

# **Corruption, immigration and refugees: new determinants in the capital structure of companies\***

Samuel de Paiva Naves Mamede  
Department of Finance  
Mackenzie Presbyterian University  
[samuel.mamede@mackenzie.br](mailto:samuel.mamede@mackenzie.br)

Manuel Rocha Armada  
Department of Finance  
University of Minho  
[rarmada@eeg.uminho.pt](mailto:rarmada@eeg.uminho.pt)

Wilson Toshiro Nakamura  
Department of Finance  
Mackenzie Presbyterian University  
[wilson.nakamura@mackenzie.br](mailto:wilson.nakamura@mackenzie.br)

## **ABSTRACT**

It is essential to have an understanding of the theories of Trade Off, Pecking Order and Agency, to understand that there is still a puzzle to be solved: they are not able to explain what are the determinants that companies must choose in the analysis of capital structure. The main objective of this research is to analyze the impacts of the choice of new factors and/or determinants of the Capital Structure of companies. The logical intuition is based on the relationship and interaction of classical variables, widely used in the financial and accounting area, relying on the skills of the CEO, as well as the use of restricted factors such as corruption, immigration and refugees. Using econometric procedures such as cross-section, panel data, and moderation of instrumental variables, this survey includes the 1.675 U.S. companies in the sample, drawn directly from the Wharton Research Data Service database, for the period 2010 to 2017. This research offers unprecedented insight into the identification, interaction and discussion of new factors in the choice of capital structure determinants, as these elements can add value to the companies' debt policy, although they have never been fully used. In general, the results of this study provide empirical evidence that the level of corruption in an economy has a direct and positive effect, assuming the following findings: (i) corruption is significant in environments with a higher concentration of refugees; which brings a direct and positive relationship with the level of indebtedness of organizations located in the states that absorb this workforce; (ii) with regard to refugee groups, companies that join the program to receive refugees in the states, through state governments, have the following opportunities: ability to obtain credit easier with financial

institutions, through the reduction of interest rates, that is, generating the impact directly on the capital structure and, naturally, becoming more competitive with respect to their competitors. Some sectors such as energy, telecommunications and retail - are finding ways to integrate refugees into their workforces, or to directly support refugee-owned businesses, so that they can participate in the opportunities with easier credit and also in creating new business with the public. Consequently, the creation of new business with the public body, over the years, influences the practice of corrupt acts or illegal benefit between both parties.

**Keywords:** CEO. Corruption. Capital Structure. Immigration. Refugees.

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## **1. INTRODUCTION**

### **1.1 Theme Presentation and Research Problem**

A number of findings have established the foundations in explaining the determinants of capital structure (Modigliani, Miller, 1958, Modigliani, Miller, 1963, Jensen, Meckling, 1976, Myers, 1977, 1984, Myers, Majluf 1984, Myers 2001; Fama, French, 2002). The principle ideas of capital structure can be categorized into three theoretical approaches: Trade Off, Pecking Order and Agency theory. The objective of the theories is to explain how choice plays a role in choosing principal determinants of capital structure. However, all three theories have been unable to provide conclusive evidence/a reason of how/why companies go into debt (Graham, 2000, Leary and Roberts, 2010).

Initially, Modigliani and Miller (1958) postulated that the value of the company was not influenced by the composition of the capital structure. However, the idea was based on conditions provided in a non-existent perfect capital market. In an attempt to explain an imperfect market, Trade Off Theory utilized the principle (Kraus; Litzenberger, 1973; Myers, 1984) that a company will negotiate costs and benefits of debt to maximize the value of the company. The debt benefit comes mainly from paying the interest on taxes which results in lowering the companies income

(Miller; Modigliani, 1963). The cost of debt is derived from direct and indirect costs of bankruptcy caused by systematically increasing financial risk (Kim, Sorensen, 1986, Kraus and Litzenberger, 1973).

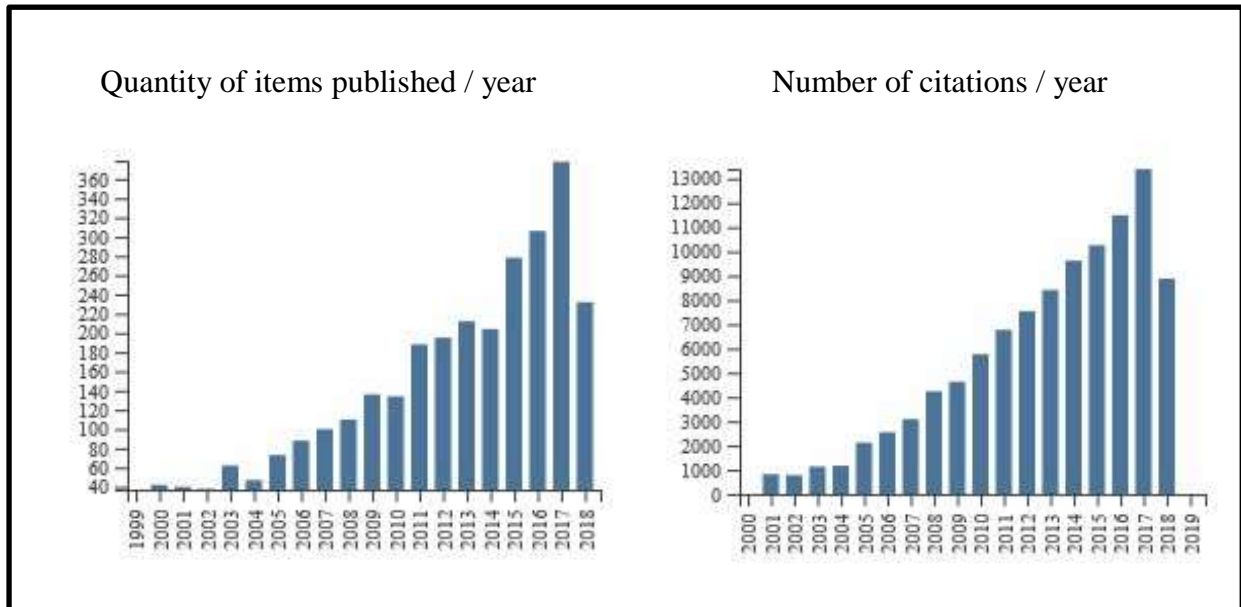
The Pecking Order Theory (Myers, Majluf, 1984; Ross, 1977) establishes that financing follows a hierarchy. Initially the hierarchy begins with internal financing followed by the possibility that debt is issued and ultimately can lead to capital if the debt cannot be addressed. Finally, Agency Theory developed by Jensen and Meckling (1976) Jensen (1986) and Hart and Moore (1994), argues that an ideal capital structure maximizes the value of the company, and minimizes conflicts of interest between stakeholders.

Based on the theoretical arguments presented the choice of the capital structure is a considerable strategic decision because it affects the cost of capital profitability valuation and solvency of a company (Sharma, 2017). In other words, the correct determination of the capital structure is necessary because it avoids exposing the company to an increased risk of financial difficulties and at the same time leads to the lowest level of cost of capital possible given the benefits costs and risks involved in the use of third-party capital on an equity basis (Frank; Goyal, 2009).

Over time several theoretical and empirical studies have attempted to identify the factors influencing this choice of the principal determinants of capital structure (Bradley et al., 1984, Myers, 1984, Titman, Wessels, 1988, Harris, Raviv, 1991, Rajan, Zingales, 1995, Fan et al., 2012, Graham et al., 2015). In line with the authors mentioned above, Frank and Goyal (2008) discusses the need to identify a satisfactory theory of capital structure, which should explain why companies tend to maintain a certain level of indebtedness for long periods, and what would be these factors and / or determinants.

In addition to the studies mentioned previously, Parson and Titman (2009) and Graham and Leary (2011) also emphasize that capital structure research focuses on factors for individual companies such as managerial preferences (decision process), governance, geography and corporate culture these factors are used to further explain the choice of the main determinants. Chart 1 represents a synthesis of the number of publications and the quantity of citations this chart serves as an overview of the amount of research that has been done so far on capital structure.

**Graph 1:** Number of publications and quotations on Capital Structure over the years



**Source:** Web of Science (2018). **Note:** the research was conducted from 1970 to 2019 (press), with a total of 3,239 publications in the the phrase "capital structure" appears. However, for the purpose of graphic visualization, we chose to present the years minimally with the visualization of the growth bar.

Note that in Graph 1, the number of articles published per year from 1999 to 2019 has been gradually increasing. The above data demonstrates that there is an increasing interest in capital structure. Accordingly, the other graph presents the number of citations per year. The graph aids in showing how the research in the area corroborates with the exponential growth in the area during the last few years.

Rauh and Su fi (2012) contend that empirical evidence suggests that capital structure research should focus only on the determinants of leverage changes. They noted that invariant factors of a company such as the type of product and the type of assets used in production, are the most significant determinants of change in indebtedness.

On the other hand, the consensus view that the capital structure is stable for long periods was questioned by DeAngelo and Roll (2015), who point out that the stability of the structure is an exception and not a norm. By using a set of data from US companies, it was discovered that large temporal variations in leverage ratios in a company may differ considerably over time.

The studies of Deesomsak et al. (2004) investigated the determinants of capital structure in companies located in Asia and Oceania. In Regards the specific determinants of the company, the research showed that the size of the company is positively related to the debt, while growth and liquidity are negatively related. Therefore, De Jong et al. (2008) analyzed the importance of company-specific factors in understanding corporate indebtedness in 42 countries. The results of this study indicated that a company's specific determinants of indebtedness differ between countries, making the current theories inconclusive in creating a uniform standard of these determinants.

Other studies, such as Psillaki and Daskalakis (2009), reported that company size is positively correlated with indebtedness, while the structure of assets, profitability and business risk are negatively correlated. The growth variable is not a statistically significant determinant of indebtedness, which was evident in the capital structure of Greece, France, Italy and Portugal. The main conclusion of this study is that company-specific, not country-specific, factors can better explain the differences in debt policy choices.

