto, & Barros, 2013). At this point, good CG practices turn basic principles into real recommendations through the alignment of interests in order to preserve and optimize long-term economic values. This process facilitates fund raising and contributes to the improvement of organizational management quality in order to provide longevity and well-being (IBGC, 2015).

Because it is seen as a mechanism to assure investors and creditors about the return of the investments they made (Shleifer & Vishny, 1997), corporate governance (CG) allows good company performance since it assures compliance with the interests of all involved parts (Shleifer & Vishny, 1997). Accordingly, Securities and Exchange Commission of Brazil (CVM) establishes that CG, which aims at “optimizing company performance by protecting all interested parts, such as investors, employees and creditors, in order to facilitate access to capital” (CVM, 2002, p. 1). Therefore, CG introduces a set of practices focused on optimizing organizational performance and on favoring company longevity by protecting all interested parts (OECD, 2004; Rossetti & Andrade, 2011; Silva, 2012; Silva & Leal, 2007); thus, CG tends to:

a) Increase the access to external financing, which can encourage greater investments, growth and the creation of more job positions;

b) Reduce capital costs and increase company price by making investments more attractive and, consequently, lead to more growth and job positions;

c) Produce better operational performance through the best allocation of resources and management practices, which reduces the risk of financial crises and provides better relationships with all interested parts (Bebchuk, Cohen, & Ferrell, 2009).

The aim of CG is to provide a beneficial environment for business investments and for the adoption of mechanisms to promote financial and economic development (Ferreira et al., 2013). Thus, the efficient adoption of CG mechanisms allows the distribution of more profits (in the form of interests or dividends) among investors, rather than being expropriated by the agent who controls the company (La Porta, Lopez-De-Silvanes, & Shleifer, 2002). Consequently, the adoption of these mechanisms enables better decisions about investments given the risks; thus, it has impact on company performance and market price (Adi et al., 2013).

Accordingly, the aim of CG is to protect shareholders’ rights through new rules and regulations and to allow the interested parts (shareholders) to follow up and assess business decisions and shareholders’ rights (Monks & Minow, 2004), since CG practices determine the way managers

Accordingly, empirical studies have been carried out to test the theoretical proposition that GC influences BP. These studies have been using different CG indicators, such as propriety, composition and features of direction boards, and incentive systems. Claessens, Djankov, Fan and Lang (2002) conducted a study with 1301 companies from Eastern Asia and found that CG (property structure) has positive influence on company performance, which was measured through “Tobin’s q”. Carvalhal da Silva (2002) developed a research based on measurements taken through “leverage” and “Payout” with 225 Brazilian companies listed in BOVESPA in 2000 and found that CG influences performance. Gompers, Ishii and Metrick (2003) performed a study with 1500 North-American companies in the 1990s and found that CG instruments are related to higher market prices and revenues, to greater sales increase and to less investments in assets.

According to Andrade, Salazar, Calegário and Silva (2009), CG (DB composition) influences BP measured through the price of Brazilian publicly traded companies. Based on Krauter (2013), CG measured through incentive systems (executive compensation) has significant influence on companies’ financial performance.

Some studies did not confirm the CG-BP relationship. An example of such statement is the study by Demsetz and Villalonga (2001), which assessed the results from 223 North-American companies from 1976 to 1980 and did not find conclusive results about whether companies achieved better results due to CG (property structure). Barontini and Bozzi (2011) did not find evidences that CG (measured through incentive systems) influences BP (measured through stock market return and through return over asset - ROA). Although these studies do not confirm this relationship, they are minority in the literature.

Based on the reviewed theoretical propositions and empirical positive results, predominant in the context of Brazilian firms, we formulate the following hypothesis: H1: CG has positive influence on the performance (BP) of companies listed in B3 S/A.

2.2 The CG - DC relationship

Dynamic capabilities lie on the way companies operate their structures, cultures and processes (O’reilly & Tushman, 2008), which require flexible coordination and resource-use strategies (Eisenhardt & Martin, 2000; Griffith & Harvey, 2001; Song, Droge, Hanvanich, & Calantone, 2005; Teece et al., 1997). According to Teece (2007), governance mechanisms are essential to support the process of combining and reconfiguring resources, since the better defined the incentive structure to solve agency issues, and to influence internal groups in the company, the greater the likelihood to develop DCs (Meirelles & Camargo, 2014).

