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BRICS and G7: does the association between contingency factors and competitive strategies influence corporate financial performance?

BRICS e G7: a associação entre fatores contingenciais e estratégias competitivas influencia o desempenho financeiro empresarial?

BRICS y G7: la asociación entre factores de contingencia y estrategias competitivas influyen en el rendimiento financiero de las empresas?

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Abstract
The purpose of this study was to analyze the relationship between competitive strategy and contingency factors on the financial performance of companies located in member countries of the BRICS and the G7. The research sample comprised 775 companies (5,425 observations), 172 of which were located in China, 33 in India, 48 in Germany, 25 in Canada, 307 in the United States of America, 169 in Japan, and 21 in the United Kingdom. Dynamic panel data models were applied to estimate the relationships between the research variables. The evidence found suggests that competitive strategies (cost leadership and differentiation) can moderate the effects of contingency factors on the financial performance of companies, considering the environment in which they operate (BRICS or G7 member countries).
Keywords: Competitive strategy; Contingency factors; Financial performance

Resumo
O objetivo deste estudo foi analisar a relação da estratégia competitiva com os fatores contingenciais sobre o desempenho financeiro de empresas localizadas em países membros do BRICs e do G7. A amostra da pesquisa foi composta por 775 empresas (5.425 observações), sendo 172 localizadas na China, 33 na Índia, 48 na Alemanha, 25 no Canadá, 307 nos Estados Unidos da América, 169 no Japão e 21 no Reino Unido. Para estimar as relações entre as variáveis da pesquisa, aplicaram-se modelos de dados em painel dinâmico. As evidências encontradas sugerem que as estratégias competitivas (liderança em custos e diferenciação) podem moderar os efeitos dos fatores contingenciais sobre o desempenho financeiro das empresas, considerando o ambiente em que atuam (países membros do BRICs e do G7).
Palavras-chave: Estratégia competitiva; Fatores contingenciais; Desempenho financeiro

Resumen
El objetivo de este estudio fue analizar la relación entre la estrategia competitiva y los factores de contingencia en el desempeño financiero de las empresas ubicadas en los países miembros de los BRIC y el G7. La muestra de investigación comprendió 775 empresas (5,425 observaciones), 172 de las cuales se ubicaron en China, 33 en India, 48 en Alemania, 25 en Canadá, 307 en los Estados Unidos de América, 169 en Japón y 21 en el Reino Unido. Para estimar las relaciones entre las variables de investigación, se aplicaron modelos de datos de panel dinámico. Las evidencias encontradas sugieren que las estrategias competitivas (liderazgo en costos y diferenciación) pueden moderar los efectos de los factores de contingencia en el desempeño financiero de las empresas, considerando el entorno en el que operan (países miembros de los BRIC o G7).
Palabras clave: Estrategia competitiva; Factores de contingencia; Desempeño financiero

1 Introduction

According to the contingency theory, to achieve superior performance, the organization needs to be adjusted to the factors present in the environment, that is, the internal and external contingency factors (Donaldson, 2015; Miller, 1992a). This requires it adapts structures and processes considering the external context (Miller, 1992b), which is a necessary condition to obtain greater performance (Martins, 2019). For that, it is necessary the organizational structure is aligned with the strategy (Donaldson, 1999), since the strategy determines the structure (Chandler Jr., 1962; Junqueira et al., 2016).

According to Anwar and Hasnu (2017), Chenhall (2003), and Gupta and Govindarajan (1984), strategy is considered a contingency factor different from other contingency variables. It is not considered an element of external context, but a means by which managers can influence the nature of the external environment, the organization's technologies, the structural arrangements, among other factors (Chenhall, 2003), and a contingency factor the organization can use to adjust to the other contingency factors and obtain differentiated performance.

To achieve superior financial performance, the organization must obtain and sustain a long-term competitive advantage (Banker et al., 2014; Huang et al., 2015). According to Porter (2004), there are only three competitive strategies that can generate competitive advantage in long term, allowing a company to create a defensible position able to face market forces, they are: cost leadership, differentiation, and focus. These three competitive strategies are based on two sources of competitive advantage: cost or differentiation.

In this sense, it is perceived that, to obtain a superior performance, the organization needs to adjust its structure to the contingency factors present in the environment, and the competitive strategy is the means by which the entity can minimize the influence of these factors on the performance, generating and maintaining a high financial performance in long term.

In recent years, studies have been developed on the moderating role of competitive strategy, assessing its influence on the impacts of contingency factors on organizational performance (Acquaah & Agyapong, 2016; Chen et al., 2018; Huo et al., 2014; Santos, 2015; Tenhiälä & Laamanen, 2018). However, most of these studies are limited to analyzing the mediation of the competitive strategy on internal contingency factors, such as: supply chain integration (Huo et al., 2014), organizational climate (Shin, 2014), operations management practices (Jayaram et al., 2014), capabilities (Santos, 2015), management control systems (Acquaah & Agyapong, 2016), production level (Mohsenzadeh & Ahmadian, 2016), and pay system (Tenhiälä & Laamanen, 2018), however research on moderating the competitive strategy on external contingency factors is still scarce.

External contingency factors are external elements to the organization that can produce or generate organizational change (Ewsi-Mensah, 1981), acting as a restrictive force on corporate activities, pressing the entity and its managers, being shaped by customers, competitors, suppliers, governments, and trade unions (Ewsi-Mensah, 1981; Tung, 1979). Among the main external contingencies, the following stand out: level of competitiveness or hostility, technology, market uncertainty, and national culture (Burkert et al., 2016; Chenhall, 2003; Junqueira et al., 2016; Mckinley & Mone, 2003; Otley, 2016).

Chenhall (2003), Khandwalla (1972), and Otley (2016) consider, for example, that environmental uncertainty influences the organizational structure, the performance evaluation, the budgetary system, and the management systems, among others, and the greater the uncertainty level caused by intense competition in the environment, the greater the need to use more formal controls and sophisticated accounting techniques.

Thus, both contingency factors (internal and external) influence the organization, causing changes in its activities and corporate structures, as well as in organizational performance. However, according to Jayaram et al. (2014) and Parnell et al. (2015), most research on competitive strategy, contingency factors, and performance was carried out in companies in developed countries. For Huo et al. (2014) and Parnell et al. (2015), it is necessary that researches approach different environments, not only developed, but also developing countries, since the characteristics of the environment (developed or developing) are shaped by different external and internal contingency factors that cause variations both in the structure as in organizational performance. That is, the influence of contingency factors can vary in each environment.

In view of the above, and understanding that contingency factors, both internal and external, affect organizational performance, as well as that competitive strategy can be considered a means by which the influence of these factors on financial performance can be reduced, depending on the environment, country in which it operates, the following research problem arises: what is the relationship between the competitive strategy and the contingency factors on the financial performance of companies located in member countries of the BRICS and the G7?