Using data from a Middle Eastern country, Sbeti and Moosa (2012) investigated the determinants of capital structure and analyzed the relationship between variable growth and profitability opportunities. In line with the previously reported results, Serfling (2016) provided clues with use of panel data to explain the relationship between the costs associated with dismissing workers and decisions made in capital structure companies. In general, the last six decades have produced a significant amount of empirical literature on the choice of determinants of capital structure; however, several authors in corporate finance conclude that the results are rather inconclusive (Na; Li, Yu, 2016; Bradley, Jarrell, Kim, 1984, Schmid, 2013, Denis, McKeon, 2012, Hovakimian, 2006, Strebulaev, 2007).

As Hang et al (2018) points out, only in the last five years (2012-2016) has the number of studies increased in more than 300 articles, each proposing its own set of key determinants. In this context, the main classic determinants, compiled by the literature, are the following: firm size, growth opportunity, profitability, volatility, tangibility, company age, dividends, liquidity and investments (Titan, Wessels, 1988; Frank, Goyal, 2009).

The vast number of studies (Anwar, Sun, 2015, Frank, Goyal, 2009; Öztekin, 2015) widens the heterogeneity of the empirical findings, rather than revealing unified evidence of the true drivers of choice of determinants of capital structure. However, one notable point is that there is

no single theory that can fully interpret and provide the factors that influence the capital structure, through its determinants, in the policy of indebtedness of organizations. However, Ardalan (2017) argues that all these theories are based on many critical assumptions, whereas reality, through decision makers, is extremely complex and diverse. He also asserts that theorists are not always fully aware of the multifaceted nature of business.

Throughout history, it is evident that knowing the capital structure is essential for organizations, however, the study of manager behavior has been an important advance to promote growth and study of finance (Abeywardhana, 2017). Starting from this understanding, it is inevitable that some questions arise: the discussion that permeates if the classic variables of the capital structure, in the last 40 years, were really sufficient, will have come to an end? How can the complexity and evolution of organizations have overcome the benefits presented by the classical determinants, thus lacking new variables with better explanatory power? What are these new variables and where do they reside?

In light of the above, further investigations are needed to shed some light on the issue. These theoretical developments open the way to the vast work of empirical research, testing the validity of these theories from different perspectives, whether new determinants or even new econometric models for testing and persistence. However, some challenges are identified, noting that most surveys use only accounting data from the country, largely because of the availability of information in the databases. More importantly, mixed theoretical and empirical results are also complex in their interpretation, regardless of which national reality presented. However, one point that seems to be in common is that most studies on capital structure focus only on specific or classic factors of the firm, comprising the following variables: profitability, tangibility, volatility, growth and size of the organization (Andres et al. al., 2014).

Therefore, one of the alternatives to advance in the investigation of possible and / or new explanations, can be found in other fields of discussion, such as the behavior of managers. Beliefs, preferences and even behavioral biases in the decision-making process may not be standardized and thus allow for various behaviors, which in turn translate into varied decisions. In this context, managers' behavior and abilities may offer new clarifications, hitherto little observable in the literature, to a better understanding and understanding of the essential factors in choosing the determinants of the capital structure.

For example, the skills of high-level managers - CEOs - are a factor that needs further observation in debt policy research, as there are strong indications of this effect on the influence of financial decisions (Matemilola et al., 2018). Hanousek and Shamshur (2011) and Lemmon et al. (2008), among others, have empirically shown that unobserved company-specific factors may account for most of the determinant variation in the capital structure of firms. According to previous studies, Bertrand and Schoar (2003) point out that CEOs have explanatory power for various corporate decisions, including investment policies such as capital spending and acquisitions and financial policies such as liquidity, financial leverage, interest payments, dividend payments and organizational strategies.

The effect of the CEO's abilities can influence the level of indebtedness of a company, as observed by Jiraporn et al. (2012) and Li et al. (2017). There are some researches (Custodio, Metzger, 2014, Gounopoulos, Pham, 2018) that point out the main skills and behavioral characteristics of CEOs, namely: age, nationality, gender, board participation, company founder, MBA holder, PhD, Ivy League alumnus, internally promoted, remuneration (salary and bonus), specialist, generalist, media impact, tenure, power, turnover, background in finance, CFO compensation value and proximity to CFO compensation with the CEO.

Considering the existence of new management challenges (CEOs) and market, particularizing the geographic specificities in which companies are established, added to the fact of the significant and significant changes that the market environment and technological regime of extreme competition produces, it becomes necessary the choice of new "market" variables that can help elucidate the challenge of choosing new determinants in capital structure.

In addition to these explicit variables, they can also help explain and understand the determinants of the capital structure, some themes of global and innovative impact, never once mentioned in corporate finance topics that, after being transformed into variables, were characterized by region and / or (Smith, 2016), immigration (James et al., 2017) and refugees (Gerick et al., 2018). Corruption is directly related to the level of indebtedness, as it suggests that firms, engaging in corrupt practices, have a comparative advantage in obtaining access to debt and, in particular, to long-term debt (Smith, 2016). However, this debt financing advantage disappears when the relationship is discontinued, due to the discovery by the market or the supervisory bodies.

For legal immigration, the policies developed to date seem to center around the impact of immigration on finance, generally highlighting the absorption of this labor force by firms (Gerick

et., 2018). Immigrants are generally recognized for their greater entrepreneurial orientation, as they often have linguistic, intercultural, and foreign skills, and in particular, preexisting links with global networks (Cerdin et al., 2014), thus being able to develop and operate companies that become exporters in their host countries (Saxenian, 2002). This line of reasoning implies that the financial performance of organizations that have immigrants offers more profitable returns than companies of non-immigrants (Gerick et., 2018).

Companies with at least one founder of immigrants had higher sales revenue and hired more employees than companies without any immigrant founders, according to McQuaid et al. (2010). The different operating results between immigrant founding firms and non-immigrant founding firms may suggest that immigrant founding companies have smaller councils in order to reduce coordination costs, improve management monitoring, and improve company performance.

With respect to refugees and corporate indebtedness, two premises are addressed: the research, carried out by Alloush et al. (2017) gathered data to investigate how the economies of refugee camps interact with the economies of the host country and also the local economic impacts of alternative mechanisms for providing food aid by businesses. The data show that companies do not have the capacity to grow, either because of the difficulty of credit and the need for investment, or because they are related to a community that does not have income, and that refugees are provisionally supported by local governments and the United Nations United Nations (UN).

The second premise argues that refugee's lack of experience prevents job seekers from balancing well with other jobseekers, according to Granovetter (1983) research. As established by the author, the contracting companies, which mostly have low value-added production profiles, receive this low-skilled labor because of their need for subsidies obtained from the government. Even so, these benefits are insufficient for their economic growth, having to use, whenever possible, sources of external financing to support investments (Granovetter, 1983)

By looking at the arguments and questions presented, one is obligated to explore the interaction of set variables, which were never used as an attempt to bring forth more comprehensive answers about the capital structure of companies. Current theories are not able to explain the reasons for capital structures ambiguity (Na, Li, Yu, 2016). This finding proposes that a single theory of capital structure cannot incorporate all the necessary variables and predictions exist in capital structure. Thus, the main question that guided the realization of this research was the following: **How can the new determinants help explain the capital structure of companies?**



This question has led to the realization that research needs to aim at understanding how new determinantes will be used and created. It is also crucial to identify the influence and the main implications that new factors can offer in the selection process of new determinants in capital structure. The impact of classical factors and the new factors will be analyzed, according to the general objective and specific objectives, as well as the respective methodological steps, in the next section.

## **1.2 General and specific objective**

Considering the context presented in section 1.1, the present study has as general objective of analyzing the impact of the choice of new factors and / or determinants in the Capital Structure of companies.

In order to support the general objective of the research, five specific objectives were devised as a way of establishing the development of the general objective in stages. The specific objectives proposed were: (i) To relate, in the same model, the set of classical variables with the set of innovative variables; (ii) Identify and compare possible similarities addressing indebtedness of companies that are located in states with high probability of corruption levels and states of corruption cases already under investigation; (iii) Analyze at the state level the influence that immigration and refugees have on a company's financial policy: further comparing these results in states with a higher incidence of corruption; and (iv) compare this date to the classical variables of capital structure exclusively with the profile of corporate CEOs.

In order to achieve the general and specific objective proposed, variables were highlighted through correlated studies, which will be analyzed with their respective theoretical bases, and denoted as dependent variables in the market indebtedness. The classic factors are those that are often used in the research on the choice of the main determinants of corporate indebtedness. The detail for each of these groups of determinants in the presentation for the group of classical factors begins, namely with the following:

(i) Size of the company (Raja, Zingales, 1995, Chen, 2004, Frank, Goyal, 2009, Dang, Garrett, 2015); (ii) the growth opportunity (Shyam-Sunder, Myers, 1999, Fama, French, 2002, Guney et al., 2011, Dang et al., 2014); (iii) Profitability (Graham, 2000, Fama, French, 2002, Frank, Goyal, 2003, Delcoure, 2007, Deesomsak et al., 2009, Piaw and Jais, 2014); (iv) Tangibility (Titman,

Wessels, 1988, Frank, Goyal, 2009, Andres et al., 2014, Dang and Garrett, 2015); (v) Dividends (Miller; Modigliani, 1963; Dhanani, 2005; Amidu, 2007); (vi) Liquidity (Ozkan, 2001; Sbeti and Moosa, 2012); and (vii) Investments (Hoshi et al., 1991, Kaplan, Zingales, 1995, Cho, 1998). After presenting the classic variables, we present the group of innovative variables: CEOs and American states.

The CEO group, with their respective variables and references, are presented as follows: (i) Age (Cao et al., 2017); (ii) gender (Faccio et al., 2016, Skala, Weill, 2018); (iii) participation in the board (Frye; Pham, 2017); (iv) founder of the company (Frye; Pham, 2017); (v) internal promotion (Huang et al., 2016); (vi) Remuneration - salary and bonuses (Brockman et al., 2017); (vii) Tenure (Banerjee et al., 2018); (viii) Power (Chao et al., 2017); (ix) Finance (Gounopoulos and Pham, 2018); (x) overconfidence. In addition, variables with an impact in the American states are the following: (i) Corruption (Smith, 2016); Refugees (Baran et al, 2018); and Immigrants (Mitaritonna et al., 2017).

