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SUPERIOR BUSINESS PERFORMANCE AND CORPORATE CULTURE IN LATIN AMERICA

Desempenho Empresarial Superior e Cultura Corporativa na América Latina

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ALAN DIÓGENES GÓIS (In memoriam)[1]
Márcia Martins Mendes de Luca[1]

1 PhD in Controllership and Accounting - Universidade de São Paulo

ABSTRACT

Purpose – Within the framework of Resource-Based View (RBV) we evaluated the relationship between corporate culture and superior business performance in a sample of 62 Latin American firms traded on the NYSE.
Design/methodology/approach – Data retrieved from 20-F forms and the CRSP database, covering the period 2011-2016, was submitted to multiple linear regression with robust errors and random effects.
Findings – Our results revealed that i) the 7 Latin American countries represented in the sample displayed a very similar mix of corporate culture, with a slight predominance of the competitive type, ii) less indebted and larger firms attained higher levels of superior business performance, and iii) auditing by one of the Big Four was associated with better performance in firms with competitive and creative culture. In the multiple regression analysis, creative culture was the best explanatory factor of superior corporate performance. Thus, we conclude that a culture with an emphasis on innovation generates competitive advantage.
Originality/value – The organizations should make efforts to understand and manage the dynamics of corporate culture, harnessing their own dominant culture in the quest for superior corporate performance. As posited by RBV, our results show that investment in creative and innovative culture is particularly favorable to the creation of competitive advantage and, consequently, business performance.
Keywords – Corporate culture. Cultural typology. Superior business performance. Resource-based view.

RESUMO

Objetivo – O estudo analisa a relação entre o desempenho empresarial superior e a cultura corporativa nas companhias de capital aberto da América Latina, listadas na New York Stock Exchange (NYSE), adotando como pressuposto teórico a Resource-Based View (RBV).
Desenho/Metodologia/Abordagem – A pesquisa utilizou a análise de Regressão Linear Múltipla com erros robustos e efeitos aleatórios, em uma amostra que reúne 62 empresas. Os dados foram extraídos do relatório 20-F e base de dados CRSP para o período entre 2011 e 2016.
Resultados – Os resultados revelaram que (i) não há diferença entre os tipos de cultura corporativa, considerando-se os países latino-americanos, sendo que a cultura competitiva se destaca em relação às demais tipologias culturais; (ii) as empresas menos alavancadas e de maior porte possuem maior desempenho empresarial superior; e (iii) as empresas auditadas por uma das Big Four auferem desempenho superior na presença de cultura competitiva e criativa. Verificou-se, ainda, que quanto maior for a composição da cultura criativa, maior será o desempenho empresarial superior. Conclui-se que manter uma cultura com ênfase na inovação condiciona vantagem competitiva.
Originalidade – As organizações devem se esforçar para compreender e gerenciar a dinâmica da cultura corporativa, aproveitando sua própria cultura dominante na busca por um desempenho corporativo superior. Conforme postulado pela RBV, nossos resultados mostram que o investimento na cultura criativa e inovadora é particularmente favorável à criação de vantagem competitiva e, consequentemente, ao desempenho dos negócios.

Palavras-chave – Cultura corporativa, Tipologias culturais, Desempenho Empresarial Superior, Resource-Based View.

1 INTRODUCTION

Corporate strategy may be defined as the choice of a position within a competitive business environment with the purpose of attaining specific organizational goals (Dal-Soto & Santos, 2004). An analysis of this environment in light of Resource-Based View (RBV) requires the assessment of, among other things, all valuable, rare, inimitable and non-substitutable traits and resources a firm can make use of in its quest for competitive advantage and superior business performance (Barney, 1991). Such resources and capacities should ideally be aligned with strategic behaviors for the building of sustainable competitiveness (Ribeiro, Rossetto, & Verdinelli, 2011).

According to Ribeiro *et al.* (2011), it is not enough to merely own strategic resources: the organization must also adopt a definite strategic behavior in order to derive all the benefits implicit in such resources. In other words, a proper alignment of resources and strategy is indispensable for the creation of competitive advantage (Ribeiro *et al.,* 2011). Organizations should therefore at all times analyze and manage the constellation of internal and external factors their success depends on.

Corporate resources may be either tangible or intangible. Among the latter are strategic resources (Sanches & Machado, 2014) such as corporate culture, corporate reputation, brands and know-how, which by nature are non-material and difficult to quantify, manage and transfer (Barney, 1991; Colauto, Nascimento, Avelino, & Bispo, 2009; Sanches & Machado, 2014).

The focus of our study, corporate culture has been defined in several different ways and has been analyzed at both national and organizational level (Hofstede, 1986; Lund, 2003). For the sake of the present study, we will consider corporate culture as a pattern of basic assumptions established by an organization to meet the needs of management and problem-solving, internally or externally. Also, corporate culture should be ingrained and effective enough to allow it to be perpetuated and correctly employed by future members of the organization (Schein, 1990). On the other hand, Lee and Yu (2004) define corporate culture as a set of values and norms shared by the organization's members. In the case of family-owned firms, corporate culture flows to a large extent from the founder's values and beliefs (Oliveira & Papa, 2009).

Cameron, Quinn, Degraff and Thakor (2014) segregated corporate culture into four types: clan, market, hierarchy and adhocracy, with their respective tendencies (collaborative, competitive, control and creative). The authors concluded that competitive culture ('market') is the most efficient from the point of view of financial results.

As an internal strategic resource, corporate culture plays an important role in an organization's quest for competitive advantage and effectiveness (Barney, 1991; Colauto *et al*., 2009; Fiordelisi & Ricci, 2014; Hartnell, Ou, & Kinicki, 2011; Kotrba, Gillespie, Schmidt, Smerek, Ritchie, & Denison, 2012; Sanches & Machado, 2014), potentially paving the way to superior business performance (Han, 2012; Sørensen, 2002; Tseng, 2010; Yesil & Kaya, 2013; Zhao, Teng & Wu, 2018).

In view of the above, in this study we attempted to answer the question: What is the relationship between corporate culture and superior business performance in public Latin American firms?