Agency Theory premises can be used to analyze to which extent CG contributes to DC development. In order to minimize conflicts of interest, this theory emphasizes that the separation between property and control creates interest line-up issues mainly concerning managerial salaries and the allocation of corporate benefits. Thus, discretion abuse and the use of corporate assets for private purposes can result from lack of appropriate accountability and oversight. These issues get
worse as the company grows and the separation between property and management expands (Herrmann, Sangalli, & Teece, 2017). Therefore, this situation requires efficient mechanisms so these potential conflicts of interest do not prevail in strategic decisions about investments on company performance improvement (Teece, 2007). Thus, C G is the instrument to mediate conflicts that allows companies to achieve balance and make long-term investments, including investments in DCs. The premise lies on the fact that CG, based on its internal mechanisms, opens way to investments in DC development in all its forms: “exploitation”, which presents positive, close and predictable returns; “exploration”, which represents uncertain and, many times, negative returns” (March, 1991, p. 85); and “ambidextrous”, which is the combination of the two first ones.

Balanced development of DCs forms is essential to companies, since the exclusive concentration in “exploitation” can make company capabilities obsolete, fact that also requires “exploration” efforts or the radical renewal of their capabilities. Accordingly, O’reilly and Tushman (2008) suggest that a high balance level between DCs, both “exploitation” and “exploration”, requires the integration of a common set of values and a shared view established by top managers, global frame, complementary context and governance process. This balance is easier to be achieved by incorporating internal mechanisms consistent with CG. Briefly, it is possible deducing that CG is a “microfoundation” that allows DC development, either “exploitation”, “exploration” or “ambidextrous” (O’reilly & Tushman, 2008). The minimization of agency conflicts would tend to drive more balanced decisions about investments in these capabilities and, consequently, increase the company price in the market.

Actually, the in-depth literature review performed in this study did not show any empirical studies assessing the CG - DC relationship. Thus, we base on the theoretical propositions to formulate the following hypothesis: H2: CG has positive influence on DCs of companies listed in B3 S/A.

2.3 The DC - BP relationship

In order to reach long-term success, companies must have operational capability and the capacity to compete in the existing markets, as well as to have the dynamic capability to recombine and reconfigure their assets and organizational structures to adapt themselves to emerging markets and new technologies (Teece, 2007). Company survival requires companies to combine development and renewal of their existing capabilities (exploitation), and to simultaneously replace them by completely new ones (exploration) (Atuahene-Gima, 2005) by defining the appropriate ambidextrous level (the use of exploitation and exploration capabilities) to the companies.

Thus, companies need to combine different resources through their DCs (Zahra & George, 2002; Wheeler, 2002), since they affect company development (Liu & Hsu, 2011; Wu, 2006). The absence of this combination of resources could lead to reduced company market price and to consequent financial loss for shareholders (Bowman & Ambrosini, 2003; Wheeler, 2002; Zahra & George, 2002).

If a company only develops “exploitation” capabilities, it faces the risk of not creating future perspectives to itself and, consequently, it would wear itself, be extinguished or bought. On the other hand, if the company only performs “exploration” activities, it can face higher risks and costs, as well as worse operational issues due to the limited attention given to production, fact that would make it impossible to handle such activities (Teh, 2014). Thus, the “exploitation” capability tends to limit the “exploration” one and vice-versa (Kyriakopoulos & Moorman, 2004). Moreover, the existing “exploitation” capabilities tend to provide faster and more precise returns than the new ones (Sethi & Sethi, 2009).
Actually, it has been possible observing that most contributions to the understanding of these activities with performance have been emerging around the company’s capacity to operate with both of them. Organizations reach more success, competitive advantages and longevity as long as they invest in ambidexterity (Gibson & Birkinshaw, 2004; He & Wong, 2004; Tushman & O’Reilly, 1996), i.e., in the appropriate balance between exploitation and exploration. According to Lubatkin, Simsek, Ling and Veiga (2006), there are two distinct positions about the subject: the first is advocated by Barney (1991) and Ghemawat and Costa (1993), who argue that there is no guarantee that organizational ambidexterity determines organizational performance improvement; the second position, which is advocated by Floyd and Lane (2000), stands out as a more up-to-date trend about the subject. Based on this second position, organizations need to become ambidextrous in order to remain adaptive and to escape environmental selection forces, which suggests direct relationship between themes.