To answer this problem, the research sought to analyze the relationship between competitive strategy and contingency factors on the financial performance of companies located in member countries of the BRICS (Brazil, Russia, India, China, and South Africa) and the G7 (group of seven highly industrialized countries in the world). From an academic point of view, the study contributes to the understanding of the relationship between contingency factors, competitive strategy, and financial performance, depending on the

environment in which the companies are located (BRICS or G7 member countries), according to the assumptions of contingency theory. In practice, it demonstrates the need for companies to adapt to the environment in which they operate (developed or developing) through a competitive strategy that acts to reduce the influences of internal and external contingency factors on the corporate structure and systems, since organizational performance may depend on alignment with the environment.

2 Literature Review

2.1 Contingency factors

According to the contingency theory, to maintain the desired level of performance, an entity needs to adjust its structure to the existing contingency(ies), identifying the contingency variables that affect its structure, and, therefore, the corporate performance (efficiency, effectiveness, profitability, and others) (Chenhall, 2003; Donaldson, 1999; Hamann, 2017; Otley, 2016).

Contingency factors can be defined as any variables related to the environment or the firm context (external factors), or internal to the entity (internal factors), that shape the organizational structure at any time, that is, they influence the way a corporation develops and structures its activities impacting organizational performance (Chenhall, 2003; Junqueira et al., 2016; Otley, 2016).

The contingency variables or factors can be listed in external contingency factors and internal contingency factors, according to the classification suggested by Otley (2016). The main external contingency factors include technology, level of competitiveness or hostility of the market, environmental uncertainty, and national culture (Burkert et al., 2016; Chenhall, 2003; Junqueira et al., 2016; Mckinley & Mone, 2003; Otley, 2016).

Evidence indicates that: the type of technology used can influence the organizational structure, the management control system, the corporate and accounting information system, among others (Chenhall, 2003; Xiao et al., 1996); uncertainty affects organizational structure and systems (communication, information, control, management etc.), shaping the characteristics of entities (Chenhall, 2003; Otley, 2016; Tung, 1979); and the national culture affects management practices, the budgeting process between companies located in different countries, participation in the budget and in the performance evaluation practiced at the headquarters and its subsidiaries, the management control system, and the pay system (Chenhall, 2003; Filatotchev & Allcock, 2010; Harrison, 1993; Hofstede, 1983; Otley, 2016; Snodgrass & Grant, 1986).

Studies (Boyd & Salamin, 2001; Chenhall, 2003; Combs & Skill, 2003; Filatotchev & Allcock, 2010) indicates that: the type of structure can influence the job efficiency, the motivation of individuals, the flow of information, and the control system, and can shape the future of the entity; the compensation system plays an important role in the recruitment, motivation, and retention of employees and executives, and can be used as a strategic means to obtain skilled managers and human capital necessary for organizational development; and strategy affects the organizational structure (Chandler Jr., 1962), demonstrating the influence of these internal contingency factors on corporate structure and performance.

2.2 Competitive strategies

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he competitive strategy, also called generic competitive strategy or main strategy, among other names, involves the establishment of a general strategic positioning that can be adopted by any organization, regardless of the industry sector (Chaves et al., 2009; Herbert & Deresky, 1987).

A competitive strategy can be defined by countless ways or visions, presenting common points that characterize it as a set of guidelines that seek to determine a decision in the future or the means an organization has chosen to achieve its objectives, goals, and results (Capalonga et al., 2014; Chaves et al., 2009; Mintzberg, 1978; Rugman & Verbeke, 1994). The literature presents some typologies of competitive strategies, among which stand out those of Gupta and Govidarajan (1984), Miles et al. (1978), and Porter (1980).

The generic strategies of Miles et al. (1978) are based on the organization's adaptation cycle. According to the authors, from the perspective of strategic choices, the behavior of an organization is partially pre-ordered by environmental conditions, and the decisions that senior executives make are critical determinants of the organizational structure and process.

For Miles et al. (1978), the management of an entity must face three types of problems related to the structure and the organizational process: the entrepreneur (the strategic management of products and markets), the technology (the production and distribution of products), and the management (of the organization, to support the entrepreneur and technological decisions). Also, according to the authors, with the solution of these problems, the entity will be able to choose a strategic approach more appropriate to its structure and its organizational processes.

Based on the analysis of how the entrepreneur's problems are solved, as well as organizational behavior, Miles et al. (1978) identified four types of corporate strategy, namely: prospective, defensive,

analytical, and reactive. The prospective approach is used by a firm when it seeks intensively new and pioneering product and market opportunities, even if it must sacrifice its level of profitability (Andrade et al., 2013).

In the defensive strategy, the company is always looking for business stability, through the leadership of its products in a certain market segment. In addition, through this strategic choice, the company seeks to practice competitive prices or invest in the quality of its products and services to guarantee its participation in the market (Miles et al., 1978).

Regarding the analytical strategy, according to Miles et al. (1978), organizations that adopt this strategic model seek to combine the bases and peculiarities of the prospective and defensive approaches to optimize and maximize their profitability opportunities, that is, it is an intermediate strategy. As for the reactive strategy, in the view of Miles et al. (1978), the entity seeks only to react to the environment, especially when it is threatened by competition. For the authors, in this model, the firm acts as if it had no strategy, seeking only to keep up with changes in the market.

In another aspect, there are the strategic approaches of Gupta and Govindarajan (1984). For the formulation of their strategies, the authors took as a basis the organizational life cycle and the strategic mission. According to them, an entity will choose its strategic mission based on the life cycle phase in which the market and the product coincide.

For Gupta and Govindarajan (1984), from the analysis of the balance of the goals of growth of the company's participation in the market and the maximization of profitability in the short term, the organization will be able to choose four strategic models: build, harvest, hold, and divest.

In the build strategy, the entity aims to increase its market share and its level of competitiveness, even if it has lower gains and low cash flows in the short term. In the harvest strategy, the organization's objective is to increase its profits and its cash flows, even though it must reduce its market share. Regarding the hold strategy, it is observed that the entity seeks to match the objectives of the build and harvest strategies. And, in the divest strategy, the company chooses to finalize its operations (Gupta & Govindarajan, 1984).

It appears that, through the strategies proposed by Gupta and Govidarajan (1984), the company will only be able to maximize its results when its strategy is aligned with the life cycle phase of its products and with that of the market, and this objective may be achieved through the strategic mission outlined by the entity.

In turn, the model of strategic approach most used in empirical studies is that proposed by Porter (1986). Porter (2004) describes two generic strategies for a company to obtain competitive advantages over its competitors: costs leadership and differentiation. Organizations that adopt a strategy based on cost leadership seek to increase their market power based on creating a low-cost position in relation to their competitors. A company can develop a variety of resource allocation processes and practices to achieve cost leadership, such as: large-scale facilities, process improvements, cost minimization, total quality management, benchmarking, and high control of cost (Allen & Helms, 2006; Banker et al., 2014; Porter, 2004).