Predicated by the literature (Han, 2012; Kotrba *et al.*, 2012; Sørensen, 2002; Tseng, 2010; Yesil & Kaya, 2013), the research question implies the existence of a verifiable relationship between superior business performance and corporate culture. Thus, the main purpose of the present study was to evaluate the association between superior business performance and corporate culture in public firms in Latin America.

To do so, we conducted a quantitative desk study on a sample of 62 public Latin American firms traded on the New York Stock Exchange (NYSE) and for which information regarding the study variables (corporative culture, business performance, company size, market-to-book ratio, leverage, company growth, age, losses, and auditing) was available. Data was extracted from Form 20-F reports and from the CRSP database, covering the fiscal years 2011-2016 (each ending on 31 December) for independent and control variables, and the fiscal years 2011-2013 for corporate culture variables.

The present study is justified by the indisputable relevance of corporate culture to the study of organizational effectiveness. Culture is one of the most important resources informing business strategies and shaping the values and missions of firms. Moreover, little has been published on the direct relationship between superior business performance and corporate culture, especially in the Brazilian setting. The countries sampled for the study were headquartered in developing countries within a fairly similar cultural context (Latin America) and internationalized through the trading of shares in developed markets outside their home region. Thus, our study contributes to current research efforts at the national level and provides valuable subsidies for future in-depth analyses of the constructs of corporate culture and superior business performance.

2 REVIEW OF THE LITERATURE

Organizations do not survive in isolation, nor are they immune to environmental influences, but interact permanently with the society in which they are inserted (Rosa, Tureta, & Brito, 2006). This interaction leads to exploring and developing new knowledge and know-how, improving the work environment and, consequently, investing in internal human relationships. Internal knowledge is now commonly viewed as a competitive advantage capable of projecting organizations on the market, but also as a resource which can be restructured when necessary (Angeloni & Grotto, 2009; Ferreira, Fandino, Segre, & Nascimento, 2010).

RBV is a well-established theoretical framework used to evaluate the relevance of corporate resources to competitiveness (Dal-Soto & Santos, 2004). Within this perspective, Barney (1991) and Peteraf (1993) argued that firms should invest in internal factors which are rare and hard to imitate, making them a source of competitive advantage and superior business performance. Such resources are usually intangible, as is the case with corporate culture (Colauto *et al.,* 2009).

According to Barbosa (1996), as objective as they may seem, managerial decisions are inevitably conditioned by cultural factors. All corporate activity depends on the context in which the organization operates and on the participation of its members, who gain experience from these processes, favoring productivity (Campos, 2004). In a scenario of constant change and learning, managers need to be aware of the crucial role of corporate culture and the many ways in which members of the organization contribute to this culture through their habits and behaviors (Fleury, 1991). Likewise, Machado (2005) believes organizations are primarily defined by their cultural traits. In fact, it would seem the market is in need of new tools of business management based on an efficient and adequate understanding of the dynamics of corporate culture (Guerreiro, Frezatti, & Casado, 2006).

Borrowed from anthropology, the term 'culture' was first used in the academic business literature in the late 1970s and early 1980s (Estol & Ferreira, 2006). Corporate culture is created and shared over the lifespan of an organization as the result of learning and in response to internal and external challenges. When used as an instrument of management, corporate culture makes it possible to link different aspects of the organization, aiding in the sharing of responsibility, the definition of strategies and internal communication, among others (Neves, Borges, Costa, & Timbó, 2005). Culture is impacted by the habits and behaviors of different groups and persons; in this process, the complex assemblage of individual contributions eventually settle into a predominant collective or organizational pattern, which represents the general way of thinking and acting of the organization in question (Guerreiro *et al.,* 2006).

The topic of corporate culture has merited much attention from researchers in organization studies and from corporate actors (Fiordelisi & Ricci, 2014; Hartnell, Ou, & Kinicki, 2011; Kotrba *et al*., 2012). The values underpinning organizational policy are manifest in corporate culture; thus, as the identity of an organization changes over time, so does the culture, and vice-versa, making it possible to determine organizational identity based on cultural traits (Machado, 2005). As argued by Barbosa (1996), the study of corporate culture, employing a set of modern management theories, underscores the importance of correlating different types of culture with their respective organizational settings, identifying recurrent dilemmas and failings.

Souza, Pereira and Maffei (2004) point out that corporate culture regulates relationships in the workplace and shapes internal and external communication, among other things. Initially, a firm's culture may be difficult to define, but over time a given cultural trait is likely to prevail (Révillion, 2004). In other words, each organization eventually develops a unique culture—created, preserved and regulated by its members and by the immediate environment (Saraiva, 2002).

In the organizational setting, the concept of culture is relevant to the development of business strategies and to research in business administration (Shinyashiki, 1995). It also allows firms to analyze their own behavior (Saraiva, 2002). Corporate culture is a system of beliefs and values in line with organizational policy (Neves *et al.*, 2005). It informs the organization's internal rules, whereas the organization itself is an agent of cultural formation through the sharing of goals by its members (Guimarães, 2004).

To Fleury (1991), corporate culture reflects forms of communication and power relationships within an organization. It is instrumental in directing daily activities, accomplishing goals and responding quickly to clients' needs (Souza *et al.*, 2004). As pointed out by Oshiro, Crnkovic and Santos (2005), corporate culture—described as a continuous process of interaction between an organization and its environment and among its members—must be flexible enough to allow the organization to adjust efficiently to changes in the market. As most other tools, it requires continuous improvement and deployment to the potential benefit of all parties.

One might say corporate culture is like an organizational compass guiding and fine-tuning conduct and policy (Freitas, 1991). Depending on the culture, the task of changing strategies, structures, operational systems and procedures may be anything from simple to highly problematic (Silva, Machado, & Hein, 2006). Thus, as put by Chu and Wood (2008), a working understanding of cultural systems is indispensable for top executives.

The fact that corporate culture is markedly influenced by local culture (Machado, 2001) does not make it any less unique: organizations will always have an exclusive set of beliefs, values and expectations (Révillion, 2004). Organizational values may be gleaned from those priorities which come to the forefront at the moment of decision making. A set of values are necessary to set in motion coordinated actions towards the attainment of corporate goals (Révillion, 2004).