The development of this research was conducted using the the following methodological steps:

(i) collect and extract samples composed from 1.675 US companies, drawn directly from Wharton Research Data Services (WRDS). WRDS provides the main databases for business institutions, as well as financial information from global institutions;

(ii) insert the control variables into the equation; (iii) estimating cross-section parameters and data (ii) insert the control variables into the equation; (iii) estimating cross-section and panel data (OLS, Fixed Effects, Random Effects and Instrumental Variables); (iv) insert the instrumental variables in the regressions; (v) compare the results obtained with Trade Off, Pecking Order and Agency Theories, in order to verify convergent and divergent points in these theories, in a reality that presents new explanatory factors. In addition, the motivational aspect and relevance of this theme will be discussed in section 1.3.

### **1.3. Motivation, Relevance and Contributions**

Arguments have been made in analyzing the impact of choosing new factors and / or determinants of Capital Structure. The primary idea was that until recently, there was no specific studies on the selection of new determinants that addressed a significant set of variables, nor proposed the introduction of new determinants in Capital Structure. This argument was verified

through a literature review in several main international journals (high impact factor) and conferences in the area of finance. Thus, in this paper it is the main focus is to address new variables that may contribute in yielding new determinants in capital structure.

The second argument is the existence of several theories and lines of thought on the subject of capital structure, which have been mainly developed in the last sixty years. The main premiss pivots on the inconclusive nature of all the theories centering on the choice of the most appropriate determinants for the analysis of the organizations' indebtedness policy. Therefore, it is necessary to seek new answers that challenge the progress and evolution of the already consolidated theories. The two theories: (i) Trade Off Theory (Kraus; Litzenberger, 1973; Myers, 1984); (ii) Pecking Order Theory (Myers, Majluf, 1984; Ross, 1977); (Jensen, 1986, Hart, Moore, 1994), were influenced by Modigliani and Miller (1958) and are only valid according to some premises, but do not effectively clarify the ideal set of determinants that should be adopted by companies at a given moment.

The third argument shows that the individual characteristics and abilities of managers could have greater influence in the selection process of determinants in capital structure. Specifically, it is evident that the effect of CEOs provides a plausible combination with capital structure in relation to Trade Off theory. With respect to Trade Off theory postulated by Myers (1984), one observes the maximization for example, benefit of an interest rate protection. According to Myers (1984), capital structure is achieved when the fiscal benefits of debt are balanced at the margin by costs of the financial crisis. By keeping the company's assets and investment plans in place, CEOs use more debt to protect the company's profits from taxes; this in turn encourages the use of more debt capital. Therefore, the experience of senior managers (CEOs) is positively related to the policy of indebtedness.

According to Agency theory, Jensen and Meckling (1976) show that agency costs arise due to the conflict of interests between owners and managers. Each party is trying to maximize its own goals. To reduce agency costs, homeowners draw up compensation contracts to align the conflicting interests of managers and shareholders. Managers, on average, are more cautious when invested on a more personal and monetarily level in the company; therefore, the policy decisions are usually conservative compared to a well-diversified shareholder.

The fourth argument confers that companies in more corrupt areas have less money and are more indebted than companies in less corrupt areas, says Smith (2016). In other words,

corruption must be considered as part of a mechanism that operates the market, which affects corporate cash and debt policies. Apergis and Apergis (2017) goes even further by explaining that the more a company can afford corruption, the more it will pay which leads to a vicious cycle. In this way, companies wishing to maximize their value should have a payment limit for corruption. Using financial policies will reduce the value of debts especially if a smaller amount of money is used to pay for corruption.

The fifth motivational idea makes reference to two of the greatest humanitarian crises of the century: immigration and refugees (UN, 2017). With respect to immigration, a reduction of granting immigrant work visas in the US results in curtailing innovation, productivity, revenues and profits at the enterprise level (Ghosh et al., 2014). In other words, the lack of immigrants produces a significant decrease in size and productivity for companies that rely on skilled foreign workers.

Finally, the seventh and final argument offers insight on how in recent years the number of refugee populations have increased. Furthermore, finding conditions to successfully integrate refugees into society, this and other refugee related topics has become an urgent and challenging task for employers/ business ( Gerike et al., 2018). The internal corporate challenge goes far beyond in how to incorporate this labor, but how the capital structure must be prepared to cope with new investments and produce the desired profit, maximizing shareholder wealth.

These ideas in regard to immigrants and refugees represent the concern countries have, in how to maintain their pre-existing responsibilities such as economic and social infrastructure and at the same time include refugees and immigrants. A pacified point in this area is the difference in the level of intellectual capital that companies make in incorporating this labor force (immigrants x refugees), considering that, in most cases, companies need indebtedness to support this new inclusion and invest in technological capital to expand its business.

Finally, motivational synthesis is the real and unprecedented element in elucidating and promoting new horizons along with the interaction and crossing of set variables mentioned previously. The purpose is to identify and select new determinants.

It is worth emphasizing the relevance of this research in the last decades as companies have started to give greater importance to the issue of financial policies that aim at the maximization of equity and return to shareholders. Even in developed countries, there is a gap between the development of theoretical knowledge and its application in the practical world, which has recently led

companies to adopt more advanced financial management practices in order to achieve wealth maximization.

Corporate indebtedness had been discussed from the point of view of providing liquidity for companies as a situation for financial difficulties that could lead to bankruptcy. However, adopting adequate borrowing practices can increase the company's ability to generate more profitability by adjusting the policy in line with the natural cycles of the economy with peaks and recessions of economic activity.

Above all, such adequate practices have the capacity to raise the value of the company and contribute to the increase of shareholder wealth. Based on the use of gains and benefits arising from the use of debt counting the need to establish an adequate level of indebtedness could be effective. This strategy may also help to leverage the growth of the company given a specific generation of results that can be partially retained thus a set of investments can be realized.

Regarding the contributions of this research, it is understood that the study contributes to the level of academic, practical and social approach. In academic approach this research offers a new dimension in the identification, relation and interaction of new determinants of capital structure, as these elements can influence the capital structure of companies using different realities (countries) and considering the behavior of managers in the decision-making process. This interaction aims to produce effects that can create results or even future assumptions at a global level, since the set of variables, mutually related, produces the most diverse inferences, for example: new horizons that effect CEOs, through the set of skills, influences indebtedness policy; the corrosion caused by corruption in the policy of indebtedness for companies (not to mention the qualitative loss of corporate image); the impact that immigrants and refugees have in each US state, and in corporate tax policy, and thus the corporation. In addition, this model representation can offer guidance in humanitarian aid for purposes in the United Nations (UN) due to the direct influence of immigrants and refugees.

This research is only possible, because there is a gap of theories, which does not explicitly explain the ideal set of determinants that a company should choose. Given its financial, political and social conjuncture. Still in the theoretical field, this research contributes to the presentation and discussion of the empirical treatments by using a current econometric methodology (OLS, panel data, instrumental variables and diff in diff), which aims to validate or contradict the

empirical results already presented on the subject, considering the inconclusive aspects reached so far by the researches in the area.

Remember that most of the studies concerning the effect of CEOs did not cover a large number of variables to identify possible behaviors in the process of indebtedness of organizations. Therefore, this research provides the opportunity to discuss more accurately what behaviors and / or ability affect CEOs and this influence in the process of making decisions related to indebtedness. It is also mentioned in this research that it contributes to capital structure literature by means of a variable that is not yet widely used at the corporate level, directly, which is corruption. Most studies on corruption use measures based on perceptions about regions with greater or lesser probability of corruption occurring. In addition to using corruption data (US Department of Justice), this study contributes to growing literature which makes it an original comparison of American states with a greater perception (expectation) of corruption versus states with a level of corruption already knowledged. It is also confirmed that cases of perceived corruption will come from two different sources: (i) report developed by US financial analysts and journalists; (ii) report compiled from the Corruption Study Center, University of Illinois - US.

In addition to the other academic contributions, evidence will be provided, which has never been clearly documented in financial research of the influence refugees and immigrants have in the policy of corporate debt and the relationship for each of the states. These groups, today, can directly influence the structure of debts, obviously considering the level of intellectual capital of employees who are admitted within corporations. In parallel, the aim is to evaluate whether states that have the highest level of refugees and immigrants are also located in states with higher or lower levels of corruption.

Regarding immigrants and their possible effects at the company level, the research will address that the intake of immigrants within a company can influence the level of greater indebtedness. The idea is as follows: companies based in districts with the greatest increase in the supply of immigrants can have greater productivity, innovation capacity, investments and export growth, compared to comparable companies in districts with lower inflows of immigrants.

With regard to the practical approach of this study, it is affirmed that the research contributes to understanding the role of managers. In the current studies, the clarification of the main determinants in the capital structure specifically in how it provides new evidence that clarifies the specific impact of the CEO's abilities in explaining indebtedness.

In addition, indications will be given on immigrants and refugees, at the state level, on the indebtedness of US companies as an effort to collaborate with developing the best public policy and management practices. Public authorities, who seek the common good, have a strong incentive to encourage the insertion, development and growth of these migratory groups. It is also worth mentioning that this work will contribute to the advancement of the social practices that the UN enforces regarding human rights, orientation towards the economic progress, and development of the countries that receive immigrants and refugees.

Finally, in relation to the social approach, some contributions are argued that this research will provide can help elucidate why refugees' difficulties in having their qualifications recognized. Furthermore, refugees and immigrants usually having a later entry into the labor market thus leading to higher unemployment and underemployment rates (Bakker et al., 2016) and are in the secondary labor market (Colic-Peisker and Tilbury, 2006). Thus, the chances of finding meaningful employment diminishes with each year of refugee status. In this way, the research indicates that American companies must be prepared, in their financial policy to receive foreign labor force. It is also worth noting the need for social policies and integration in the demographic areas where the largest number of refugees reside.

As far as immigrants are concerned, this research can help promote policies for the integration of immigrants, developing social integration and increasing human appreciation, through an understanding of the impact that immigrants from different nationalities have on American companies.

It should also be noted through this research that the change in the capital structure of companies is a channel by which companies can prevent the incidence of corruption and, in turn, the possibility of creating future solvency problems. Socially, corruption reduces the activities of corporations because of the additional cost (Couttenier; Toubal, 2017), causing a decrease in the level of investments, low professional demand and, in some cases, consumer resistance in continuing to acquire the products.