According to Andrade et al. (2013), total cost leadership requires a company to constantly invest in its capital, optimize its process engineering, and develop low-cost production systems, seeking to manufacture its products at lower costs than its competitors. The cost leadership strategy is effectively applied by a company when its structure, production, and market for its products are more efficient than that of its competitors (Allen & Helms, 2006).

A differentiation strategy, in turn, is one in which a company focuses its efforts on providing an exclusive product or service to its customers. In this strategy, the organization competes with exclusive and differentiated products and services from the competition, in quality and functionality, through specific capacities and creative talents (Allen & Helms, 2006; Andrade et al., 2013).

Thus, it can be said the strategic approach used by an entity plays an important role in its operations, in addition to being an internal contingency variable that relates to other contingency factors, such as, for example, structure and environment, which can influence corporate economic-financial performance.

2.3 Previous studies

There are few studies that attribute to the competitive strategy the role of a moderating contingency variable between other contingency factors and organizational performance. Through a systematic review of the literature, the following researches were identified: Acquaah and Agyapong (2016), Chen et al. (2018), Hernández-Perlines et al. (2016), Huo et al. (2014), Jayaram et al. (2014), Mohsenzadeh and Ahmadian (2016), Santos (2015), Shin (2014), Tenhiälä and Laamanen (2018).

From the analysis of these studies, with regard to those who used competitive strategy as a factor that moderates the influence of contingency factors on organizational performance, this relationship was observed with supply chain integration practices (Huo et al. , 2014), operational practices and supply chain management (Jayaram et al., 2014), adoption of high-performance work systems (Shin, 2014), management control system (Acquaah & Agyapong, 2016), entrepreneurial orientation (Hernández-Perlines et al., 2016),

organizational capabilities and capacities (Mohsenzadeh & Ahmadian, 2016; Santos, 2015), and corporate social responsibility (Chen et al., 2018).

Among the examined studies, only that of Parnell et al. (2015) sought to assess the relationship between contingency factors (environmental uncertainty), competitive strategy, and organizational performance, evaluating companies in the United States of America (USA) and China, comparing organizations operating in a developed environment with those operating in a developing market. According to the authors, due to changes in China, companies avoid uncertainty and seek clearer information before implementing strategies, something that does not happen in the USA, where the environment is more stable and changes occur more gradually.

It can be said that most of the studies analyzed did not seek to verify whether the moderating role of competitive strategy varies according to the environment in which companies operate (developed or developing countries), as predicted by the contingency theory. Furthermore, most of the evidence found refers to the influence of competitive strategy on contingency factors related to the internal environment of organizations, such as: organizational structure, management control system, operational practices, among others.

3 Methodological Procedures

3.1 Population, sample and survey data

The population of this research consisted of public companies listed on stock exchanges of BRICS and G7 member countries. According to the International Monetary Fund (IMF, 2019), the G7 is formed by the most advanced and developed economies in the world, comprising Germany, Canada, USA, France, Italy, Japan, and the United Kingdom (UK).

The BRICS, on the other hand, is a group of countries comprising Brazil, Russia, India, China, and South Africa. The BRICS countries stood out for presenting high potential and rapid economic growth, becoming leaders in the development of new goods and services (Fedato et al., 2017). In this way, the choice of companies belonging to the G7 and BRICS member countries makes it possible to analyze the relationship of competitive strategy with contingency factors (internal and external) on the financial performance of organizations, considering the characteristic of the environment in which they operate, since the environments addressed present different stages of economic, institutional, social, and cultural development, influencing the strategy adopted by the companies.

The sample consisted of non-financial companies that had data for analysis considering the period from 2012 to 2018. Public utility companies were also excluded from the sample, because these organizations operate in regulated environments, and there may be a low level of competition between the entities and price regulation, influencing performance and competitive strategy, and, in many cases, the strategic positioning is not so well defined (Banker et al., 2014). The final sample of the research was composed of 775 companies (5,425 observations), being 172 from China, 33 from India, 48 from Germany, 25 from Canada, 307 from the USA, 169 from Japan, and 21 from the UK. Companies from Brazil, South Africa, Russia, France, and Italy were excluded from the sample, because they did not present sufficient information on spending on research and development (R&D) and number of employees to estimate the competitive strategy. Data for this study were collected from the Thomson Reuters® database and, when necessary, from the financial statements and/or other reports provided by the companies, such as the management or sustainability report, in addition to the companies' websites on the Internet. The information on the economic growth of each country was obtained from the IMF (2019) website.

To obtain the financial variables of the survey, it was were considered the companies' consolidated statements, when available in the Thomson Reuters® database, or the non-consolidated data, when those were not available. In addition, all accounting-financial data were standardized for the US dollar, since such information was disclosed in the currencies of each country. This procedure allowed for the comparability of accounting data, as well as reduced the effects of exchange rate variation on the financial performance of organizations (Paredes & Wheatley, 2017).

3.2 Descriptions of econometric models and research variables

To analyze the competitive strategy (costs leadership and differentiation) that can reduce the influence of contingency factors (environmental uncertainty, level of competitiveness, national culture, life cycle, and organizational size) on the financial performance of companies, considering the environment in which they are located (developed and developing countries), the model proposed by Banker et al. (2014) was adapted.

Based on the research objectives, the relationship between the research variables was estimated from the empirical model by Banker et al. (2014), added by the variables referring to contingency factors, economic growth, industrial sector, and country, according to Equation 1:

$$FP_{it+1} = \alpha_0 + \alpha_1 FP_{it} + \alpha_2 CLS_{it} + \alpha_3 DIF_{it} + \alpha_4 CL_{jt} + \alpha_5 UNC_{it} + \alpha_6 AGE_{it} + \alpha_7 SB_{it} + \alpha_8 LB_{it} + \alpha_9 LEV_{it} + \alpha_{10} EG_{jt} + \alpha_{11} Industry\ dummy + \alpha_{12} Country\ dummy + \varepsilon_{it} \quad (1)$$

Where,

- FP_{it} is the financial performance of company *i* in period *t*, calculated based on return on assets (ROA);
- FP_{it-1} is the financial performance of company *i* in period *t*-1, calculated based on return on assets (ROA);
- CLS_{it} is the factor score for the cost leadership strategy for company *i* in the period *t*; measured based on the construct obtained from the mean of *t*-1 to *t*-5 of the variables NS/CAPEX, NS/PP&E, and NE/TA;
- DIF_{it} is the factor score for the differentiation strategy of company *i* in period *t*; measured based on the construct obtained, from the mean of *t*-1 to *t*-5 of the variables SGAE/NS, R&D/NS, and VA/NS;
- CL_{it} is the level of competitiveness in sector *j* in period *t*, calculated based on the Herfindahl index;
- UNC_{jt} is the uncertainty level of company *i* in period *t*, measured based on the coefficient of variation of sales;
- AGE_{it} is the age of organization *i* in period *t*, measured based on the age of each company;
- SB_{it} is a dummy variable that represents a value of 1, if company *i* in period *t* is considered small business, or 0, otherwise, measured from the quartile classification of the natural logarithm of the number of employees;
- LB_{it} is a dummy variable that represents a value equal to 1, if company *i* in period *t* is considered large business, or 0 otherwise, measured from the quartile classification of the natural logarithm of the number of employees;
- LEV_{it} is the level of leverage of company *i* in period *t*, measured by the ratio between total current and long-term debt and total assets;
- EG_{jt} is the economic growth of environment (country) *j* in period *t*, measured by the variation in gross domestic product (GDP);
- *Industry dummy* is a dummy variable that assumes a value equal to 1 or 0, according to the organizational industry;
- *Country dummy* is a dummy variable, which assumes a value equal to 1, if the environment (country) is considered developed, or 0, otherwise; and
- ε_{it} are the regression errors.