Révillion (2004) argued for the existence of wide spectrum of corporate culture. Subsequently, Cameron *et al*. (2014) identified four major types (hierarchy, market, clan, adhocracy) and defined the dominant orientation and effectiveness criteria of each one (Table 1).

Table 1: Types of corporate culture, dominant orientations and effectiveness criteria.

Type of culture	**Orientation**	**Effectiveness criteria**
Hierarchy	Control	Efficiency, timeliness, opportunity, smooth functioning
Market	Compete	Increase in stock market, profitability, product quality and produtivity
Clan	Collaborate	Satisfaction of collaborators and commitment
Adhocracy	Create	Innovation

Source: the authors, based on Cameron et al. (2014).

For the purpose of this study, corporate culture type was defined in accordance with the dominant orientations proposed by Cameron *et al.* (2014). Thus, four types were considered: control (CON), competitive (COM), collaborative (COL) and creative (CRE).

According to Cameron *et al*. (2014), the four culture types may also be divided into internal focus (control and collaborative) and external focus (competitive and creative). Control culture is related to organizational structure and control mechanisms, such as corporate governance, while collaborative culture focuses on human capital (Cameron *et al.*, 2014). On the other hand, competitive culture reflects primarily a concern for maximization of earnings, whereas creative culture is the result of innovative thinking.

Fiordelisi and Ricci (2014), Hartnell, Ou and Kinicki (2011) and Kotrba *et al*. (2012) observed that, in the literature, corporate culture is generally viewed as an important determining factor of business effectiveness. However, studies correlating corporate culture with superior business performance are scarce (Kotrba *et al.*, 2012; Sørensen, 2002), even more so if one considers the effect of each type of culture (Han, 2012; Tseng, 2010; Yesil & Kaya, 2013).

Yesil and Kaya (2013) believe that creative, innovative and competitive firms tend to prefer international markets and adjust more quickly to changes (Oliveira, Hahn, Santos, Souza, Campos, & Pivetta, 2017). This behavior may in some cases protect firms against economic losses. Marcoulides and Heck (1993) attributes this to the fact that business performance reflects the extent of goal achievement in the organization's workforce, capital, marketing and fiscal matters.

In other words, firms with competitive culture allegedly tend to perform better than firms with other types of culture (Cameron *et al.,* 2014; Fiordelisi & Ricci, 2014; Kotrba *et al.,* 2012; Tseng, 2010). The same has been postulated for firms with creative culture (Fekete & Böcskei, 2011; Han, 2012; Morgan & Vorhies, 2018; Naranjo-Valencia, Jiménez-Jiménez, & Sanz-Valle, 2016).

Other authors have found significant evidence of a positive association between collaborative culture and corporate performance (Fekete & Böcskei, 2011; Han, 2012; Tseng, 2010). Tseng (2010) believes that good performance flows from interdependent behavior like cooperation, knowledge sharing and mutual assistance. On the other hand, in firms with control culture, corporate performance is believed to be negatively affected by excessive formality (Fekete & Böcskei, 2011; Han, 2012).

Thus, as expressed by many authors (Han, 2012; Kotrba *et al.*, 2012; Sørensen, 2002; Tseng, 2010; Yesil & Kaya, 2013), corporate culture is an internal resource capable of boosting corporate performance. Among the most significant contributions to our understanding of the correlation between corporate culture and corporate performance are the studies of Fekete and Böcskei (2011), Han (2012), Tseng (2010) and Yesil and Kaya (2013). The result of each one is briefly described below.

Fekete and Böcskei (2011) evaluated the association between corporate culture and corporate performance in a sample of 256 Hungarian firms and found control culture (emphasis on hierarchy and control) to have negative repercussions on performance.

Han (2012) looked into the relationship between corporate culture, strategic orientation and corporate performance in a sample of hotels from South Korea in 2009. Competitive culture was not found to favor performance when compared to other types of culture, but collaborative culture and creative culture were positively associated with performance.

Tseng (2010) studied the correlation between corporate culture, knowledge conversion and corporate performance in Taiwan's largest firms in 2008 and found greater knowledge conversion and better performance in firms with creative culture than in firms with collaborative culture or control culture.

Yesil and Kaya (2013) analyzed the relationship between corporate culture and economic-financial performance in firms headquartered in Gaziantep, Turkey, and concluded that no specific type of culture could be shown to favor corporate performance.

Based on the reviewed literature (Fekete & Böcskei, 2011; Fiordelisi & Ricci, 2014; Han, 2012; Kotrba *et al.,* 2012; Sørensen, 2002; Tseng, 2010; Yesil & Kaya, 2013), the following study hypotheses were formulated:

H1: Corporate culture of the control type is negatively associated with corporate performance.

H2: Corporate culture of the competitive type is positively associated with corporate performance.

H3: Corporate culture of the collaborative type is positively associated with corporate performance.

H4: Corporate culture of the creative type is positively associated with corporate performance.

3 METHODS

The design of this study reflected the objective, procedures and approach to the problematic. Thus, with regard to the objective the study was descriptive, the procedure was that of a desk study, and the approach was quantitative.

The study population included all 75 Latin American firms traded on the NYSE in the fiscal years of 2011 through 2016 (each year ending on December 31st). The final sample consisted of 62 firms for which the desired information was available in 20-F forms and/or the CRSP database.

The information used to determine corporate culture was extracted from reports attached to Form 20-F. These reports are mandatory for non-US firms listed on the NYSE and can be downloaded from the stockmarket's portal for the fiscal years ending on 31 December 2011, 2012 and 2013, as was done by Fiordelisi and Ricci (2014). Assuming that changes in corporate culture are negligible in the short run, we used the average calculated for the years 2011-2013 to define the culture of each firm and then extrapolated it unto the entire study period. The official purpose of Form 20-F is to make disclosure by foreign companies compatible with the format used by US firms, with emphasis on key business activities, market risks, internal controls, codes of ethics and conduct, corporate governance, financial reports and audits.

Content analysis was used to determine the type of culture of each firm in the sample. As explained by Bardin (2011), content analysis is a systematic and replicable analysis of messages and other communication artifacts which allows to draw inferences regarding the intentions, beliefs and affinities of both sender and recipient. The method was used by Fiordelisi and Ricci (2014) by assigning word roots from company reports to specific types of culture (Table 2).