## **2.1 LITERATURE REVIEW**

One of the main currents in academic finance is the ideas of capital structure as one of the cornerstones of corporate finance. In this context, the theory of the irrelevance of capital structure is based on a set of assumptions, which are both unrealistic and contradictory to current studies in corporate finance. Since then, many researchers have altered these conditions to explain the factors or determinants that drive capital structure decisions. Harris and Raviv (1991) synthesize some evidence in the theoretical literature and suggest promising avenues for future research.

According to Baker and Martin (2011), the financial crisis during 2008 and 2009 forced economists and financiers to reflect more deeply on the subject of capital structure because the problems faced by many companies originated from debt policies. Moreover, managers seemed to have no real understanding of the problems arising from the crisis and the implications for company's' debt policy.

Economists and financiers generally did not pay sufficient attention to the links between taxes, bankruptcy costs, and capital structure until, recent research specifically on top executives - CEOs, revealed their importance. In the next sections, discussions will be presented on the main theories of capital structure, as well as presentations of the classic and innovative determinants that literature currently offers, in an attempt to verify the possible existence and influence of new factors in the explanation of the politics of companies' indebtedness.

### **2.1 Trade Off, Pecking Order and Agency Theories**

Among the existing theories, the Trade Off, Pecking Order and Agency theories deserve special mention. Each theory offered a new perspective on the interpretation of the capital structure policies adopted by companies. The trade-off theory suggests that companies aim for an optimal level of capital-debt mix that maximizes the difference between the benefits and costs of debt issuance. The benefit of debt is the fiscal advantage of paying interest to debt holders (Modigliani and Miller, 1963, Miller, 1977). As interest is deductible, companies have incentives to use more debt, in addition to the fact that debt costs are generally described as financial costs during financial distress.



These costs include bankruptcy costs (Krausand and Litzenberger, 1973) and costs of financial agency (Jensen and Meckling, 1976). Bankruptcy costs include direct costs (for example, legal and administrative expenses) and the overhead costs of bankruptcy. These indirect costs are characterized by a reduction in the value of the company's assets during the bankruptcy process (for example, loss of business with customers, which require guarantees of business continuity from its suppliers).

In addition to these bankruptcy costs, the costs arising from conflicts of interest between shareholders and debt holders should also be taken into account in Trade-Off theory. As Jensen and Meckling (1976) show, managers can change the risk of their investments after debt issuance. Motivated by the fact that equity can be seen as a call option, in which its value increases as the risk of the underlying asset increases (Merton, 1973), managers acting on behalf of shareholder interest may be tempted to change the risk of their operations. This behavior, in general, is often labeled as the problem of asset substitution.

Nonetheless, debt holders are aware of this possibility of switching operations and therefore write debt contracts. (including monitoring devices) This precaution prevents managers from changing the risk of corporate assets and / or requiring higher premiums to buy debts. In both cases, as Jensen and Meckling (1976) show, all costs are incurred by shareholders, and the larger the debt, the greater the likelihood of incurring financial costs. Trade-Off theory then argues that companies will target leverage at the target level in order maximized value (ie where the marginal costs of debt corresponds to the marginal benefits).

Finally, the main premise of the Trade Off Theory, as evidenced in Chart 2, is to emphasize that the optimal capital structure is obtained by means of equality, by the positive result of taxes on financial expenses and by the negative result of the costs associated with the leverage process. Following the presentation of the Trade Off Theory, the next theory that has a significant prominence in the capital structure is the Pecking Order or hierarchy of choices.

The Pecking Order Theory by Myers and Majluf (1984) and Myers (1984) suggest that the costs of adverse selection in companies have a preference order in the use of their sources of financing. The theory is based on problems of asymmetric information between managers and external investors. Because managers know more about the company's outlook than outside investors. Managers can find new investment opportunities if external funding is needed.

Rational behavior is that investors (who have less information than managers) recognize the true value of the company in relation to the willingness of the manager to issue shares. Investors rationally interpret a new share issue and absorb it as bad news, accepting only to buy new shares at a discounted price. With the issuance of new shares, new stock prices can transfer value from current shareholders to managers, but in return, they pass on an investment opportunity that would increase the value of the company.

In this scope (where internal agents know more about the company than outsiders), funding sources allow managers to move forward whenever they identify new investment opportunities. In addition, if debt is available and risk free, it can also be used. If debt is available and risky, then Myers (1984) argues intuitively that it is preferable to equity, since it is less sensitive to adverse selection costs.

In other words, the adverse selection premium required by investors is lower for less risky securities. Therefore, these information asymmetries, the Pecking Order theory predicts that if capital is needed for new investment opportunities companies prefer to use retained earnings on debt, ie, short-term debt on long-term debt and debt over equity.

A fundamental difference between the Pecking Order theory and the Trade-Off theory is that in the most radical interpretation of the Pecking Order theory, managers do not have a well-defined leverage relationship; however, in Trade Off theory, it is anticipated that the administration will emit debt or capital for a target leverage (Myers, 1984). One criticism that is often pointed out in the Pecking Order is that, in its most extreme interpretation, companies should never issue shares, provided they always issue debt for financing.

However, proponents of Pecking Order argue that because companies have some capacity for indebtedness, debt capacity serves to limit the amount of debt within the hierarchy and, in fact, allows the use of equity (Lemmon and Zender, 2010) .

Although neither the Trade Off theory nor the Pecking Order theory can explain all the determinants found in business reality (Frank, Goyal, 2009), the empirical literature has often documented that managers behave as the Pecking Order theory predicts, even if in mind there is some kind of target leverage relationship with some flexibility.

With respect to Agency Theory, ownership and control separation in a professionally managed enterprise - a source of agency conflict - can result in managers indulging in privileges by choosing inputs or outputs that suit their own preferences or by not maximizing the value of

the company, thus affecting shareholders. In effect, outsourced agency costs equate to the lost value of professional managers, maximizing their own utility, rather than the company's value. The theory suggests that choosing the capital structure can help mitigate these agency costs. Under the hypothesis of agency costs, high leverage or low equity / asset ratio reduce agency costs from external equity and increase the value of the firm, restricting or encouraging managers to act in the interests of shareholders. The seminal article by Jensen and Meckling (1976), presents a vast amount of literature developed by such theoretical explanations of capital structure (Harris; Raviv, 1991; Myers, 2001).

Greater financial leverage can affect managers and reduce agency costs through threat of liquidation, which causes loss of salaries, reputation, privileges, and etc. (Grossman, Hart, 1982). Still on greater leverage, it is argued that it can mitigate conflicts between shareholders and managers in relation to the choice of investment (Myers, 1977), the amount of risk to be assumed (Jensen and Meckling, 1976), the conditions under (Harris, Raviv, 1990) and also in the dividend policy (Stulz, 1990).

While the increase in leverage can reduce the costs of external asset management, the opposite effect may occur for the costs of external debt agency arising from conflicts between debt holders and shareholders. When leverage becomes high, further increases can generate agency costs for external debt due to the risk shift, which results in higher expected costs of financial hardship, bankruptcy or even liquidation. These agency costs result in higher interest expenses for companies to compensate debt holders for their expected losses.

On the other hand, with low levels of leverage, the increases will produce positive incentives for managers and reduce total agency costs, reducing the costs of external capital agency, as pointed out by Jensen and Meckling (1976). However, at a time when a bankruptcy becomes more likely, foreign debt agency costs will burden the cost of outsourcing, so additional increases in leverage result in significantly higher total agency costs.

In general, capital structure remains a crucial issue in the financial literature. Since the seminal paper by Modigliani and Miller (1958), numerous academic reflections have examined a broad set of theoretical and empirical aspects of the major determinants of funding. Moreover, other studies confirm that capital structure can be affected fundamentally by the choices of determinants, according to Berger and Di Patti (2006).

Therefore, Berger and Di Patti (2006) highlight the need to seek new factors that may explain the process of corporate indebtedness. However, the results of the relationship between the fundamental determinants of capital structure in firms remain controversial. The next section will highlight the classic determinants, widely used in capital-structure investigations.

## **2.2 Classical Variables**

The traditional theories of capital structure suggest that market and accounting indebtedness relate to certain observable attributes (Lemmon and Zender, 2010). However, the approaches diverge in the prediction of how the characteristics of the companies influence the indebtedness. Although there is no intention to re-create previous studies or confirm the findings, on the relative importance of the main determinants that influence indebtedness, we included, in this research, the most used factors of the company, as found in previous studies, to correctly infer the referring results to the focal point of interest.

Considering the main classical determinants, that is, those most used in the last 100 articles (Hang et al., 2018), considering the theoretical and empirical studies, besides other factors, no less important, but with less incidence, the the following determinants for analysis: company size, growth opportunity, profitability, volatility, tangibility, company age, dividends, liquidity and investments.

Therefore, in order to highlight the dependent variables that are used in the empirical analysis, focusing on the determinants of corporate financing decisions, two dependent variables were related: market indebtedness and accounting indebtedness. After these several arguments presented, through the classic variables mentioned above, allow the definition of the first hypothesis of the research:

**H1:** The Group of classical variables, in general, have a positive relation with the Capital Structure of the companies.

The next section continues with the discussion of determinants and the presentation of new research hypotheses, however, highlighting the relationship and interaction of innovative behavioral variables, firms and American states.

## 2.3 CEO's Variables

Understanding the traditional models of capital structure determinants to include managerial features can reduce some important gaps between known theoretical predictions and unresolved empirical facts (Antonczyk and Salzmann, 2014). One of the biggest challenges today is to examine the effect of executive behavior on corporate financial policies. As one might expect, emotions and feelings are not directly observable, thus bringing the challenge for researchers into how to abstract behavioral factors such as new forms of answers and clarifications to uncertain problems in corporate finance.

The literature quantified the managerial traits, through revealed behavioral characteristics, from a set of summarized and direct information to the research or from indirect empirical proxies of external perception. Unfortunately, such measures are rarely available in databases. Although it does not directly measure behavioral biases, it is evident that the role of top corporate executives is significantly related in the decision-making of the organizations' indebtedness.

For several decades, financial studies, specifically on behavior, have been integrating insights from the broad perspective of social science. A large body of literature has evolved from the pioneering work of, for example, Shiller (1981), De Bondt and Thaler (1985), Shefrin and Statman (1985) and Roll (1986). These surveys, in general, brought realism and descriptive power to a field that was originally built on perfectly rational agents and established in capital market efficiency.