Based on the estimations in Equation 1, the relationships between the explanatory variables and the financial performance of companies can be evaluated, making it possible to identify the competitive strategy and the contingency factors that affected the performance of the companies in the period investigated. In order to assess the competitive strategy (*CS*) that can reduce the influences of external (*ECF*) and internal (*ICF*) contingency factors on the financial performance of companies, according to the thesis proposed by this study, interaction variables between external contingency factors (CL_{jt} and UNC_{it}) and internal contingency factors (AGE_{it}, SB_{it} and LB_{it}) with competitive strategies (cost leadership and differentiation) were added in Equation 2:

$$FP_{it} = \beta_0 + \alpha_1 FP_{it-1} + \sum_{k=1}^{3} \gamma_k\, ECF_{it} \times CS_{it} + \sum_{m=1}^{2} \delta_m\, ICF_{it} \times CS_{it} \sum_{n=1}^{4} \varphi_n\, CV_{it} + \varepsilon_{it} \quad (2)$$

Where:

- FP_{it+1} is the financial performance of company *i* in period *t*+1, calculated based on return on assets (ROA);
- FP_{it} is the financial performance of company *i* in period *t*, calculated based on return on assets (ROA);
- ECF_{it} are the external contingency factors of the environment of organization *i* in period *t*, measured by the variables CL_{jt} and UNC_{it};
- ICF_{it} are the internal contingency factors of the environment of organization *i* in period *t*, measured by the variables AGE_{it}, SB_{it}, and LB_{it};
- CS_{it} indicates the competitive strategy of company *i* in period *t* based on cost leadership (CL_{it}) or on differentiation (DIF_{it});
- CV_{it} are the control variables of the model (level of leverage, industry sector, economic growth, and country in which the organization operates); and
- ε_{it} are the regression errors.

The relationship between the competitive strategy and the contingency factors was obtained based on the sign of the angular coefficients of each interaction between these variables. The research variables were calculated according to Table 1.

Table 1:
Definition of explanatory variables

Variable	Description	Calculation	Expected signal
ROA_{it-1}	Return on assets	Operating income divided by total average assets.	+
CLS_{it}	Cost leadership strategy	Measured based on the construct obtained from the mean of *t*-1 to *t*-5 of the variables NS/CAPEX, NS/PP&E, and NS/TA.	+
DIF_{it}	Differentiation strategy	Measured based on the construct obtained from the mean of *t*-1 to *t*-5 of the variables SGAE/NS, R&D/NS e VA/NS.	+
CL_{it}	Competition level	Calculated based on the Herfindahl index.	–
UNC_{it}	Uncertainty level	Measured based on the sales variation coefficient.	–
AGE_{it}	Age of organization	Calculated based on the age of each company.	+
SB_{it}	Small business	Dummy variable that represents a value of 1, if company *i* in period *t* is considered small, or 0, otherwise.	+
LB_{it}	Large business	Dummy variable that represents a value of 1, if company *i* in period *t* is considered large, or 0, otherwise.	+
LEV_{it}	Leverage	Measured by the amount of total current and long-term debt divided by total assets.	–
EG_{it}	Economic growth	Calculated by the change in GDP.	
Industry dummy	Industry dummy	Dummy variable that assumes a value of 1 or 0, according to the organizational industry.	
Country dummy	Country dummy	Dummy variable, which assumes a value of 1, if the environment (country) is considered developed, or 0, otherwise.	

Source: the authors.

The explanatory variables used in this research were chosen based on the literature and on previous studies on the subject (Balsam et al., 2011; Banker et al., 2014; Chenhall, 2003; Hambrick, 1983; Otley, 2016). The choice of environmental uncertainty and the level of competitiveness, as external contingency factors, for example, is justified because they represent aspects of the external environment that can influence the organizational structure and performance of companies (Chenhall, 2003; Otley, 2016). Furthermore, environments characterized by high uncertainty and competition levels lead to changes in management systems and in the use of advanced accounting techniques (Khandwalla, 1972; Otley, 2016). Other external contingency factors, such as national culture and technology, were not used, because the databases used did not provide information about them, making the use of these variables difficult.

The variables that represent the internal contingency factors (age of the organization and size) reflect the development of companies over the years and their growth, and may indicate the changes they made to remain efficient and have greater control of the environment in which they operate (Greiner, 1972), and the increase in size can affect both the organizational structure and the levels of controls (Chenhall, 2003; Otley, 2016).

3.3 Analysis methods

Initially, to identify the competitive strategies, an exploratory factor analysis was used in order to find the common patterns among the variables. Subsequently, a confirmatory factor analysis was conducted to validate the two constructs that represent the strategy of differentiation and cost leadership. The results of the exploratory and confirmatory factor analysis are shown in Tables 2 and 3, in the following section.

Exploratory factor analysis was used in order to capture the common patterns between the items that make up the constructs of competitive strategies (cost leadership and differentiation). Based on the exploratory factor analysis, the adequacy of the items for each construct was observed (Hair Jr. et al., 2009). Therefore, the following criteria were verified: (a) types of variables: most were continuous; (b) sample size: there should be at least 5 observations for each variable, 6 variables were used (3 for the cost leadership construct and 3 for differentiation), therefore, at least 30 observations were needed , but the sample of this study considered more than 5,000 observations; and (c) pattern of correlation: the pattern of correlation between variables must present factor loadings greater than 0.30 in the confirmatory factor analysis (Hair Jr. et al., 2009).

Sample adequacy was obtained using the Kaiser-Meyer-Olklin (KMO) test. The KMO statistic varies between 0 and 1, and the closer to 1, the better the adequacy of the data. The acceptable value for the KMO test is 0.50. The significance was verified using Bartlett's test of sphericity. This test measures the statistical significance that the correlation matrix presents significant correlations between the variables. The test significance value (p-value) must be less than 0.05 ($p < 0.05$) (Hair Jr. et al., 2009).