Different from the relationship between CG and DC, there are many empirical studies assessing the DC - BP relationship. He and Wong (2004), for example, conducted a study with 206 companies in Singapore and Malaysia, and found that ambidexterity was positively related to sales increase. Similar result was observed by Lubatkin et al. (2006) in a study performed with CEOs and members of the top management of 139 small and mid-sized companies (SMCs). These authors found that the ambidextrous capability is related to company performance measured through a scale based on sales increase, on greater participation in the market, on gross ROE and on return in total assets. Based on exams in the direct and interactive effects of capabilities, either “exploitation” or “exploration”, on product innovation for foreign markets and on general company performance, Cabral, Coelho, Coelho and Costa (2015) used data from 498 Brazilian exports companies in their research and concluded that exploitation capabilities influence product innovation and global performance (ambidexterity), whereas exploration capabilities, and their interaction with the exploitation ones (ambidexterity), influence the overall performance rather than product innovation.

Therefore, based on the reported empirical evidences, we formulate the following hypothesis: H3: DCs have positive influence on the performance (BP) of companies listed in B3 S/A.

2.4 The Moderating and/or mediating effect of the CG - DC - BP relationship

By assuming the effects of CDs on the CG - BP relationship, one starts from the assumption that companies need to make balanced decisions about their DCs in order to succeed in the market they work in. However, these decisions are consistent and balanced when the company has efficient CG mechanisms to minimize possible conflicts in the decision-making process (Teece, 2007, 2009). On the other hand, based on the information provided above, some contradictory results were found in research about the CG - BP relationship. Thus, among other possibilities, such as non-linear relationships, it is possible to find DC’s moderating and/or mediating function in the CG - BP relationship. Cabral et al. (2015) found that the relationship between exploitation capabilities and global performance is mediated by product innovation. Therefore, the present study contributes to the theory by defining how exploration capabilities influence general performance, either directly or indirectly, through product innovation. Thus, the following hypotheses are formulated: H4: the CG - BP relationship is positively moderated by DCs; H5: the CG - BP relationship is positively mediated by DCs.

Based on the formulated hypotheses, we have our conceptual model resumed in Figure 1.
3 RESEARCH METHODOLOGY

In epistemological terms, based on the taxonomy by Burrel and Morgan (1979), this study follows a positivist design, objective ontology, determinism in relation to human nature and the nomothetic method. Thus, it emphasizes investigation development based on systematic protocols, scientific rigor and on specific quantitative techniques based on the hypothesis test on generalization possibilities (Burrel & Morgan, 1979; Paes de Paula, 2016). Besides its quantitative nature, the research is also classified as descriptive and of causal inference, since it aims at describing the features of a certain population/phenomenon and at assessing CG - DC - BP relationships. This quantitative analysis was performed through PLS-SEM in the WarpPLS® software (version 5.0). Data were collected through a survey involving 334 companies listed in B3 S/A (Brazilian Stock Market) from 2014 to 2016, except for companies from the financial sector. The sample was defined based on the census form due to the small size of the population. Companies that did not answer the questionnaire, or that could not be reached, were excluded from the study. The final sample encompassed 195 companies per assessed year, thus totaling 585 observations concerning 2014, 2015 and 2016. This sample size was satisfactory for the adopted analytical technique.

Primary data were collected through the application of a structured questionnaire, which was divided in three parts. The first part comprised 12 items, 6 of them related to DC variable “exploitation”, and 6 to the “exploration” one. These variables were measured through Likert scale (5 points), in which disagree completely (1) and agree completely (5) (Lubatkin et al., 2006). All scales were selected from the predominant international literature. For this reason, they were translated into Portuguese using the reverse translation method. The second part comprised 20 items about CG practices adopted by the company - “yes” or “no” answers. Each answer “yes” scored 1 and the opposite scored 0. Companies that had adopted only part of the CG practices scored 0.5. The CG index of each company was calculated based on the method suggested by Leal, Carvalhal and Iervolino.
(2015). The third, and last, part had 4 items to assess BP through Likert scale – 5 points - (1 – very low, 5 – very high) (Wei, Zhao, & Zhang, 2014).