Table 2: Word roots screened for in company reports.

Type of culture	Word roots
Control (CON)	*capab*, collectiv*, commit*, competenc*, conflict*, consens*, control*, coordin*, cultur*, decentr*, employ*, empower*, engag*, expectat*, hir*, involv*, life*, long-term*, loyal*, monit*, mutual*, parent*, procedur*, productiv*, retain*, reten*, skill*, social*, tension*, value**
Competitive (COM)	*achiev*, acqui*, agreem*, attack*, budget*, challeng*, charg*, client*, compet*, customer*, deliver*, direct*, driv*, excellen*, expand*, fast*, goal*, growth*, hard*, invest*, market*, mov*, outsourc*, performanc*, position*, pressur*, profit*, rapid*, reputation, result*, revenue*, satisf*, scan*, succes* signal*, speed*, strong, superior, target*, win**
Collaborative (COL)	*cautio*, certain*, chief*, collab*, conservat*, cooperat*, detail*, document*, efficien*, error*, fail*, help*, human*, inform*, logic*, method*, outcom*, partner*, people*, predictab*, relation*, qualit*, regular*, solv*, share*, standard*, team*, train*, uniform**
Creative (CRE)	*adapt*, begin*, chang*, creat*, discontin*, dream*, elabor*, entrepre*, envis*, freedom*, futur*, idea*, init*, innovat*, intellec*, learn*, new*, origin*, pioneer*, predict*, radic*, risk*, start*, trend*, ventur*, vision**

The asterix represents one of many possible suffixes added to a root. Dictionary words thus formed may or may not be prefixed; e.g., capab*= root; capable = primary dictionary word derived from the root; incapable = secondary dictionary word formed by adding a prefix to a primary dictionary word.

Source: the authors, based on Fiordelisi and Ricci (2014).

Word roots included in the analysis of Fiordelisi and Ricci (2014) which occurred with less than 1% frequency in our study were excluded to avoid outlier bias.

Having screened the sampled company reports for dictionary words derived from the word roots above (Table 2), we used Equation 1 to determine the type of culture of each firm.

$$X = (FREQ/n)/\Sigma(FREQ/n) \qquad \text{(Equation 1)}$$

where X represents the type of corporate culture, FREQ is the number of times words attributed to a given type of culture occur in 20-F forms issued in the period 2011-2013, and n is the number of word roots attributed to that culture (Table 2).

If for example a company's reports for the period 2011-2013 contain 1,500 dictionary words derived from the word roots in Table 2, with 300 attributed to control culture, 400 to competitive culture, 600 to collaborative culture and 200 to creative culture, the firm may be said to have a mix of 21% control culture [(300/30)/(300/30)+(400/40)+(600/29)+(200/25)], 21% competitive culture

[(400/40)/(300/30)+(400/40)+(600/29)+(200/25)], 42% collaborative culture [(600/29)/(300/30)+(400/40)+(600/29)+(200/25)], and 16% creative culture [(200/25)/(300/30)+(400/40)+(600/29)+(200/25)].

According to RBV, corporate culture is a source of competitive advantage and, potentially, superior corporate performance. In this study, the latter was proxied by the difference between the firm's five-year mean return on assets (ROA=operating income divided by total assets) and the mean sector ROA (the mean ROA of all the sampled firms).

In addition, following the example of Fiordelisi and Ricci (2014), we adopted six control variables with a potential influence on corporate performance: company size, market-to-book ratio, leverage, company age, losses, and auditing. Table 3 shows all the variables used in the study.

Table 3: Study variables.

Variable	Description
Superior corporate performance (ROAS)	$ROA_{firm} - ROA_{sector}$
Corporate culture (CULT)	CON = (FREQ/30)/Σ(FREQ/n) COM = (FREQ/40)/Σ(FREQ/n) COL = (FREQ/29)/Σ(FREQ/n) CRE = (FREQ/25)/Σ(FREQ/n)
Company size (SIZ)	Natural logarithm of total assets
Market-to-book ratio (MTB)	Market value / Equity
Leverage (LEV)	Total debt / total assets
Company age (AGE)	Year of analysis – year of foundation
Losses (LOSS)	Binary variable that takes the value "1" if the firm had losses in the preceding year, and "0" otherwise.
Auditing (AUD)	Binary variable that takes the value "1" if the firm is audited by one of the Big Four (EY, KPMG, Deloitte, PwC), and "0" otherwise.

CON=control culture; COM=competitive culture; COL=collaborative culture; CRE=creative culture.
Source: the authors.

Initially, we performed a descriptive analysis of the collected data and calculated Pearson correlation coefficients to determine the behavior and interrelationships of the variables. To answer the research question and test the hypotheses we used multiple linear regressions on panel data with robust errors and random effects, clustered by year, sector and country.

Each hypothesis was tested with a model based on Equation 2, in which the respective culture variable was inserted. Thus, Model 1 (control culture) included the variable CON, Model 2 (competitive culture) was fitted with the variable COM, Model 3 (collaborative culture) used the variable COL, and Model 4 (creative culture) featured the variable CRE.

$$ROAS_{it} = \alpha + \beta_1 CULT_{it} + \beta_2 SIZ_{it} + \beta_3 MTB_{it} + \beta_4 LEV_{it} + \beta_5 AGE_{it} + \beta_6 LOSS_{it} + \beta_7 AUD_i + \beta_8 BRA_i + \beta_9 CHI_i + \beta_{10} MEX_i + \varepsilon$$
(Equation 2)