To extract the factors, the principal components method was used. This method considered the total variance of the data. The criterion used to assess the factors was the analysis of commonalities. Commonality indicates the total variance that a variable shares with the other variables included in the

analysis. The commonality must be evaluated to verify whether the variables meet acceptable levels of explanation, with variables with values greater than or equal to 0.50 being admitted (Hair Jr. et al., 2009).

In turn, confirmatory factor analysis was used to test whether the variables used to identify competitive strategies (cost leadership and differentiation) adequately represent these constructs. The purpose of confirmatory factor analysis is to measure the level of adjustment between the observed data and what is predicted in theory. To assess the validity of the constructs, convergent validity (common variance shared between the construct variables) and discriminant validity (indicates the level to which a construct is different from the others) should be analyzed (Hair Jr. et al., 2009).

The convergent validity can be obtained: (a) through standardized loads, which must present values between 0.50 or more, with values equal to or greater than 0.70 being ideal; (b) by the average variance extracted, whose acceptable values must be greater than 0.50; and (c) by Cronbach's alpha, in which a value between 0.6 and 0.7 is considered acceptable and a value above 0.7 or more suggests a good level of reliability (Field, 2009; Hair Jr. et al., 2009). To assess the convergent validity, the average extracted variance was observed.

Two tests can be used to measure the discriminant validity of the confirmatory factor analysis: the cross-load analysis and the Fornell-Larcker (1981) criterion. In the cross-load analysis, it is observed whether the load of the indicator related to the associated latent construct is higher than the load presented by it in the other constructs of the model. In turn, in the Fornell-Larcker (1981) criterion, it is verified whether a latent construct shares more variance with its indicators than with any other latent measure in the model. In this criterion, the mean variance value extracted from each latent construct must be greater than the highest quadratic correlation of any other latent construct (Hair et al., 2011). The Fornell-Larcker (1981) criterion was used to analyze the discriminant validity of the constructs.

Therefore, from the confirmatory factor analysis, it is verified whether the variables used represent the differentiation and cost leadership strategies, as provided for in the literature, that is, companies that compete with low cost seek greater efficiency in their activities, as firms who seek to differentiate their products in the market make high investments in R&D, for example. The results of the exploratory and confirmatory factor analysis are shown in Tables 2 and 3, in the following section.

The relationships between the contingency factors, the competitive strategies, and the financial performance of the companies, on the other hand, were estimated based on the dynamic panel data model. The dynamic panel data model is applicable when there is the inclusion of the lagged dependent variable among the explanatory variables (Baltagi, 2005). Estimation of the econometric model from other statistical techniques, such as the ordinary least squares method, could generate biased and inconsistent coefficients, since the lagged dependent variable is correlated with regression errors and due to the existence of endogeneity of the explanatory variables (Baltagi, 2005).

To solve such problems, Arrelano and Bond (1991) proposed the generalized method of moments (GMM). The method consists of eliminating the fixed effects through the first difference between the model equations and using values of the lagged variable in one or more periods as valid instrumental variables in the equation, or, in last case, in two or more periods, if the first instrumental variables are not valid (Arrelano & Bond, 1991).

The consistency and robustness of the model depend on the premise that there is no serial correlation in the regression errors and the validity of the additional instruments (Baltagi, 2005; Labra & Torrecillas, 2018). For the regression estimators to be consistent, the hypothesis of absence of first-order autocorrelation must be rejected, but accepted the second-order one. Then, the Hansen test was applied for overidentification and to check whether the instruments used are valid.

4 Research Results

4.1 Exploratory and confirmatory factor analysis of competitive strategies

To capture the long-term competitive strategy of each company, the average of the variables SGAE/NS, R&D/NS, VA/NS, CAPEX/NS, PP&E/NS, and TA/NE was computed considering the period from 2011 to 2017. Then, an exploratory factor analysis was performed to capture the common pattern for the six variables described. The results are presented in Table 4, for companies from China and India, and in Table 5, for companies located in G7 countries.

Initially, analyzing the commonalities of the variables, as shown in Panel A of Tables 2 and 3, only the variables R&D/RL (0.34) and AT/NE (0.188 and 0.39), respectively, presented commonalities lower than 0.50, being necessary to exclude such variables, according to Hair et al. (2009). However, it was decided to leave these variables, since, despite having a low commonality, such items contribute with a factor loading greater than 0.30 for the factors, as well as being identified by other studies as indicators of the differentiation strategy and cost leadership, respectively (Asdemir et al., 2017; Balsam et al., 2011; Banker et al., 2014; Hambrick, 1983). Furthermore, the results of the confirmatory factor analysis (Panel B of Tables 2 and 3) indicated that such variables also represent the constructs.

Based on the factor loadings shown in Panel A of Tables 2 and 3, the variables were grouped into two competitive strategies, namely: cost leadership and differentiation. The variables SGAE/NS, R&D/NS and VA/NS were grouped in the differentiation factor, as they presented the highest factor loadings in this construct. For example, the variable SGAE/NS, according to Panel A, contributes with a greater factor loading to the differentiation factor (factor loading = 0.83), but it contributes negatively to the cost leadership construct (factor loading = -0.43).

The variables CAPEX/NS, PP&E/NS, and TA/NE, based on factor loadings, were aggregated in the strategy based on cost leadership, as shown in Panel A of Tables 2 and 3. Such results are in accordance with what is foreseen in the literature (Balsam et al., 2011; Banker et al., 2014; Hambrick, 1983), indicating that these variables can explain the competitive strategy adopted by companies for the two analyzed groups.

The internal consistency of the factors was assessed using Cronbach's alpha. The test results showed that the internal consistency for the two factors, cost leadership (alpha > 0.60) and differentiation (alpha > 0.70), according to Hair Jr. et al. (2009), both for firms from countries of BRICS and G7, can be considered acceptable. In addition, because each factor has only three variables, it was decided to assess the reliability composed of each construct, as suggested by Hair Jr. et al. (2009). Based on the reliability coefficient of Fornell and Larcker (1981), it can be said that the constructs present internal consistency, with indexes above 0.70, suggesting that the measures adequately represent the same latent construct (Fornell & Larcker, 1981; Hair Jr. et al., 2009), according to Tables 2 and 3.