Much of the progress was evidenced by the work of Barberis and Tahaler (2003), Subrahmanyam (2008), Shefrin (2009) and Baker and Nofsinger (2010) who discussed the influence of emotions and feelings in the decision-making process. In addition, there are several reviews of behavioral research that specifically focus on corporate finance (Shefrin, 2006; Bakerand & Wurgler, 2013).

In this context, there has been a substantial increase in the importance of the behavioral effect of CEOs in the organizational context, and especially in the decision making process. CEOs have a significant influence on company performance, an influence that has grown in substance (Hambrick, Quigley, 2014) and perception (Quigley, Crossland, Campbell, 2016) in recent years.

As a better understanding, in the 1950s, most CEOs were in-house, rarely dismissed, and received a slightly higher basic salary than their subordinate executives (Frydman, Jenter, 2010; Khurana, 2002).

However, since the 1990s, there have been considerable changes in the perception of the importance of the CEO effect on organizations. CEOs have been more prominent in the press, more likely to be recruited from outside the company, more easily dismissed, and received much larger pay packages, including not only a salary, but also bonuses and capital clearing (Hambrick, Quigley, 2014; Kaplan and Minton, 2012).

Hambrick and Quigley (2014) investigate the CEO effect, based on the 60-year data set and provide evidence that, they are actually gaining notoriety in the research field; particularly on the impact of the company's financial performance. In line with previous studies, Mackey (2008) also shows that the CEO effect explains 29.2% of the variance in a company's financial performance.

To get an idea of this CEO effect, using panel and manager data, Bertrand and Schoar (2003) found that manager effects may explain a significant extent of heterogeneity in leverage. In companies with weak CEOs (ie CEOs with less influence), financing decisions can be dominated exclusively by the board of directors and / or other senior executives.

To mitigate the conflict between CEOs and homeowners, companies tend to use more debt. With CEOs having more influence, they become more solid in office. In this case, CEOs can impose more leverage on the company's financing decisions and tend to adopt below-optimal levels of debt so that they can promote their own benefits. Thus, CEOs can avoid debts to preserve their managerial opportunism, as Berger, Ofek and Yermack (1997) assert. These authors further conclude that firms with greater managerial power are more likely to adopt less debt. In addition, Zwiebel (1996) argues that self-interested CEOs tend to reduce indebtedness to avoid the pitfalls of debt financing, the threat of bankruptcy, and job loss.

In the continuity of the discussion on the CEOs effect, Naz et al. (2017) focus on examining the role of CEOs in financial decisions in companies. Researchers point out that top managers make important strategic decisions, such as deciding on optimal combinations of debt securities that maximize company value. However, the prevalence of high debt use in some companies raises the question of whether top managers actually use their skills to maximize the company's value. Attributes such as age, compensation, and CEO power are believed to serve as a proxy for the

skills of top managers (Hambrick; Mason, 1984) in the area of management research. Keeping all other things constant, senior CEOs use more debt to protect company profits from taxes, a discussion that can be based on capital structure theories.

Adding to the previous argument, Hambrick and Mason (1984) emphasize that attributes such as senior management experience and board participation influence their strategic choices. Finally, the theorists suggest that CEOs are a critical resource for their success because of the significant influence that senior executives have on strategic decisions and company results (Hambrick and Mason, 1984).

In addition, Finkelstein (1992) demonstrates that the attributes of CEOs, which include their experience and expertise, produce stronger predictions of strategic results. Hambrick and Mason (1984) recognize the experience of high-level managers as an important attribute that influences strategy. The authors argue that CEO skills are reflected in financial results.

In the same vein, Escrib-Esteve et al. (2009) argue that CEOs make high-quality decisions because they have the skills to execute complex strategic decisions and influence strategic results, thus generating greater company value. In general, previous research examines several CEO skills such as age (Serfling, 2014, Orens, Reheul, 2013), level of education (King et al., 2016), experiences (Malmendier et al., 2011) (Cain and McKeon, 2016) and specific managerial skills (Kaplan et al., 2012).

These studies broadly associate CEO skills with strategic business decisions. To do so, we identified some variables that are appropriate in this research, and Figure 4 summarizes all the variables (skills) that will be used, directly related to the CEO effect. With the use of a set of behavioral variables, as evidenced in the previous CEO variables, we intend to elucidate with more detail the process of influence in the decision-making of determinants of capital structure. Thus, the second hypothesis arose:

**H2:** The CEO Profile Group has a positive impact on the Capital Structure of companies.

### **3. CORRUPTION**

Despite the efforts of the researchers, so far the literature has ignored a fundamental characteristic: corruption is an agreement whereby a civil servant receives a payment in exchange

for a favorable decision on a specific issue and, as in any agreement, the division of his earnings depends on the allocation of the bargaining power of the parties involved, with bribes when civil servants have great power and private agents fall behind (Angelopoulos et al., 2009)

Notably, Aidt (2003) identifies the discretionary power of a bureaucrat as a necessary condition for the emergence of corruption. Given these premises, we distinguish between two types of corruption. In the first active corruption, the bureaucrat has the power of bargaining and can define the level of bribery: we refer to this trade as active because it is the bureaucrat who "demands" and defines bribery. In the second, passive corruption, the private agent has the power of bargaining and defines the value of bribery.

### **3.1 Relevance of Corruption in the Capital Structure Study**

Corruption can be seen as a mechanism by which companies receive political favoritism (Zhu, 2017). In this sense, corrupt employees provide the favored company with access to vital interests, privileges and favorable treatment. The argument is structured as follows: Since the rules and regulations governing economic interactions are less respected in the case of corruption (Cuervo-Cazurra, 2006), companies subject to discrimination in business can easily acquire protection, new government contracts and support from corrupt officials at banking institutions. Due to political favoritism stemming from corruption, business opportunities and a free market arise for private companies that have universally faced discrimination in business.

Thus, corruption is seen as "facilitating transactions and streamlining procedures that would otherwise occur with more difficulty, if at all" (Cuervo-Cazurra, 2006) for these companies. Yao (2002) points out that private companies that face discrimination in business are empowered to guarantee the favoritism of public officials. Consequently, they address not only the entry barrier, but also the scarcity of capital (credit facilities with financial institutions), dealing better with the affirmation of turnover and obtaining capital support, which defines their probability of survival and growth.

In addition, Yao (2002) points out that the asset turnover of private firms can be accelerated in the case of corruption. Due to the entry barrier, private firms may not easily obtain permits and licenses. Thus, they have few opportunities to explore projects and make investments, preventing asset turnover. However, this problem can be alleviated in the context of corruption. Therefore, it



is logical to expect that the barrier to entry for private companies will be alleviated and that asset turnover will be facilitated in case of corrupt circumstances

With respect to a change in the capital structure, credit constraints can be facilitated for private companies when corruption is taken into account. To assist employees, private and state banks can make a credit exchange and facility. As for state banks, the reason is that the decisions of these banks are controlled or influenced by public officials. As for non-state banks, the reason is that their development and success are sensitive to support from government or officials because of direct influence on the financial market.

Thus, in general, banks prefer to negotiate and influence the credit standard for private companies that have corrupt relations with employees (Yao, 2002). Bringing together the arguments presented above, Méon and Sekkat (2005) point to two visions of the financial and economic effects of corruption on the capital structure of companies. On the one hand, corruption is treated as the "sand in the wheels of firms' debt" by most researchers. This view highlights the negative influences of corruption. On the other hand, corruption is considered as "grease in the wheels of corporate debt" highlighting the positive influence of corruption.

Despite recognition regarding the economic impact of corruption, few empirical studies follow the survival of private companies after the detection of corruption, that is, over the years. That said, the logical intuition of this variable, related to the indebtedness policy of organizations, is based on the following argument: corruption affects the financial policies of companies may have a substantial impact on the growth path of both the business sector and the economies.

The main implications of corruption practices, within companies, positively influence the definition of companies' financial policies, such as: risk taking, dividend policies, capital structuring, results management, cash vs. debt decisions, equity versus debt decisions and aggressiveness in accounting practices. Therefore, after the arguments presented here, as well as the main implications, the creation of the third hypothesis is motivated:

**H3:** corruption has a positive relationship with debt policy

#### **4. REFUGEES**

According to the UN (2018) people who are forced by force to leave their homes face two options. They can flee to another place in their home country, in which case they are known as

Internally Displaced Persons (IDPs). Or they can flee to another country, becoming "refugees" when they cross an international border. Those travelling directly to the country where they seek 'safe haven' are referred to as 'asylum seekers', while those fleeing to another country and waiting there for an opportunity to resettle in a third country are referred to as 'refugees for resettlement'.

The number of people forcibly displaced around the world has soared since 2007, from 42.7 million that year to 68.5 million in 2017. Much of this increase has been fuelled by ongoing armed conflicts in Syria, Myanmar and the Democratic Republic of Congo (DRC). However, people are also being displaced in large numbers by conflicts in Burundi, the Central African Republic, Iraq, South Sudan, Ukraine and Yemen.

Under US law, a "refugee" is a person who is unable or unwilling to return to his or her country of origin because of a well-founded fear of persecution because of race, membership of a particular social group, political opinion, religion or national origin. This definition is based on the 1951 United Nations Convention and the 1967 Protocols relating to the Status of Refugees, to which the United States became a party in 1968. After the Vietnam War and the U.S. experience in resettling Indo-Chinese refugees, Congress passed the Refugee Act of 1980, which incorporated the Convention's definition into U.S. law and provides the legal basis for the current U.S. Refugee Admissions Program (USRAP).

Most of the refugees who came to the United States during 2017 were from Africa, followed by East and South Asia, East Asia, Europe, and Latin America/Caribbean. Specifically, 46.5% (or 10,459) of all refugee arrivals came from Africa - compared to 31,624 in 2016 (the last year of the former U.S. President's administration). Already 16.9% (or 3,797) of all refugee arrivals came from the Near East/South Asia, a region that includes Iraq, Iran, India, Syria and Egypt - compared to 35,555 in fiscal year 2016.