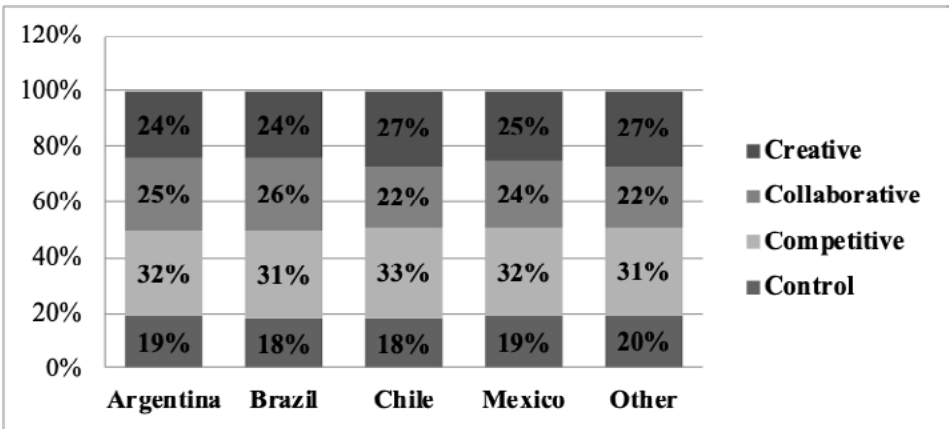
The statistical procedures (Pearson correlation analysis and multiple linear regression on panel data with robust errors) were performed with the software Stata, v. 13. In addition, the software G*Power 3.1.9.2 was used to conduct *post-hoc* analyses and calculate the sample size required for multiple regression. The statistical power (1–β) of the test was determined in accordance with the level of significance (α=0.05) and the sample size (n=62). Since each model included 8 predictive variables, the power was 0.93 in all the models—an indication that the sample was sufficiently large for the regression analysis (Cohen, 2013).

4 RESULTS AND ANALYSIS

The 62 firms sampled for the study were headquartered in seven countries: Argentina (n=12), Brazil (n=26), Chile (n=11), Colombia (n=2), Mexico (n=9), Panama (n=2) and Peru (n=3).

Figure 1 shows the representativeness of each type of corporate culture, as identified in reports issued by the sampled firms, according to home country.

Figure 1: Representativeness of corporate culture, segregated by home country.



Source: the authors.

The composition of culture types was relatively similar from one Latin American country to another, possibly because differences in context were small, with most organizations developing a fairly similar "Iberian identity" (Hofstede, 1986). In our sample of Latin American firms traded on the NYSE, competitive culture was slightly predominant, matching the results of Fiordelisi and Ricci (2014).

The descriptive statistics in Table 4 shows the behavior of the study variables in minimum and maximum values, mean values, standard deviation, and variation coefficients.

Table 4: Descriptive statistics.

PANEL A: metric variables					
Variable	**Observations (n)**	**Mean**	**Standard deviation**	**Minimum**	**Maximum**
ROAS	401	0.545	1.45	-0.06	5.57
CON	436	0.18	0.02	0.14	0.23
COM	436	0.32	0.03	0.27	0.38
COL	436	0.25	0.03	0.17	0.32
CRE	436	0.25	0.03	0.20	0.33
SIZ	436	23.15	1.48	19.94	26.84
MTB	428	2.36	3.03	-4.14	51.32
LEV	431	0.29	0.16	0.01	0.89
GROW	373	0.15	0.44	-0.62	6.40
AGE	436	56.28	33.53	1	146
PANEL B: non-metric variables					
Variable	**Observations (n)**	**Category**	**Frequency**	**Percentage**	**Accum.**
LOSS	436	Yes	48	11.01	100.00
		No	388	88.99	88.99
AUD	436	Yes	429	98.39	100.00
		No	7.00	1.61	1.61

ROAS=superior corporate performance; CON=control culture; COM=competitive culture; COL=collaborative culture; CRE=creative culture; SIZ=company size; MTB=market-to-book ratio; LEV=leverage; GROW=company growth; AGE=company age; LOSS=losses in the preceding year?; AUD=audited by one of the Big Four?

Source: the authors.

As shown by the calculated standard deviations, heterogeneity (dispersion) was low in the dataset, with the exception of ROAS, MTB and GROW. On average, the sampled firms displayed elevated ROAS values. The fact that competitive culture (32%) was predominant in our sample while control culture was relatively less important (18%) (Figure 1) suggests corporate culture favored the creation of competitive advantage.

As reflected by the control variables, the sampled firms were generally large, with higher market value than book value, and low levels of leverage (debt < 50% of total assets). Company growth was 15% on the average, indicating a positive sales variation. Most of the firms had been on the market for a considerable time (mean: 56 years). Only 11% had sustained losses in the preceding year and nearly all (98.4%) were audited by one of the Big Four.

Following the descriptive analysis, we submitted the data to Pearson correlation analysis in order to evaluate potential associations between the variables (Table 5).

Table 5: Pearson correlation analysis.

	ROAS	CON	COM	COL	CRE	SIZ	MTB	LEV	GROW	AGE	LOSS	AUD
ROAS	1											
CON	0.02	1										
COM	-0.06	-0.49***	1									
COL	0.09*	-0.32***	-0.13**	1								
CRE	-0.04	0.23***	-0.56***	-0.64***	1							
SIZ	-0.03	0.06	-0.12**	-0.08	0.16***	1						
MTB	-0.03	-0.08	0.04	0.09*	-0.08	-0.12***	1					
LEV	-0.01	-0.31***	0.14**	0.13**	-0.09	0.26***	-0.06	1				
GROW	-0.13**	-0.05	0.07	0.00	-0.04	-0.05	0.40***	-0.10*	1			
AGE	0.04	0.06	0.00	-0.17***	0.12**	0.14**	-0.16***	0.13**	-0.08	1		
LOSS	0.06	-0.03	0.08	0.02	-0.08	-0.01	-0.12**	0.24***	-0.10*	0.05	1	
AUD	0.05	-0.05	0.09	-0.01	-0.04	-0.09*	0.05	0.16***	-0.04	0.16***	0.05	1

Note: ROAS=superior corporate performance; CON=control culture; COM=competitive culture; COL=collaborative culture; CRE=creative culture; SIZ=company size; MTB=market-to-book ratio; LEV=leverage; GROW=company growth; AGE=company age; LOSS=losses in the preceding year; AUD=audited by one of the Big Four.

***=significant at the level of 1%; **=significant at the level of 5%; *= significant at the level of 10%.

Source: the authors.

In this analysis, COL and GROW were the only variables significantly correlated with ROAS (the former positively, the latter negatively). Four other relationships were observed: i) greater SIZ was associated with greater CRE and smaller COM, ii) greater MTB was associated with greater COL, iii) greater LEV was associated with greater COM and COL but smaller CON, iv) greater AGE was associated with greater CRE and smaller COL.