Table 2:
Exploratory and confirmatory factor analysis of the constructs: companies from BRICS member countries

Panel A – Exploratory factor analysis (2011-2017)				
Variables	Cost leadership (factor loads)	Differentiation (factor loads)	Communalities	
SGAE/NS	-0.43	**0.81**	0.85	
R&D/NS	-0.12	**0.57**	0.34	
VA/NS	-0.30	**0.88**	0.86	
CAPEX/NS	**0.77**	0.52	0.86	
PP&E/NS	**0.83**	0.37	0.83	
TA/NE	**0.43**	-0.07	0.19	
Explained variance	1.77	2.16		
Cronbach's alpha	0.65	0.75		
KMO				0.521
Bartlett test				1.513.455***
Panel B – Confirmatory factor analysis (2011-2017)				
Variables	Cost leadership (factor loads)	Differentiation (factor loads)	Reliability coefficient of Fornell and Larcker (1981)	Average variance extracted (AVE)
SGAE/NS		0.85	0.86	0.70
R&D/NS		0.36		
VA/NS		0.99		
CAPEX/NS	0.91		0.77	0.59
PP&E/NS	0.84			
TA/NE	0.17			
Model fit statistics				
Chi2			118.138***	
Root mean square residual (RMR)			0.067	
Goodness of fit index (GFI)			0.943	
Goodness of fit index adjusted for degrees of freedom (AGFI)			0.868	
Normed fit index (NFI)			0.922	
Comparative fit index (CFI)			0.928	

Note: Statistical significance: *** p < 0.01. All variables were standardized (mean = 0; s.d. = 1). SGAE/NS is the relationship between general, sales and administrative expenses with net sales; R&D/NS is the relationship between R&D spending and net sales; VA/NS is the relationship between the gross value added and net sales; CAPEX/NS is the relationship between capital expenditures and net sales; PP&E/NS is the relationship between property, plant and equipment and net sales; TA/NE is the relationship between total assets and the number of employees.
Source: research data.

The adequacy of the factor analysis was analyzed using the Kaiser-Meyer-Olkin (KMO) and Bartlett tests. The test results, as shown in Tables 2 and 3, indicated that the factor analysis is adequate and can be used (KMO = 0.521 and KMO = 0.576, respectively), indicating that the correlation between the variables examined is statistically significant (Bartlett test = 1,513.455, p < 0.01; and Bartlett test = 4,391.544, p < 0.01, respectively).

Subsequently, a confirmatory factor analysis was performed to validate the competitive strategy measures. The results are presented in Panel B of Tables 2 and 3. The model's fit statistics indicate that the models were fit. The goodness of fit index (GFI) test was 0.943 and 0.950, indicating a good overall fit of the models. The other fit statistics of the model also pointed to its adequacy.

Table 3:
Exploratory and confirmatory factor analysis of constructs: companies from G7 member countries

Panel A – Exploratory factor analysis (2011-2017)				
Variables	Cost leadership (factor loads)	Differentiation (factor loads)	Communalities	
SGAE/NS	0.37	**0.76**	0.72	
R&D/NS	0.54	**0.61**	0.66	
VA/NS	0.53	**0.67**	0.73	
CAPEX/NS	**0.67**	-0.63	0.84	
PP&E/NS	**0.62**	-0.71	0.85	
TA/NE	**0.59**	-0.20	0.39	
Explained variance	1.88	2.32		
Cronbach's alpha	0.76	0.67		
KMO				0.576
Bartlett test				4.391,544***
Panel B – Confirmatory factor analysis (2011-2017)				
Variables	Cost leadership (factor loads)	Differentiation (factor loads)	Reliability coefficient of Fornell and Larcker (1981)	Average variance extracted (AVE)
SGAE/NS		0.81	0.87	0.69
R&D/NS		0.65		
VA/NS		0.77		
CAPEX/NS	0.85		0.85	0.69
PP&E/NS	1.01			
TA/NE	0.32			
Model fit statistics				
Chi2			284.612***	
Root mean square residual (RMR)			0.034	
Goodness of fit index (GFI)			0.950	
Goodness of fit index adjusted for degrees of freedom (AGFI)			0.882	
Normed fit index (NFI)			0.917	
Comparative fit index (CFI)			0.920	

Notes: Statistical significance: *** p < 0.01. All variables were standardized. SGAE/NI is the relationship between general, sales and administrative expenses with net sales; R&D/NS is the relationship between R&D spending and net sales; VA/NS is the relationship between the gross value added and net sales; CAPEX/NS is the relationship between capital expenditures and net sales; PP&E/NS is the relationship between property, plant and equipment and net sales; TA/NE is the relationship between total assets and the number of employees.
Source: research data.

Regarding the convergent validity of the confirmatory factor analysis, observing the result of the average variance extracted (AVE), as shown in Panel B of Tables 2 and 3, it can be stated that the common variance shared between the variables of the two constructs is convergent and reliable. The joint reliability coefficient of Fornell and Larcker (1981) indicates the model has convergent validity, that is, reliability. Finally, based on the results of the confirmatory factor analysis, it is suggested that the constructs of the strategies are reliable and acceptable for the sample of companies from member countries of the BRICS (China and India) and the G7.

4.2 Analysis of the estimates of companies from BRICS member countries

Initially, it should be noted that only models and variables that presented statistical significance at the level of 1% and 5% were considered for analysis. All models shown in Table 4 were estimated by the GMM-system using the two-step procedure, with robust standard errors to correct the heteroscedasticity problem, as well as that the panel is balanced. It is noteworthy that the models were estimated with the number of instruments lower than the number of groups, since the number of instruments cannot be greater than the number of groups, as suggested in the literature (Labra & Torrecillas, 2018; Roodman, 2009).

According to the results of the Wald test, it can be said that the estimates shown in Table 4 are statistically significant (p < 0.01). Regarding the assumptions of the dynamic panel model, the test for second-order autocorrelation (AR2) indicates the absence of autocorrelation for all estimations (models 1, 2, 3, 4, and 5), demonstrating the estimators of the models are consistent. Furthermore, using the variance inflation factor (VIF) statistic, it was observed the variables present in the models did not present a multicollinearity problem.

The results shown in Table 4 suggest that the previous performance (ROA_{it-1}) was persistent during the analyzed period, ranging from 0.606 to 0.670, being statistically significant, at the level of 1%, for all estimates. Regarding competitive strategies, considering model 1, it is observed that only the cost leadership strategy (CLS_{it}) presented a positive and statistically significant relationship, at the level of 1%, with financial performance (ROA_{it}), indicating this strategy contributed to the performance of the companies. This result is consistent with the literature (Banker et al., 2014; Cho & Lee, 2018; Hambrick, 1983; Junqueira et al., 2016;

Porter, 1980), which predicts that a strategy based on cost leadership enables companies outperform their competitors.

As for the strategy based on differentiation (model 1), the evidence points to a negative relationship with financial performance, but without statistical significance. This result can be explained by the characteristics of the environments where companies operate. India and China went through a transition process in the economy, allowing greater economic liberation (Fedato et al., 2017; Gopalakrishna & Subramanian, 2001; Parnell et al., 2015). Furthermore, according to Parnell et al. (2015), in the Chinese context, for example, companies tend to use a strategy based on cost leadership or focus, due to the low environmental uncertainty.

Regarding to the other explanatory variables, the results of model 1 suggest that uncertainty positively affects the performance of companies, being significant at the level of 1%. As mentioned above, such evidence can be explained due to the low competitiveness and uncertainty levels present in the Chinese and Indian market, as mentioned in the literature (Gopalakrishna & Subramanian, 2001; Parnell et al., 2015).