Interviews were conducted by Centro de Estudos e Pesquisas em Administração (CEPA) da Escola de Administração (EA) da Universidade Federal do Rio Grande do Sul (UFRGS) – Business Studies and Research Center of the Business School of Federal University of Rio Grande do Sul – by phone, via e-mail or skype – company and respondent data were recorded. The first interviews, around 5% of the sample, were used as a pre-test of the questionnaire. Thus, some questions not understood generating responses from the interviewee, such as “I don’t have this information” or “I don’t know”, have been reformulated or complemented. The total of 195 valid questionnaires were gathered at the end of the data collection process.

The 20 CG items corresponded to the 4 dimensions used in the construct: information outspread (transparency) (six questions); direction board composition and functioning (five questions); ethics and conflicts of interest (four questions); shareholders’ rights (five questions) - the CG index (CGI) is defined at the end. Secondary data were collected through documental search in reports from companies in the sample published in BM&FBOVESPA (B3), Comdinheiro.com® and CVM websites. These sources provided information about: (1) the list of companies in the stratum of a differentiated market, (ii) the economic sector of the company, (iii) year when the company was launched, (iv) assets of companies listed in B3 S/A; and (v) complementary CG data. Part of these data were used to measure control variables: size, measured through the natural log of total assets; age, measured through the total number of years by means of differences among 2017, the years when the listed company was launched and on the year when the assessment was conducted (2014, 2015 and 2016).

4 RESULTS AND DISCUSSION

Companies in the sample are relatively long lived: 41.7 years, on average. Most of them (14.4%) belong to the power generation and basic services sectors. Most of them (56.4%) are included in B3 S/A special segments: Bovespa Mais (4.6%), in New market (42.6%), in Level 2 (3.6%) and in Level 1(5.6%); thus, they participate in differentiated CG rules, which are lined up to the best international practices that go beyond obligations with the Law of Corporations.

Tests of validity were performed in the first part of the PLS-SEM analysis, which was applied to evaluate the measurement model in order to assure that the adopted items would measure the expected items and highlight the degree of internal consistency required to each one of them (Hair Jr., Black, Babin, & Anderson, 2014). Thus, it was possible observing that data met the basic assumptions recommended for their use, such as: absent values up to 5% of the total sample (Hair Jr. et al., 2014), abnormal data based on Kock (2015), permission to use abnormal data and Variation Inflation Factor (VIF) lower than 3.3 (Nascimento & Macedo, 2016). It was also possible observing the existence of high outer load of indicators given the respective BP latent construct of CD constructs (“Exploitation_2” (0.628) and “Exploration_1” (0.687)), and CG (“gov_divulg_q1” (0.638), “gov_divulg_q5” (0.669), “gov_direction board_q2” (0.467) and “gov_conflict_q1” (0.6561)), and insufficient reliability scores. However, by following the parameters defined by Hair Jr. et al. (2014) (between 0.40 and 0.70) these indicators were not eliminated, since they did not increase in reliability and composite reliability above the suggested floor value.

One can notice that the model points to a satisfactory fit, since the lowest value reported for the convergent validity (AVE) recorded 0.516 for the “information outspread” dimension of the CG construct (AVEs > 0.50).The composed reliability presented the following values per construct:
DCs – “exploitation” (0.881) and “exploration” dimensions (0.882), BP and CG dimensions (0.919), “information outspread” (0.757), “Direction board” (0.805), “Conflict” (0.813) and “Shareholders’ rights” (0.920). These values confirm the high level of internal consciousness (higher than 0.708) (Hair Jr. et al., 2014). In terms of discriminating validity, all constructs recorded satisfactory discriminating level - correlations between levels were lower than the square root of AVE (Hair Jr. et al., 2014). Based on these results, it was possible evaluating the structural model (Figure 2) by observing the following adjustment procedures: coefficients of determination (R²), predictive relevance (Q²), size and significance of the path coefficients, and size of (f²) and (q²) effects (Hair Jr. et al., 2014; Nascimento & Macedo, 2016).