In turn, 16.3% (or 3,668) of all refugee arrivals came from East Asia - a region that includes China, Vietnam and Indonesia - compared to 12,518 in fiscal year 2016. Finally, it is worth noting that 16.1% (or 3,612) of all refugee arrivals came from Europe - compared to 3,957 in 2016 and 4.2% (or 955) of all refugee arrivals came from Latin America/Caribbean compared to 1,340 in 2016. Notably, the U.S. refugee reception policy was significantly restricted from 2017 with the inauguration of the new U.S. President.

#### **4.1 Relevance of Refugees in the Capital Structure Study**

State governments offer public programs to absorb the labor of refugees. Refugee Services of US believes that every refugee has the potential to prosper in America. Once they arrive in Texas, for example, refugees attend English classes and work preparation, participate in interviews, and find suitable jobs to become self-reliant as soon as possible.

The Employment Services program that the state government offers to refugees is developed as follows: it functions as a free referral and staffing service. Again, using the above example, thousands of refugees arrive in Texas each year, authorized to work and pre-selected to combine skills and prior work experience with available jobs. All clients are immediately enrolled in English as a Second Language classes to learn basic English and vocabulary in the workplace, while job preparation classes are taught by employment specialists in languages such as Spanish, Burmese, Nepali and Arabic.

The International Chamber of Commerce marked World Refugee Day by launching a partnership with the United Nations Refugee Agency (UNHCR) and issuing a call for businesses to hire more refugees, now numbering 70 million worldwide (UN, 2019). The global refugee crisis is not new, but businesses are now recognizing the enormous economic potential of bringing refugees into their supply chain.

A report published in April by the Centre for Policy Development (2019) and the Open Political Economy Network (2019) looked at refugee employment in Australia and found that adding 1,000 refugee-owned businesses to the country would generate \$100 million annually. Another recent study by Brookings Institution (2019) found that Syrians living in Turkey now own more than 10,000 companies, employing about 10 people on average.

Amidst the current civil war in Syria, Turkey has become the country hardest hit by the influx of refugees. It is home to 4 million refugees, the largest on the planet. To this end, the Dutch bank ING is providing more than \$10 million in loans to companies, through the intervention of the U.S. government, to help them develop their businesses through new investments. Employing another corporate strategy to help companies that receive refugees, the retail banks TD Bank and Royal Bank, in the U.S., have paved the way for facilitating the purchase of bank credit by reducing interest rates, simply by proving the existence of refugees in the company's employee structure.

The banks are moving to make credit as easy and inexpensive as possible, encouraging companies to hire more refugees, and motivating other banks to follow the model.

In addition to all of the above arguments, the Government Liaison Office (GL) is responsible for developing and implementing collaborative management initiatives between federal, state and local governments. Each U.S. state has a LG designated to serve as the primary liaison for the corporate refugee reception program. In this line of thinking, newly admitted refugees are resettled and have access to important services through the Refugee Admissions Program (RAP).

RAP is administered jointly by the Bureau of Population, Refugees, and Migration (PRM) in the State Department and the Office of Refugee Resettlement (ORR) in the Department of Health and Human Services (HHS). At this time, businesses that are interested in employing refugees in their work positions are directed to a state government program that allows them the following possibilities: (i) government linkage with state and federal government for business development (new agreements) and humanitarian partnerships, i.e. the possibility of increasing agreements with the government through partnership with refugees; (ii) easy access to credit with state and non-state (private) institutions.

It is also ratified that the programmes offered by the states are varied and that adherence varies from the availability offered by each state. The statements of the Centre for Policy Development (2019), informs that it is not uncommon for some refugees to migrate to a neighboring state, a few kilometers away, in order to support the opportunities that the company next door desires, instead of supporting another company in its own home state.

As it is a research in corporate finance, one of the most significant elements in this relationship of refugees with capital structure, is based on the following argument: the ability of companies to get easier credit with financial institutions, by reducing the interest rate, that is, generating the impact directly on their capital structure and, of course, becoming more competitive with respect to their competitors.

Companies in many sectors are finding ways to integrate refugees into their workforces, or to directly support refugee-owned businesses. Some sectors such as energy, telecommunications and retail - are finding ways to integrate refugees into their workforces, or to directly support refugee-receiving businesses, so that they can participate in cheaper credit opportunities and also in creating new business with the public. According to research by Gründler and Potrafke (2019)

and Tran (2019), creating new business with the public over the years can influence the sharing of corrupt acts or illegal benefit between both parties.

## **5. IMMIGRANTS**

The impact of immigration on the economy of a recipient country, particularly on company finances, is a little debated topic. Although there is no consensus in the existing literature on the overall effect of immigration on firms' financial performance, there is some empirical evidence showing that immigrants have a modest effect on employment (and wages), and in turn influence the level of economic growth of firms (Braun & Weber, 2016).

However, the academic debate on immigrants occupying formal jobs is probably based more on the interactions that take place at the firm level, as in the example mentioned above. This is another reason why it is important to analyse the overall impact using data on the firm and work levels to address the impacts of immigrants on the financial results of the firm as well as on the debt structure.

Over the past decades, researchers' perceptions of immigrants have changed, particularly in the United States. In the 1970s, immigrants were viewed in a mainly positive light. Chiswick (1978) found that immigrant men earned as much as natives, despite being less educated, and concluded that investments in job training made up for the gap in formal schooling. Grossman (1982) examined the impact of immigration on native wages and concluded that the effects were small. Borjas (2003) - drew both conclusions and gradually led to a more negative image of US immigration.

The change in perceptions closely followed the changes in the national origin of U.S. immigrants, often attributed to the Immigration Reform Act of 1965. Immigration concerns have been caused by the decline in low-skilled wages in the US and the belief that some of this may be due to competition from immigrants (Borjas, 1997). Compounding the arguments presented, what can be inferred is that legal immigrants have a direct influence on the economic performance of the company, which in turn influences the level of investment by companies as well as the possibility of changes in the level of debt to meet domestic needs.

## 5.1 Relevance of Immigrants in the Study of the Capital Structure

Immigrants increase overall productivity in companies, revealing an impact on the cost cutting of these companies (Maritonna et al., 2017). They also reduce the process of transferring a firm, resident in one country to another, consistent with the reallocation of tasks; and increase country-specific exports, consistent with the reduction of bilateral communication and trade costs. According to Ottaviano et al (2018), immigrants generate three potential effects on the capital structure of firms, that is, on the debt structure: first, immigrants can reduce costs and increase the productivity of the firm, allowing firms to produce and export more overall. With cost reduction and increased revenue, the need for third party capital, on average, may decrease or increase, depending on the financial strategy adopted by the organization.

Secondly, by bringing specific skills to each country, immigrants can replace the import of intermediate services, which were previously outsourced and subsequently imported by the companies (production costs). In this way, the company will provide an increase in cash capital for investments in other areas, which would impact on the decision making of new debts. Finally, and thirdly, by bringing the specific knowledge of the country of origin, immigrants can increase exports (increased revenue) of services to the country of residence. This increase may offer new decisions regarding the cash decision of the company, which includes the choice of a greater or lesser indebtedness of the company, depending on its strategic growth objectives.

While the debate tends to focus on the questions of who, how many, and what kind of non-citizens should be admitted to the United States, especially for business work, many see the integration of immigrants as the true test of a successful immigration system. Unlike other traditional immigration countries such as Canada and Australia, for example, the United States does not have federal policies for integrating immigrants or an agency responsible for ensuring that immigrants effectively become part of American society. Instead, integration policies are limited and funded together with banks and private agencies, only for restricted groups of immigrants, such as refugees or those with political asylum permits (US Census Bureau, 2017).

Thus, in view of what has been presented, the logical reasoning of this variable - the use of legal immigrants, in relation to the indebtedness of enterprises, is based on the following economic understanding: the effects of immigration, on the performance of enterprises, depend, among other

measures, on the level that immigrants are substitutes or complementary to existing workers - natives (Borjas, 1995).

If immigrants and residents are really substituting, then the wage range will decline as a result of increased competition in the labor market, thus leading to a possible increase in the cash level for firms, for the lowest wages (Borjas, 1995). In other words, companies will have other and new investment opportunities because they have higher cash generation.

Unemployment among residents will increase as they refuse to work at lower wages (Altonji; Card, 1991). On the other hand, if immigrants are complementary for residents of the host country, then production, employment opportunities and wages will inevitably rise. This gradual rise in wages will - eventually - propel companies to increase their indebtedness policy in the face of new financial commitments.

In addition, immigrants also consume local goods and services and consequently the demand for local production will increase and lead to increases in employment opportunities (Bodvarsson et al., 2008). However, if immigrants have a high level of intellectual capacity (education), human capital, incorporated to immigrants, will compensate for the reduction in the capital and physical labor ratio.

Thus, if immigrants have more intellectual capital than residents, per capita output will increase. On the other hand, if immigrants have little human capital, per capita production will decrease, impacting directly on the financial activity of the organizations and especially on the financial policy of the organizations. In this line, the fourth and last hypothesis of this research is presented:

**H4:** Immigration and refugees have a positive and negative relationship with indebtedness, respectively.

## **6. METHODS AND DATA**

### **6.1 Typology and Sample**

The general objective of this research is to analyze the impacts of the choice of new determinants in the Capital Structure of the companies, being this motivated by some arguments,

and as specific objectives, the following notes were structured: (i) To relate, in the same model, the set of classical variables to the set of innovative variables; (ii) To identify and compare possible similarities of indebtedness of companies that are located in states with a high probability of a corruption level and states of cases of corruption already sentenced;

(iii) To analyze the impact, at the state level, of immigration and refugees on the financial policy of the companies, interacting these results in areas with a higher incidence of corruption; (iv) To interact the classical variables of capital structure exclusively with the profile of the CEO's of the companies.

This required access to information from the Wharton Research Data Services (WRDS) company database. This database is justified first of all by presenting the listing of publicly traded companies, in addition to the information necessary for the composition of the correlated control variables in the econometric model.