According to model 1, the expected relationships between the level of competition and variables related to organizational size and financial performance were not found. Also based on model 1, there was a negative and significant association at the level of 5% between the age of the organization and financial performance, suggesting that, in the period under analysis, the evolution of companies over time does not contribute to increase the return on assets.

From models 2 to 5, the interactions between competitive strategies (CLS_{it} and *DIFit*) and external contingency factors (*CLjt*, and UNC_{it}) and internal (SB_{it}, LB_{it} and AGE_{it}) are observed. Based on the results presented in model 3, as shown in Table 4, it was observed that the coefficient of interaction between the uncertainty level and the cost leadership strategy was positive and statistically significant, at the level of 5%. This result may suggest that a cost leadership strategy helps companies face the environmental uncertainty, generating positive financial results, as predicted in the literature (Allen & Helmms, 2006; Hambrick, 1983; Huo et al., 2014; Porter, 1980).

Table 4:
Results of estimation of the model for companies from BRICS member countries (2012-2018)

Variables		Model 1 Coefficient	Model 2 Coefficient	Model 3 Coefficient	Model 4 Coefficient	Model 5 Coefficient
ROA_{it-1}	+	0.653**	0.620**	0.670**	0.650**	0.606**
CLS_{it}	+	0.015**	0.015**	0.001	0.013**	0.004
DIF_{it}	+	-0.004	-0.004	-0.006	-0.001	-0.009
CL_{jt}	-	0.050	-0.019	0.036	0.031	0.058
UNC_{it}	-	0.229**	0.202**	0.197**	0.147**	0.194**
SB_{it}	+	0.010	0.010	-0.008	0.002	0.009
LB_{it}	+	-0.021	-0.008	-0.004	-0.012	-0.013
AGE_{it}	+	-0.001*	-0.001*	-0.001	-0.001*	-0.001*
LEV_{it}	-	-0.023	-0.048	-0.064	-0.037	-0.037
EG_{jt}		-0.209	-0.361	-0.021	-0.280	-0.319
CL_{it} x DIF_{it}			0.036			
CL_{it} x CLS_{it}			0.008			
UNC_{it} x DIF_{it}				0.011		
UNC_{it} x CLS_{it}				0.048*		
SB_{it} x DIF_{it}					0.002	
SB_{it} x CLS_{it}					-0.007	
LB_{it} x DIF_{it}					0.002	
LB_{it} x CLS_{it}					-0.008	
AGE_{it} x DIF_{it}						0.0002**
AGE_{it} x CLS_{it}						0.0004**
Industry dummy		Yes	Yes	Yes	Yes	Yes
Country dummy		Yes	Yes	Yes	Yes	Yes
Constant		0.100*	0.121*	0.097	0.090*	0.085*
Observations		1.434	1.434	1.434	1.434	1.434
Instruments		103	123	123	143	123
Groups		205	205	205	205	205
Wald test		240.44**	316.91**	330.74**	358.74**	269.81**
AR1 (p-value)		0.000**	0.000**	0.000**	0.000**	0.000**
AR2 (p-value)		0.328	0.364	0.292	0.344	0.275
Hansen test (p-value)		0.321	0.264	0.293	0.659	0.373

Note: Significancy: * p < 0.05 and ** p < 0.01.
Source: research data.

Furthermore, this evidence of the moderating role of cost leadership strategy in relation to the uncertainty level can be explained due to the characteristics of the Chinese and Indian environment, where the low uncertainty level allows for the standardization and formalization of organizational tasks and routines, allowing that the cost leadership strategy is effective, as suggested by Huo et al. (2014) and Parnel et al. (2015).

On the other hand, based on model 5, positive and significant relationships were found at the level of 1% in the interactions between the age of the organization and competitive strategies. This evidence suggests both the cost leadership strategy and the differentiation strategy can moderate the effects of time on company performance. This result can also demonstrate, over the years, companies that use a strategy based on cost leadership seek to use the knowledge acquired over time to optimize their activities, becoming efficient and improving organizational performance. For firms that seek to employ a differentiation strategy, such evidence may indicate, over time, for example, these companies sought to employ more resources to improve products, making them differentiated and better known in the market (reputation).

Based on the estimated results for companies located in China and India, it can be said there is evidence that competitive strategies can act to reduce the effects of contingency factors on the financial performance of companies. Furthermore, the results reported are in line with the findings of Chen et al. (2018) and Huo et al. (2014), pointing out that competitive strategies can moderate the effects of contingency factors on financial performance.

4.3 Analysis of the estimates of companies from G7 member countries

Table 5 presents the results of the dynamic panel model estimates for companies headquartered in G7 member countries (Germany, Canada, USA, Japan, and UK). All models were estimated based on the GMM-system method, by the two-step method, with robust standard errors for heteroscedasticity correction and the panel is balanced. Only models and variables that showed statistical significance at the level of 1% and 5% were considered for analysis.

Table 5:
Results of estimation of the model for companies from G7 member countries (2012-2018)

Variables		Model 6 Coefficient	Model 7 Coefficient	Model 8 Coefficient	Model 9 Coefficient	Model 10 Coefficient
ROA_{it-1}	+	0.670**	0.627**	0.678**	0.680**	0.671**
CLS_{it}	+	0.0001	-0.005	-0.004	-0.001	0.029*
DIF_{it}	+	-0.065	-0.014	-0.007	-0.013	-0.021*
CL_{jt}	-	0.036	0.081	-0.006	-0.107	0.097
UNC_{it}	-	0.128	0.365	0.111	0.150	0.047
SB_{it}	+	-0.009	-0.093	-0.0002	0.007	-0.027
LB_{it}	+	0.021	-0.029	0.013	0.026	-0.014
AGE_{it}	+	0.0001	-0.0001	0.0001	0.0001	0.0001
LEV_{it}	-	-0.023	-0.141	-0.004	-0.019	0.019
EG_{jt}		0.325**	0.134	0.333**	0.308**	0.227*
CL_{it} x DIF_{it}			0.031			
CL_{it} x CLS_{it}			0.045			
UNC_{it} x DIF_{it}				0.011		
UNC_{it} x CLS_{it}				0.087**		
SB_{it} x DIF_{it}					-0.013	
SB_{it} x CLS_{it}					0.022	
LB_{it} x DIF_{it}					0.042*	
LB_{it} x CLS_{it}					0.006	
AGE_{it} x DIF_{it}						-0.0003
AGE_{it} x CLS_{it}						0.0002
Industry dummy		Yes	Yes	Yes	Yes	Yes
Country dummy		Yes	Yes	Yes	Yes	Yes
Constant		0.100*	0.121*	0.097	0.090*	0.085*
Observations		3.989	3.989	3.989	3.989	3.989
Instruments		96	88	112	128	136
Groups		570	570	570	570	570
Wald test		309.38**	238.14**	359.69**	323.35**	420.23**
AR1 (p-value)		0.000**	0.000**	0.000**	0.000**	0.000**
AR2 (p-value)		0.058	0.082	0.074	0.070	0.065
Hansen test (p-value)		0.100	0.382	0.171	0.178	0.131

Note: Significance: * p < 0.05 and ** p < 0.01.
Source: research data.