We then proceeded to conduct multiple linear regressions on panel data with robust errors and random effects, clustered by year, sector and country, meeting the assumptions of multicollinearity, homoscedasticity and normality of residuals. Table 6 shows the associations found between corporate culture and superior corporate performance using four different models, one for each type of corporate culture, as described in the Methods section.

Table 6: Multiple linear regressions with robust errors and random effects.

	Model 1	Model 2	Model 3	Model 4
	Control	**Competitive**	**Collaborative**	**Creative**
CULT	-101.874	-90.822**	3.076	127.011***
	(93.73)	(46.21)	(63.89)	(40.89)
SIZ	3.290*	3.168*	3.191*	3.040*
	(1.70)	(1.72)	(1.71)	(1.73)
MTB	0.627	0.613	0.640	0.695
	(0.85)	(0.85)	(0.86)	(0.83)
LEV	-0.489**	-0.427**	-0.448**	-0.466***
	(0.20)	(0.18)	(0.18)	(0.16)
GROW	4.780	5.728	4.905	5.520
	(18.59)	(18.66)	(18.55)	(18.49)
AGE	0.014	0.012	0.007	0.012
	(0.05)	(0.05)	(0.05)	(0.05)
LOSS	6.332	6.239	6.022	5.711
	(13.05)	(12.95)	(13.02)	(13.05)
AUD	8.087	10.888**	8.202	12.597**
	(5.22)	(5.35)	(5.28)	(5.56)
Intercept	2.106	10.395	-15.823	-47.197
	(42.42)	(38.91)	(43.53)	(43.90)
Year fixed effects	Yes	Yes	Yes	Yes
Sector fixed effects	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Chi^2	8826,092***	14947,260***	10434,324***	14424,151***
N	339	339	339	339

Note: CULT=corporate culture; SIZ=company size; MTB=market-to-book ratio; LEV=leverage; GROW=company growth; AGE=company age; LOSS=losses in the preceding year; AUD=audited by one of the Big Four.
***=significant at the level of 1%; **=significant at the level of 5%; *= significant at the level of 10%.
Source: the authors.

In the chi-squared test all the models were significant (some at the level of 1%), indicating that at least one of the independent or control variables was significant. This means the models are valid and may be used to draw inferences.

In Model 1, which considered control culture as an explanatory factor of superior corporate performance, no significant association between the independent variables was found (CON and ROAS were negatively but not significantly associated). As for the control variables in this model, highly indebted firms had smaller ROAS while large firms displayed higher ROAS.

On the other hand, in Model 2, which evaluated competitive culture as an explanatory factor of superior corporate performance, COM was negatively associated with ROAS, contradicting the results of Cameron *et al*. (2014), Fiordelisi and Ricci (2014), and Kotrba *et al.* (2012), but not the conclusions of Han (2012) and Yesil and Kaya (2013) who failed to detect an incremental effect of competitive culture on performance (i.e., a non-positive association). Tseng (2010) and Zheng, Yang and McLean (2010) saw this as a confirmation of the claim that the contribution of corporate culture to superior performance is indirect at best, by way of knowledge conversion, knowledge management and innovation. As for the control variables in Model 2, highly indebted firms had smaller ROAS. In contrast, large firms and firms audited by one of the Big Four had greater competitive advantage and therefore higher ROAS.

Moving on to Model 3, which tested collaborative culture as an explanatory factor of superior corporate performance, COL was positively but not significantly associated with ROAS. In addition, less indebted firms and large firms presented higher ROAS.

Finally, in Model 4, which considered creative culture as an explanatory factor of superior corporate performance, a positive and significant association was observed between CRE and ROAS, matching the literature in general (Cameron *et al.*, 2014; Fiordelisi & Ricci, 2014; Kotrba *et al.*, 2012; Morgan & Vorhies, 2018; Naranjo-Valencia *et al.*, 2016; Zhao, Teng, & Wu, 2018). Creative and innovative firms had greater competitive advantage than firms with any other type of culture. Innovation is a high-risk strategy, but also one of the most economically rewarding. As expected, ROAS was greater in less indebted firms, large firms and firms audited by one of the Big Four.

It should be kept in mind that no firm had only one type of corporate culture, but displayed a mix of the four types, one of which was predominant. Based on our findings, the three first study hypotheses (***H1***, ***H2*** and ***H3***) had to be rejected. But, since the association between CRE and ROAS was positive and significant, the fourth study hypothesis (***H4***) was not rejected.

The results of this study support the tenets of RBV, confirming the role of corporate culture as a strategic resource in the creation of competitive advantage and superior corporate performance. Creative culture, which in this study was found to be positively associated with corporate performance, is outward-oriented and centered on innovation. As such, it is a critical resource for firms (Barney, 1991) which among other things helps capture and retain customers, outperform the competitors and discourage the entry of new rivals into the game (Bowonder, Dambal, Kumar, & Shirodkar, 2010).

5 FINAL CONSIDERATIONS

In this descriptive and quantitive desk study we probed the relationship between corporate culture and superior corporate performance in a sample of 62 Latin American firms traded on the NYSE, with RBV as theoretical framework. Our findings were submitted to Pearson correlation analysis and multiple regression analysis with robust errors and random effects.

The descriptive analysis revealed a very similar mix of the four types of corporate culture (control, collaborative, competitive, creative) in the seven countries to which the sampled firms belonged (Argentina, Brazil, Chile, Colombia, Mexico, Panama, Peru). Competitive culture was slightly better represented than the other types, suggesting the sampled firms were primarily market-oriented.

In the Pearson correlation analysis, only collaborative culture was positively and significantly associated with superior corporate performance, and company growth was correlated with smaller ROAS. Thus, annual variation in income from sales or services was not reflected in greater mean return on assets in the preceding five years and so cannot be said to have contributed to the attainment of superior corporate performance in the sector.

Our multiple regression analysis identified creative culture as the best explanatory factor of superior corporate performance (the more strongly CRE was represented in the culture mix, the higher the ROAS). Since CRE was positively associated with ROAS, H_4 could not be rejected.