Figure 2. Results of the proposed structural model

Results point out that 56% (R²=0.56) of the variance in the endogenous construct (EC) is explained by other latent constructs and control variables found in the structural model. Approximately 92% of the 56% variance in the BP construct is explained by the DC latent construct, which is the only presenting direct explanation power - statistically significant - in the proposed structural model. The remaining 8% of BP latent construct explanation results from control variables “age” and “size” - both included in the structural model. The CG latent construct has low explanation power over BP (almost null), but approximately 27% of the variance in DCs is directly explained by it. The effect strength (f²) was calculated in order to evaluate the global contribution of the research (Chin, Marcolin & Newsted, 1996). The f² values recorded for DC (0.95) and CG (0.009) under parameters proposed by Hair Jr. et al. (2014): 0.02, 0.15 and 0.35 to indicate the effects of small, mid and large size, respectively, it was possible concluding that DCs have strong effect on BP, whereas CG has light effect on it (almost null).
The $f^2$ values (validated redundancy measurements) by Stone-Geisser must be higher than zero (Chin, 1998) in order to highlight the existence of the appropriate level of predictive relevance of the analyzed model. Thus, the relative impact of the predictive relevance ($f^2$) of small, mid and large sizes was found by using an approach similar to that adopted to evaluate the $f^2$ effect, depending on the $f^2$ values (Hair Jr. et al., 2014). Accordingly, the DC and CG values 0.973 and 0.081, respectively, highlighted the strong and light effects on the predictive relevance of BP. Finally, with regards to the analysis of the structural model, the indicator of general model adjustment known as Goodness of Fit (GOF) recorded 0.704, thus indicating that the model had excellent appropriate adjustment (Wetzels et al., 2009). Mainly with respect to the hypothesis tests, DCs had direct and strong effect on BP ($\beta$=0.71), which was statistically significant at 0.01% ($p<0.001$); whereas CG had positive effect on BP ($\beta$=0.03), although non-significant ($p>0.1$). CG, in its turn, had positive and statistically significant influence ($p<0.001$) on DCs ($\beta$=0.52).

Procedures presented the following results in the moderating and mediating effect tests: the moderating test of DCs in the CG - BP relationship showed non-significant coefficient $\beta$=-0.05; the mediating test recorded coefficient $\beta$=0.366, with variance accounting for (VAF) 0.302. Therefore, it was possible concluding that there is lack of DC moderation in the CG – BP relationship, since VAF was higher than 20% and lower than 80% in the mediating test; therefore, there is total mediation by DCs in the same relationship.

Thus, of the five formulated hypothesis, three were supported (H2: the positive effect of CG on DCS; H3: the effect of CDs on BP; and H5: the mediating effect of DCs on the CG - BP relationship). The analysis of results recorded for control variables “year”, “age” and “size” in the model highlights that these variables do not change the result between CG and BP ($\beta$=0.03 $^{ns}$). However, they reinforce the relationship between CG and DC ($\beta$=0.52; $p<0.001$), and DC and BP ($\beta$=0.71; $p<0.001$), fact that supports H5. Hypotheses 2 and 4 were not supported. Based on the recorded results, the CG - BP relation was not supported within the context of Brazilian companies listed in the stock market (H1). This result goes against results recorded in most previous studies.

A possible explanation for the aforementioned results in emerging economies presenting great capital concentration on their hands (controlling shareholder) is that the agency conflict between major and minor shareholders is much stronger. Therefore, it helps reducing the expected financial return predictions and increasing the costs of capitals in companies, fact that also reduces their price in the market (Silveira, 2002). It happens because costs from the process applied to minimize agency conflicts can become higher than the incomes from it (Jensen & Meckling, 1976; Rogers & Ribeiro, 2006; Rossetti & Andrade, 2011).

In its turn, CG has positive effect on DCs, and it highlights the importance of adopting its practices as basis or “microfoundation” for DC development in companies listed in B3 S/A. This result corroborates the proposition by Teece (2007, 2009), according to which, CG influences DC development through its efficient mechanisms in order to minimize possible agency conflicts.