The results presented in Table 5 indicate that all models (6, 7, 8, 9, and 10) were estimated with the number of instruments lower than the number of groups, as suggested by the literature (Roodman, 2009), and that, by Wald test, all models have statistical significance. In addition, the second-order autocorrelation test (AR2) and the Hansen test indicate the consistency of the estimators and the validity of the instruments, respectively, for all models. It is also noteworthy, based on the VIF statistic, there was an absence of multicollinearity between the variables present in the models.

As shown in Table 5, there was a positive relationship between the previous performance and the current performance of the companies, with such relationship being statistically significant at the level of 1% for all models, indicating that the companies showed persistent results throughout of the period analyzed.

Regarding to the relationship between competitive strategies and financial performance, according to model 6, the results show that cost leadership and differentiation strategies did not contribute to the performance of companies in the period analyzed. Also, according to model 6, the expected associations between the variables CL_{it}, UNC_{it}, SB_{it}, LB_{it}, and AGE_{it} with the performance of companies were not observed.

From model 7 to model 10, as shown in Table 5, it was possible to verify the results for the interactions between the contingency factors (CL_{it}, UNC_{it}, SB_{it}, LB_{it}, and AGE_{it}) and the competitive strategies (CLS_{it} and DIF_{it}). According to model 8, a positive and significant relationship was found, at the level of 1%, between the cost leadership strategy and the uncertainty level, suggesting this strategy can reduce the effects of uncertainty on the performance of firms, contributing to increased financial performance. This result may indicate competitive strategy can moderate the effects of contingency factors on corporate performance.

Such evidence may indicate that, to face the environmental uncertainty, organizations that use a strategy based on cost leadership seek, for example, to make investments to optimize the organizational structure, increasing the efficiency of production capacity and the use of resources (Banker et al., 2014; Hambrick, 1983; Huo et al., 2014; Porter, 1980), seeking to maintain its adjusted structure and sustain long-term performance.

Regarding to the interactions between the variables that represent organizational size (SB_{it} and SB_{it}) and competitive strategies (CLS_{it} and DIF_{it}), according to model 9, the results show a positive and significant interaction coefficient, at the level of 5%, between the LB_{it} variable and the differentiation strategy, suggesting that this strategy can reduce the effects of corporate size on the financial performance of companies.

This result may indicate that large business, which use a differentiation strategy because they have more resources and greater control of the operating environment (Chenhall, 2003), are able to invest more in R&D, for example, making their products known for their distinct attributes and qualities, always keeping ahead of its competitors, in terms of innovation and performance that differentiates from others (Banker et al., 2014; Cho & Lee, 2018; Hambrick, 1983; Huo et al., 2014; Junqueira et al., 2014; Junqueira et al., 2018; 2016; Porter, 1980).

The evidence reported reinforces that evidenced in the studies by Chen et al. (2018), Hernández-Perlines et al. (2016), Mohsenzadeh and Ahmadian (2016), and Santos (2015), pointing out that competitive strategies can moderate the effects of external and internal contingency factors on financial performance.

Therefore, based on the above results, for the environment of companies located in G7 member countries, in the period analyzed, it appears the cost leadership strategy contributed to reducing the effects of uncertainty and the strategy based on differentiation moderates the influence of corporate size on the performance of companies, generating positive financial results.

5 Final Considerations

The organizational environment is characterized by several contingency factors that shape the corporate structure. Among these factors, competitive strategy is seen as a mediating variable that can be used by entities to adapt their activities and reduce the influence of other contingency factors on financial performance.

In this sense, this research aimed to analyze the relationship of competitive strategy (cost leadership or differentiation) with contingency factors (environmental uncertainty, competition level, size, and age of the organization) on the financial performance of companies, considering the environment in which they are located (BRICS and G7 member countries).

The evidence found indicated that, in the environment of the BRICS countries, the cost leadership strategy positively affects the financial performance of companies. This result indicates that the cost leadership strategy seems to increase the financial performance of organizations.

According to the results of the panel data analysis, the expected relationships between contingency factors and financial performance were not found. On the other hand, evidence indicates that, for companies headquartered in BRICS member countries (China and India), the cost leadership strategy seems to reduce the effects of uncertainty and age of the organization on the financial results of companies. Furthermore, it was found the differentiation strategy can moderate the influence of the age of the organization on financial performance.

Regarding to the G7 member countries (Germany, Canada, USA, Japan, and UK), the results suggest that, in the period analyzed, the cost leadership strategy moderates the effects of uncertainty on the return on assets, and that the differentiation strategy seems to mitigate the influence of corporate size on financial performance.

Based on the evidence found, it can be said there is evidence that, in the environment of the BRICS countries, the cost leadership strategy seems to reduce the effects of uncertainty and organizational age, and the differentiation strategy moderates the influence of age of the organization on the financial performance of companies, and that, in the G7 member countries, the cost leadership strategy seems to

moderate the effects of uncertainty and the size differentiation strategy on financial performance, in the period analyzed.

These results also demonstrate the applicability of the contingency theory, confirming the premise that organizations must adapt to the context in which they operate, since the environment (internal and external) shapes corporate structures, and that competitive strategy can be used to moderate the influence of contingency factors on the performance of organizations.

As practical and empirical implications, the results suggest that managers, controllers, and others involved in organizational management should seek to choose the competitive strategy that suits the organizational environment and can moderate the influence of contingency factors, seeking to optimize the financial performance of companies, making it sustainable over time. Furthermore, they need to understand the contingency factors and the dynamics of the environment in which the organization is inserted in order to employ the most adequate competitive strategy for each context.

It's noted that the results presented must be considered diligently and they are restricted to the sample of companies investigated in the period covered. Furthermore, it cannot be categorically affirmed that a specific competitive strategy is more efficient in moderating the influence of contingency factors on the financial performance of companies, depending on the environment in which they operate (developed or developing countries), and other variables, not covered by this research, can act in the choice of the competitive strategy to be used by an organization. Thus, the evidence presented in the context of this study must be analyzed, being valid only for the entities analyzed and for the period evaluated.

Some potential limitations of this research should be considered when interpreting the results, such as: number of periods analyzed; small number of companies studied from developing countries; differences in the period of closing financial statements; and non-inclusion of other contingency factors, such as psychological variables, changes in control systems, national culture, among others that may affect the performance of companies.

Considering the mentioned limitations, and as it is a topic that needs further studies, it is intended, in future research: to increase the number of periods analyzed; to include new contingency factors; to increase the number of countries to be analyzed; to use other variables in order to capture the focus-based competitive strategy; and to apply other econometric theories and methods, seeking to highlight the role of competitive strategy in reducing the influence of contingency factors on organizational performance.

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