In relation to obtaining, collecting and extracting data from primary and secondary sources, the research followed the following methodological procedures:

- (i) data collection from the 1,675 U.S. companies was extracted directly from the Wharton Research Data Services (WRDS) database; in addition to the separation of each of the U.S. states, consisting of 52 states, according to the official U.S. Government website at: <https://state.gov>;
- (ii) consultation of the Compustat database, for extraction of classic variables and/or determinants. This query and extraction of data were obtained, for each of the variables through a filter, with the use of the company name, in addition to the use of the ISIN and CUSIP codes (applicable coding for concatenation of the company name and accounting data) and this sorting was extracted with the company sequence and variable type;
- (iii) consultation of the BoardEx, ExecuComp and ISS Risk Metrics database, specifically for the extraction of the survey behavior variable - CEOs. These databases provide network data for CEOs, senior executives and directors of the set of global public and private companies. In turn, the compilation of these three databases are interfaced with Compustat data to obtain the corresponding financial and accounting variables;
- (iii) research with the Institute for Corruption Studies and the Center for Public Integrity's for use with data on corruption at the level for each U.S. state;
- (iv) research at the IPMUS Immigrations and Refugee Processing Center for the use of annual data, for each U.S. state, with immigration and refugee variables, respectively.



The sample analysis period involved the dates from January 1, 2010 through December 31, 2017. The limitation of the data to December 31, 2017 is justified by the maximum period made available by the companies regarding: accounting data, CEOs data, corruption data, immigration and refugees; at the time of the research development.

After the presentation of the variables and respective data sources, the periods of analysis of the sample, as well as the justification for the use of each of these periods; it is necessary to synthesize the variables that will be used in the econometric model, the respective acronyms, as well as the operational definition and the formula of each one, in addition to the authors who have already used them.

In the next section, we will discuss the statistical procedures applied in the research, as well as their application and the main studies that have already used the aforementioned methodologies.

## **6.2 Strategic Implementation and Research Design**

### **6.2.1 Empirical modelling**

In order to proceed with a relationship between the indebtedness and the other independent variables, we follow a specific approach - OLS regressions and Panel Data - to test the model of market and accounting indebtedness (dependent variables), in relation to the classical and innovative variables.

To this end, the strategic implementation will take place in the following way: in the first stage, exclusive regression estimates for the classical variables will be produced, as well as the proper application of econometric tests, and then, in the second part, regressions interacting between the classical and innovative variables.

As is previously known, the variables: firm size, growth, profitability, volatility, tangibility, age of the firm, dividends, liquidity and investments will be used in this first stage of the regression models. Based on this assumption of variables, a summary of the quantitative procedures that will be estimated in the first stage follows:

Equation 1: regression in OLS;

Equation 2: regression with panel data with fixed effects;

Equation 3: regression with panel data with random effects;

Equation 4: use of instrumental variables;

Equation 5: regression with panel data with fixed effects and instrumental variables; and  
 Equation 6: regression with panel data with random effects and instrumental variables.

It should be noted that, as a way to better understand the behavior of the elements constituted in the database, a set of tests will also be made in order to identify possible structural problems. The main problems, which will be duly explained in the next sections, and the respective tests, are:

- (i) Heteroscedasticity problems. Test: Robust;
- (ii) Multicollinearity problems. Test: VIF (Variance Inflation Factor);
- (iii) Specification problems. Test: Linktest;
- (iv) Functional form problems. Test: F Test;
- (vi) Correlation of data. Test: Author correlation;
- (vii) Data distribution: Test: Shapiro Wilk's Normality Test;
- (viii) Absence of influence of observations: Test: Cook's test.

In a complementary way, it is emphasized that a critical problem in the researches in finances, specifically with the use of accounting and financial data, refers to endogeneity. Inbreeding is more typically described in the context of regression by ordinary least squares (OLS). Equation 1 represents a basic equation of OLS regression:

$$y_i = \alpha + \beta X_i + \varepsilon_i \quad (1)$$

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In this equation,  $y_i$  represents the dependent variable,  $\alpha$  represents a constant,  $\beta$  represents the coefficient,  $x_i$  represents the independent variable and  $\varepsilon_i$  represents the error term. The error term, in an OLS regression model, illustrates the extent to which independent variables predict the dependent variable and should vary randomly.

When the error term is correlated with an independent variable, however, the errors are not random; this leads to bias coefficients estimates (Robert; Whited, 2008). Bias occurs when the coefficient estimation is based on a sample, on average, equal to the true value of the coefficient

in the population (Cohen et al., 2003). Therefore, a critical assumption of the OLS regression is that the independent variable and the error term are not correlated.

Returning to the question about endogeneity, Kennedy (2008) highlights that there are four different points that can potentially introduce endogeneity in OLS regression models: (i) errors in variables (i.e., measurement error); (ii) automatic regression; (iii) omitted variables; and (iv) simultaneous and/or reverse causality.

In each of these scenarios, OLS regression reports biased coefficients. Instead of estimating the correct relationship between the independent variable and the dependent variable, the OLS regression includes, erroneously, the correlation between the independent variable and the error term, in the estimation of the independent variable coefficient.

After these considerations about the problems and data verification tests, highlighting in particular the endogeneity problem issue, we applied the first stage, that is, the ordinary least squares method (OLS), thus minimizing the sum of the square errors for any data  $\gamma$ , besides presenting that the limit value estimators can be obtained.

As it is well known in the capital structure literature, right-hand variables are most likely endogenous rather than exogenous, and the financing decisions of a firm are inherently dynamic. Thus, not all explanatory variables in the model may not be correlated with the error term. Therefore, it follows equations 2, referring to OLS regression:

In this equation,  $y_i$  represents the dependent variable,  $\alpha$  represents a constant,  $\beta$  represents the coefficient,  $x_i$  represents the independent variable and  $\varepsilon_i$  represents the error term. The error term, in an OLS regression model, illustrates the extent to which independent variables predict the dependent variable and should vary randomly.

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$$\text{debt} = \beta_1(\text{size}) + \beta_2(\text{growth}) + \beta_3(\text{prof}) + \beta_4(\text{tang}) + \beta_5(\text{divid}) + \beta_6(\text{liquid}) + \beta_7(\text{invest}) + \varepsilon_{Pt} \quad (2)$$

Where the dependent variables are debt = total market debt, and the control variables are:  $\beta_1(\text{size})$  = company size;  $\beta_2(\text{growth})$  = growth opportunity;  $\beta_3(\text{prof})$  = profitability;  $\beta_4(\text{tang})$  = tangibility;  $\beta_5(\text{divid})$  = dividends;  $\beta_6(\text{liquid})$  = liquidity;  $\beta_7(\text{invest})$  = investments; and  $\varepsilon_{Pt}$  = regression error term.

The next step is the insertion of the instrumental variable, which aims at offering a solution with consistent estimators for those already established. In other words, the instruments are widely known as a solution for endogenous regressors, that is, the explanatory variables correlated with the regression error term, and the methods of instrumental variables provide a way, however, to obtain consistent parameter estimates.

However, it should also be noted that even if the methods of instrumental variables have been developed to deal with the problem of endogeneity in a simultaneous system, the correlation of the regressor with the error may arise for other reasons.

After the inclusion of the instrumental variable, the regression estimates in panel data are applied for fixed effects and random effects, having as objective the sample size, identifying the effect of time in the observations and testing if the relationship between the variables of the model,

suffers some kind of change with time. For the validation of the most adequate model, between fixed effects and random effects, the following tests are applied: Hausman, Breuch Pagan and Chow.

Afterwards, the same fixed and random effects will be estimated again, but with the difference of the presence of instrumental variables, for each of these effects. In the presence of instrumental variables, the Sargan test will be analyzed, with the objective of analyzing the correlation between the instruments and the error term.

The Hansen test, or Hansen-Sargan, of identification restrictions should be routinely performed in any model identified and estimated with instrumental variables techniques. The instrumental variable techniques are robust, but if a strong rejection of the null hypothesis of the Sargan-Hansen test is found, you should greenly doubt the validity of the estimates.

After identifying instruments, it is also necessary to examine the possible endogenous of the instruments. In comparison with exogenous instruments, endogenous instruments may increase the probability of reporting a statistically significant result. Given the size of the bias, it is essential to test the inbreeding of the instrument using the Sargan test.

In order to proceed with a relationship between the indebtedness and the other independent variables, we follow a specific approach - OLS regressions, Data in Panel, to test the market indebtedness model (dependent variable), in relation to the classical and innovative variables.

For this purpose, the strategic implementation will take place as follows: in the first stage, estimates of exclusive regressions for the classical variables will be produced, as well as the due application of econometric tests, and then, in the second part, regressions interacting between the classical and innovative variables. As is previously known, the variables: firm size, growth, profitability, volatility, tangibility, age of the firm, dividends, liquidity and investments will be used in this first stage of the regression models.

## **6.3 Statistical Procedures**

### **6.3.1 OLS Regression and Panel Data**

Most surveys in the area of capital structure use panel data as one of the main econometric sources. In order to offer robustness to this research, we applied a panel data methodology with the presence of instrumental variables, which presents some advantages, highlighting the

minimization in the sample bias and control of individual heterogeneity, as highlighted by Gujarati and Porter (2011).

According to the authors, the models in panel data allow the observer to evaluate the relationship of a performance variable and multiple prediction variables, thus providing a model that indicates possible differences of elements over time, in addition to the growth of the object of analysis in relation to elements and time.

Hsiao (2003) lists several benefits of using panel data. The main ones are: (i) Control of individual heterogeneity, as panel data suggest that individuals, firms, states or countries are heterogeneous. In turn, time series and studies that do not control this heterogeneity, run the risk of obtaining biased results;

(ii) Panel data provides more informative data, more variability, less collinearity between variables, more degrees of freedom and more efficiency; (iii) Panel data is more efficient in studying the dynamics of fit, as the cross-sectional distributions that seem relatively stable hide a multitude of changes; (iv) Panel data are more suitable for measuring effects that are simply not detectable in pure cross-section or pure time series data; (v) Panel data models allow for building and testing more challenging behavioral models than pure cross-sectional or time series data; (vi) In micro-level analysis, panel data on individuals, businesses, and households can be measured more accurately than macro-level variables. Biases resulting from aggregation on firms or individuals can be reduced or eliminated; (vii) Panel data have a longer time series and, unlike the problem of typical non-standard distributions, unit root tests in time series analysis, panel unit root tests have standard asymptotic distributions.

Given the above, it is necessary to specify assumptions about the general model in order to make it more suitable for the estimation of classical and innovative variables. Among the models that combine time series data and cross-sectional data, the most commonly used are: (i) Pooled or stacked aggregate model - OLS; (ii) Fixed effects model and (iii) Random effects model.