However, the other three hypotheses (***H1***, ***H2*** and ***H3***) were rejected since none of the respective types of culture (CON, COM and COL) could be shown to have promoted superior corporate performance. This contradicts the prevailing notion in the literature that stronger competitive culture (defined as being market-oriented and primarily concerned with maximizing earnings) is synonymous with better performance. Likewise, based on earlier studies, we had expected control culture to be negatively associated with corporate performance, but this was not confirmed. Rather, superior corporate performance was significantly influenced by leverage and company size, and auditing by one of the Big Four was highly relevant to performance in firms with competitive and creative culture.

Being rare, valuable, inimitable and capable of creating competitive advantage and boosting performance, corporate culture may be defined as an internal strategic resource in the sense proposed by RBV. At all stages in their life cycle, organizations should make efforts to understand and manage the dynamics of corporate culture, harnessing their own dominant culture in the quest for superior corporate performance. Our results suggest that firms seeking to improve performance ought to encourage creative culture, favoring innovation of processes, products and services. The present analysis is relevant to both academics and business executives by showing that public Latin American firms investing in innovative and creative culture were able to sustain superior corporate performance over a period of at least five years (ROAS was based on the five-year mean return on assets).

Some limitations of the study may be mentioned, among which: i) the population was restricted to Latin American firms traded on the NYSE, ii) the metric of corporate culture employed was based solely on content analysis, and iii) the period covered by the study was relatively short. With regard to the first, follow-up studies could use similar methods to compare firms from other cultural settings, such as Europe, Asia and North America. Likewise, the metric could subsequently be fine-tuned with information retrieved from self-reporting tools, such as integrated reporting or annual reports in the Global Reporting Initiative format. Finally, the study period could be extended in future investigations to allow the analysis of long-time changes in different settings, possibly with the use of partial least-squares structural equation modeling to better understand the complex relationships between variables.

REFERENCES

ANGELONI, M. T., & GROTTO, D. (2009). A influência na cultura organizacional no compartilhamento do conhecimento. Faces: **Revista de Administração,** 8(2), 76-93.

BARBOSA, L. N. H. (1996). Cultura administrativa: uma nova perspectiva das relações entre antropologia e administração. **Revista de Administração de Empresas**, 36(4), 06-19.

BARDIN, L. (2011). **Análise de conteúdo**. Lisboa: Edições 70.

BARNEY, J. (1991). Firm resources and sustained competitive advantage. **Journal of Management**, 17 (1), 99-120.

BOWONDER, B., DAMBAL, A., KUMAR, S., & SHIRODKAR, A. (2010). Innovation strategies for creating competitive advantage. **Research-Technology Management,** 53(3), 19-32.

CAMERON, K. S., QUINN, R. E., DEGRAFF, J., & THAKOR, A. V. (2014). **Competing Values Leadership** (2nd ed.). Cheltenham: Edward Elgar Publishing.

CAMPOS, C. J. (2004). A difusão do aprendizado de mercado nas organizações: um fator de competitividade. **Revista de Contabilidade do Mestrado em Ciências Contábeis da UERJ**, 9(1), 77-90.

CHU, R. A., & WOOD T, JR. (2008). Cultura organizacional brasileira pós-globalização: global ou local? **Revista de Administração Pública**, 42(5), 969-994.

COHEN, J. (2013). **Statistical power analysis for the behavioral sciences.** New York: Routledge.

COLAUTO, R. D., NASCIMENTO, P. S., AVELINO, B. C., & BISPO, O. N. A. (2009). Evidenciação de ativos intangíveis não adquiridos nos relatórios da administração das companhias listadas nos níveis de governança corporativa da Bovespa. **Contabilidade Vista & Revista,** 20(1), 143-169.

DAL-SOTO, F, & SANTOS, M. R. (2004). Os recursos como fonte de estratégia competitiva: uma evidência empírica da Resource-Based Review. **Revista Capital Científico-Eletrônica**, 2(1), 47-64.

ESTOL, K. M. F., & FERREIRA, M. C. (2006). O processo sucessório e a cultura organizacional em uma empresa familiar brasileira. **Revista de Administração Contemporânea**, 10(4), 93-110.

FEKETE, H., & BÖCSKEI, E. (2011). Cultural waves in company performance. **Research Journal of Economics, Business and ICT**, 3, 38-42.

FERREIRA, É. C. V., FANDINO, A. M., SEGRE, L., & NASCIMENTO, R. P. (2010). Privatização e mudanças organizacionais: um estudo de caso sobre transformação cultural e comportamental. **Cadernos EBAPE.** BR, 8(3), 468-491.

FIORDELISI, F., & RICCI, O. (2014). Corporate culture and CEO turnover. **Journal of Corporate Finance,** 28, 66-82.

FLEURY, M. T. L. (1991). Cultura organizacional e estratégias de mudanças: recolocando estas questões no cenário brasileiro atual. **Revista de Administração**, 26(2), 3-11.

FREITAS, M. E. (1991). Cultura organizacional grandes temas em debate. **Revista de Administraçao de Empresas**, 31(3), 73-82.

GUERREIRO, R., FREZATTI, F., & CASADO, T. (2006). Em busca de um melhor entendimento da contabilidade gerencial através da integração de conceitos da psicologia, cultura organizacional e teoria institucional. **Revista Contabilidade & Finanças**, 17(N. Especial), 7-21.

GUIMARÃES, T. A. (2004). Ambiente de aprendizagem e cultura em organizações: estudo de caso em organização militar. **Revista de Administração da USP – RAUSP,** 39(3), 231-241.

HAN, H. (2012). The relationship among corporate culture, strategic orientation, and financial performance. **Cornell Hospitality Quarterly**, 53(3), 207-219.

HARTNELL, C. A., OU, A. Y., & KINICKI, A. (2011). Organizational culture and organizational effectiveness: a meta-analytic investigation of the competing values framework's theoretical suppositions. **Journal of Applied Psychology**, 96(4), 677-694.

HOFSTEDE, G. (1983). The cultural relativity of organizational practices and theories. **Journal of International Business Studies,** 14(2), 75-89.

KOTRBA, L. M., GILLESPIE, M. A., SCHMIDT, A. M., SMEREK, R. E., RITCHIE, S. A., & DENISON, D. R. (2012). Do consistent corporate cultures have better business performance? Exploring the interaction effects. **Human Relations**, 65(2), 241-262.