Similar to previous studies (Cabral et al., 2015; Cao, Gedajlovic, & Zhang, 2009; Jansen, Van Den Bosch, & Volberda, 2006; Lisboa, Skarmeas, & Lages, 2013; O’reilly & Tushman, 2013; Wei et al., 2014), the result confirming the positive effect of DCs on the performance of companies listed in B3 S/A shows that, overall, investments in DC development enable BP improvement in Brazilian companies. Therefore, this outcome shows the importance of developing the skills and capabilities of these companies to (re)configure their assets/resources in order to adapt them to dynamic changes in the Brazilian market and to search for the appropriate improvement of their business performance (Eisenhardt & Martin, 2000; Teece, 2007, 2009; Teece et al., 1997). Although the hypothesis that CG influences BP was not supported, a relevant result showed that this influence is indirect and mediated by DCs. Hence, the adoption of CG practices had improved BP through DC acquisition/development.
in companies composing our sample. Results in the present analysis presented “counter-position to the literature” and explored the logics of the overestimated effects shown in previous studies about the relationship between the CG and BP constructs, although they did not take into account the role played by DCs in this relationship. Thus, companies listed in the B3 S/A must understand that CG practices driven towards more balanced and consistent decisions about investments in the development of their DCs, either on the short- or on the long-term, will reflect on their adaptation to the dynamic demands of the Brazilian market and, therefore, will improve their BP.

5 CONCLUSION

The aim of this study was to assess the direct effect of CG on DC and BP and the moderating and/or mediating impacts of DCs on the CG - BP relationship. In order to reach this goal, 195 companies listed in B3 S/A were investigated.

Based on the presented results and by framing more than half of the sample to the demands from some special listing segments of B3 S/A, it was possible concluding that these companies have efficient mechanisms to assure shareholders’ rights. These companies outspread information to other stakeholders and their regulations aim at mitigating risks of information asymmetry (BM&FBOVESPA, 2017).

In conclusion, despite the rigor of companies listed in B3 S/A, their GC does not present direct effect on BP; this effect is indirect and mediated by DCS. Thus, based on the results, the adoption of CG practices must not be expected to influence performance, but to induce other routines (in our study, DCs) to actually improve performance. Accordingly, some points are questioned: Would CG practices only mean more costs to these companies? Or, yet, what would be the most appropriate metric if their returns were measured in the long-term?

In order to answer the first question, it is important highlighting that the Brazilian stock market still concentrates traces of control by major shareholders and it generates high costs to monitor existing conflicts resulting from the relationship between principal and agent. Such relationship, in its turn, can reflect on possible returns expected by companies participating in the study. With regard to the second question, it is important mentioning that national and international empirical studies have been using different formative metrics to measure company performance. Thus, mainly in this item, the proper choice for the right performance metric applied to assess returns from the adoption of CG practices can likely explain the observed divergent empirical results. The option was made for adopting a flexible metric.

The confirmation of the CG effect on DC development allowed concluding that CG – as an efficient mechanism to manage conflict of interest – enabled strategic decision-making to generate satisfactory company performance. The confirmation of the DC effect on the BP of companies listed in B3 S/A made it possible concluding the relevant of this effect to companies that aim at improving their capabilities, mainly the dynamic ones. With regards to the dynamic context emerging in the Brazilian context, exploitation and exploration capabilities are essential for companies to fit and remain competitive.

These conclusions present theoretical and practical implications. The proposed conceptual model provides original contributions for theoretical advancement. These contributions are amplified by the recorded results; for example, the rejected hypothesis about the direct effect of CG on BP and The confirmation of the indirect effect via DCS suggests the analysis of aspects related to costs with monitoring procedures applied to agency conflicts and to complementary factors that must be achieved in order to boost development.
On practical terms, the results contribute to companies that look for the best and most satisfactory performance in the markets they work in. They must guide their actions to implement their efficient CG mechanisms, which must also line-up with strategic decision-making about promoting their DCs. In addition, there is the need of managing possible agency conflicts in the process that could stop the effective implementation of these capabilities. Finally, when it comes to limitations, it is important highlighting the cross-section adopted during data collection. Longitudinal studies are more appropriate to evidence effect tests in periods longer than the ones adopted for the current study. The second limitation of this study concerns the fact that it was restricted to the universe of companies listed in the Brazilian stock market, which was justified by data availability.

REFERENCES


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