LEE, S. K. J., & YU, K. (2004). Corporate culture and organizational performance. **Journal of Managerial Psychology,** 19(4), 340-359.

LUND, D. B. (2003). Organizational culture and job satisfaction. **Journal of Business & Industrial Marketing,** 18(3), 219-236.

MACHADO, D. D. P. N. (2007). A Cultura Brasileira Influencia a Aprendizagem Organizacional? **Revista de Negócios**, 6(4), 17-26.

MACHADO, H. V. (2005). Identidade organizacional: um estudo de caso no contexto da cultura brasileira. **Revista de Administração de Empresas – RAE Eletrônica**, 4(1), 1-18.

MARCOULIDES, G. A., & HECK, R. H.(1993). Organizational culture and performance: Proposing and testing a model. **Organization Science,** 4(2), 209-225.

MORGAN, N. A., & VORHIES, D. W. (2018). The Business Performance Outcomes of Market Orientation Culture and Behaviors. In **Innovation and Strategy**. Emerald Publishing Limited.

NARANJO-VALENCIA, J. C., JIMÉNEZ-JIMÉNEZ, D., & SANZ-VALLE, R. (2016). Studying the links between organizational culture, innovation, and performance in Spanish companies. **Revista Latinoamericana de Psicología,** 48(1), 30-41.

NEVES, J. A. D., BORGES, R. C. O., COSTA, A. M., & TIMBÓ, D. B. P. (2005). Análise do clima organizacional em hospitais de Fortaleza. **Revista de Economia e Administração**, 4(3), 290-314.

OLIVEIRA, A. A., & PAPA, A. C. (2009). A influência da cultura organizacional no processo de profissionalização da gestão em uma empresa familiar. **Revista de Administração da UFSM**, 2(3), 385-398.

OLIVEIRA, M. C. S. F., HAHN, I. S., SANTOS, M. B. D., SOUZA, G. A., CAMPOS, D. C., & PIVETTA, N. P. (2017). Orientação para o Mercado e Habilidades de Marketing Internacional: Um Estudo acerca da Influência sobre o Desempenho Internacional . **Revista de Administração da UFSM**, 10(ed. Especial), 26-40.

OSHIRO, S., CRNKOVIC, L. H., & SANTOS, F. C. A. (2005). O desafio de integrar cultura organizacional e a gestão da produção. **Revista de Administração**, 3(2), 109-131.

PAUNOV, C. (2012). The global crisis and firms' investments in innovation. **Research Policy,** 41(1), 24-35.

PETERAF, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. **Strategic Management Journal**, 14(3), 179-191.

RÉVILLION, A. S. P. (2004). Cultura nacional e cultura organizacional no contexto de marketing. **Revista Eletrônica de Administração,** 10(1), 1-25.

RIBEIRO, R., ROSSETTO, C. R., & VERDINELLI, M. A. (2011). Comportamento estratégico da empresa e a visão baseada em recursos: um estudo no setor varejista de material de construção. **Gestão & Produção,** 18(1), 175-192.

ROSA, A. R., TURETA, C., & BRITO, M. J. (2006). Cultura organizacional e cultura brasileira revisitadas:

uma atualização hermenêutica do dilema brasileiro. **GESTÃO.Org - Revista Eletrônica de Gestão Organizacional,** 4(3), 4-19.

SANCHES, P. L. B., & MACHADO, A. G. C. (2014). Estratégias de inovação sob a perspectiva da Resourced-Based View: Análise e evidências em empresas de base tecnológica. **Gestão & Produção,** 21(1), 125-141.

SARAIVA, L. A. S. (2002). Cultura organizacional em ambiente burocrático. **Revista de Administração Contemporânea**, 6(1), 187-207.

SCHEIN, E. H. (1990). Organizational culture. **American Psychological Association**, 45(2), 109-119.

SHINYASHIKI, G. T. (1995). Estudo quantitativo dos pressupostos básicos da cultura organizacional. **Revista de Administração da USP – RAUSP**, 30(3), 60-72.

SILVA, T. P., MACHADO, D. D. P. N., & HEIN, N. (2006). A influência da cultura organizacional no desenvolvimento de um sistema de informações analisado pelos números áureos. **Revista Universo Contábil**, 2(1), 75-88.

SØRENSEN, J. B. (2002). The strength of corporate culture and the reliability of firm performance. **Administrative Science Quarterly,** 47(1), 70-91.

SOUZA, M. T. S., PEREIRA, R. S., & MAFFEI, P. A. J. (2004). Ética e liderança: sua influência na cultura organizacional da empresa. **RAI-Revista de Administração e Inovação**, 1(1), 89-100.

Tseng, S.-M. (2010). The correlation between organizational culture and knowledge conversion on corporate performance. Journal of Knowledge Management, 14(2), 269-284.

YESIL, S., & KAYA, A. (2013). The effect of organizational culture on firm financial performance: Evidence from a developing country. **Procedia-Social and Behavioral Sciences**, 81, 428-437.

ZHAO, H., TENG, H., & WU, Q. (2018). The effect of corporate culture on firm performance: Evidence from China. **China Journal of Accounting Research**, 11(1), 1-19.

ZHENG, W., YANG, B., & MCLEAN, G. N. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. **Journal of Business Research**, 63(7), 763-771.

AUTHORS

1. ALAN DIÓGENES GÓIS (In memoriam)
PhD in Controllership and Accounting - Universidade de São Paulo
São Paulo, SP, Brazil
ORCID: https://orcid.org/0000-0003-3534-6557

2. MÁRCIA MARTINS MENDES DE LUCA
PhD in Controllership and Accounting - Universidade de São Paulo
Professor at Universidade Federal do Ceará, Fortaleza, Ceará, Brazil
E-mail: marciammdeluca@gmail.com
ORCID: https://orcid.org/0000-0002-9995-5637

Contribution of authors.

Contribution	[Author 1]	[Author 2]
1. Definition of research problem	√	√
2. Development of hypotheses or research questions (empirical studies)	√	√
3. Development of theoretical propositions (theoretical work)	√	√
4. Theoretical foundation / Literature review	√	√
5. Definition of methodological procedures	√	√
6. Data collection	√	
7. Statistical analysis	√	√
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