A panel data regression differs from a time series or cross section regression, as it has a double subscript in its variables, as described in Equation 3.

$$y_{it} = \alpha + X_{it} \beta + u_{it}, u=1, \dots, N, t=1, \dots, T \quad (3)$$

with  $i$  denoting families, individuals, firms, countries, etc. and  $t$  denoting time. The  $i$  denotes the dimension of the cross section, while  $t$  denotes the dimension of the time series. The letter  $\alpha$  is a scale,  $\beta$  is  $K \times 1$  and  $X_{it}$  is the last observation on explanatory variables of  $K$ . Most panel data applications use a unidirectional error component model, which is shown in Equation 4.

$$u_{it} = \mu_i + v_{it} \quad (4)$$

where  $\mu_i$  denotes the specific effect of an unobservable individual and  $v_{it}$  denotes the remainder of the variation. For example, in an income equation in labour economics,  $y_i$  will measure the income of the household head, while  $X_{it}$  may contain a set of variables such as experience, education, union membership, gender, race, etc. Note that  $\mu_i$  is invariant in time and is responsible for any specific effect of the individual that is not included in the regression.

In this case, one can think about the unobserved capacity of the individual. The remaining variation  $v_{it}$  varies with individuals and time and can be considered as the usual variation in regression. Alternatively, for a production function using data on firms over time,  $y_i$  will measure production and  $X_{it}$  will measure inputs, for example. The unobservable company-specific effects will be captured by  $\mu_i$  and, one can analyze how the unobservable entrepreneurial or managerial skills of company executives - CEOs.

Fixed Effects, also known as least squares dummy variables (LSDV), suffer from a reduction in degrees of freedom. By estimating  $(N-1)$  extra parameters, and several dummies, this problem can be aggravated by the multicollinearity among regressors. In addition, the fixed effects estimator cannot estimate the effect of any invariable variable over time, such as gender, race, religion, schooling or union participation.

These invariant variables in time are eliminated by the transformation, that is, the deviations of the means transformation. Alternatively, one can see that these invariant variables in time are covered by the individual dummies and, therefore, any attempt to estimate regression will fail, signaling a perfect multicollinearity. If it is the true model, Fixed Effects is the best non-biased linear estimator (BLUE).

When it comes to Random Effects, there are many parameters in the fixed effects model and loss of degrees of freedom can be avoided if  $\mu_i$  can be considered random. In general, the

Random Effects model is an appropriate specification if there are  $N$  individuals, randomly, from a large population

This effect is generally the most used case in panel studies in companies. Due care is taken in the design of the panel to make it the most representative in relation to the population that is intended to make inferences. In this case,  $N$  is generally large, and a fixed effect model would lead to a huge loss of degrees of freedom.

The issue of fixed versus random effects generates a debate in the statistical literature that has spread to the panel data econometrics literature. Mundlak (1961) and Wallace and Hussain (1969) were the first proponents of the fixed effects model and Balestra and Nerlove (1966) were advocates of the random error component model. The specification test proposed by Hausman (1978), based on the difference between fixed and random effects estimators, is interpreted by the researchers as a rejection and adoption of the fixed effects model, not rejection as an adoption of the random effects model.

Chamberlain (1984) showed that the fixed effects model imposes testable restrictions on the parameters of the model in a reduced way and the validity of these restrictions should be checked before adopting the fixed effects model. Mundlak (1978) argued that the random effects model assumes the exogeneity of all regressors with random individual effects. In contrast, the fixed effects model allows for the endogeneity of all regressors with these individual effects. Therefore, it is a choice of whether or not to have exogeneity of the regressors and individual effects.

Finally, Hausman and Taylor (1981) allowed some of the regressors to be correlated with individual effects, as opposed to the choice of whether or not to have endogeneity. These over-identification restrictions are testable using the Hausman test.

In summary and ratifying the previous arguments, the estimators are first presented using the pooled format, i.e., they are admitted every year as a cross section. The cross-section data obtained independently in several periods of time, allow us to analyze them using stacked data, because some variables may change over time (Greene, 2000).

The models with fixed effects consider that the differences of individuals (in this case, US firms) are captured in the constant part, while the models with random effects consider that these differences are captured in the error term, as Wooldridge (2015) asserts.



That said, the models will be developed in pooled data and panel data for fixed effects and random effects. For the robustness of the model, the following were applied the multicollinearity tests so that none of the independent or exploratory variables can be explaining the same function as another.

For this, the following statistical methods were applied: (iii) analysis of the absence of multicollinearity (VIF test - Variance Inflation Factor), considering the segregation value equal to 10. That is, Multicollinearity analysis occurs when two or more explanatory variables of the model have correction between them (Gujarati; Porter, 2011). For the purpose of corrections and heteroscedasticity adjustments, the robust STATA command was initially applied for the purpose of this correction, transforming the residues thus into homoscedastic, that is, residue distribution as a constant variance, according to Wooldridge (2015).

## **7. RESULTS**

This chapter aims to analyze the impacts of the choice of new factors in the choice of the determinants of the Capital Structure of Companies. Section 7.1 presents the descriptive analysis of the variables, as well as the application and discussion of regression models.

### **7.1 Descriptive Analysis of Variables and Regression Models**

As an initial procedure, the observations for each of the American companies for the period 2010 to 2017 were transferred to the STATA@ software in which they received the quantitative treatment. Therefore, the descriptive statistics for the survey-dependent variable: market debt were organized. 13.400 annual observations were used for 1.675 American companies, presenting the average results of each variable, standard deviation and minimum and maximum observations, as shown in Table 1:

**Table 1:** Statistics described of the econometric model variables

Variables	N.	Standard			
	Observ.	Mean	Deviation	Minimum	Maximum
<i>Classic</i>					
market debt	11.293	0.244686	0.35254	0	0.509.04
tangibility	13.400	0.14196	1.1088	1.39965	2.33856
liquidity	9.247	2.355468	0.02048162	0	3.70427
investments	13.400	278.4731	13.04534	1.70752	540.050
profitability	13.206	0.0647692	0.1197551	0.0143879	1.24678
dividends	13.400	245.6778	1494.066	55.458	85419
size	13.400	6829.771	18595.03	1579	245075
growth	13.206	1.039105	1.311686	0	20.0927
<i>CEO</i>					
ceointern	13.400	0.9518657	0.214058	0	1
ceopower	13.400	0.0459701	0.2094282	0	1
ceofounder	13.400	0.0712687	0.2572827	0	1
ceoage	13.400	54.71478	7.369624	0	92
ceooverconfidence	13.400	0.243209	0.4290362	0	1
ceocompensation	13.400	5.455161	7.376049	0	3.779965
ceoboard	13.400	0.8500746	0.3570116	0	1
ceogender	13.400	0.0489552	0.2157825	0	1
ceospecialistfin	13.400	1.042015	0.2010023	0	1
ceotenure	13.400	12.99813	9.216071	0	66
<i>Innovation</i>					
corruption	13.400	123.8063	61.93673	1	262
immigration	13.400	16305.77	13631.26	65	51.749
refugees	13.400	3291.252	2600.848	0	11.278
estadosamericanos	13.400	25.0656	16.2314	1	52

**Source:** Prepared by the author. Note: "Market Debt" = market indebtedness, through total debts over total market assets; "tangibility" = assets tangibility, that is, balance of fixed assets with inventories over total assets; "liquidity" = relation between current assets and current liabilities; "investments" = cash flow statement over total assets; "profitability" = constructed by profit before interest and taxes; "dividends" = dividends paid by net profit; "size" = logarithm of net revenue;

"growth" = growth opportunity, composed of value and market over net equity; "ceointern" = if the CEO was promoted internally (dummy); "ceopower" = if the CEO has influence through the proxies of variables of the CEO (dummy); "ceofounder" = if the CEO was the founder of the company (dummy); "ceoage" = how many years the CEO has during the period of analysis (dummy); "ceooverconfidence" = measurement of the CEO's excess confidence in management (dummy); "ceocompensation" = is the value of the total remuneration of the CEO (salary and bonus paid); "ceoboard" = If the CEO is on the Board of the institution (dummy); "ceogender" = if the CEO is male or female (dummy); "ceoespecialistfin" = if the CEO has some financial expertise (dummy); "ceotenure" = number of years the CEO is in this position; "corruption" = percentage of occurrence of corporate corruption; "immigration" = number of immigrants in the U.S. per company; "refugees" = number of registered refugee cases per company in the U.S.

The result of Table 1 shows the differences and compositions of each of the variables, highlighting the accounting variables, the characteristics of the CEOs (which are mostly dummy variables), the probabilistic level of the corruption variable, from 1 to 262, and, in thousands, the number of immigrants and refugees. A second reading that can be made of Table 1 is to show that the heterogeneity of the accounting data, in particular the level of market indebtedness of the companies, which make up the minimum of 0 of indebtedness, to the maximum value of 0.509.

Through the Shapiro-Wilk normality test, it was analyzed whether the observations of the sampled companies had a return distribution close to the normal distribution. The Shapiro-Wilk test, in its applicability, made it possible to calculate whether the structure of the sample has the behavior close or not to a normal distribution. The result obtained by the normality test showed that the distribution of returns was similar to the normal distribution.

Additionally, the VIF (Variance Inflation Factor) test was applied in order to detect possible collinearity in the data. The result, in turn, showed that this finding does not exist, through the result of 4.22. In addition, the "robust" test showed possible problems of heteroscedasticity in the observations.

Regarding the correlation between the variables, the correlation test was applied to identify the significant degree of the relationship between the dependent, control and independent variables. The results of the tests suggest that the variables reported in the literature are relevant in explaining the indebtedness of firms.

After these procedures, the first OLS regression was estimated with the classical variables and the CEO characteristic variables, assuming as dependent variable the market indebtedness. This information is described in Table 2:

**Table 2:** OLS regression with classic variables and CEO characteristics

Variables	Coef.	Standard		
		Error	t	P>t
<i>Clásic</i>				
tangibility	-.0000796	0.0000331	-2.40	<b>0.016</b>
dividends	-.000079	0.000061	-1.30	0.195
liquidity	-.1565696	0.0497397	-3.15	<b>0.002</b>
investments	-.000079	0.0000415	-1.90	<b>0.057</b>
profitability	-6.596.153	2.386.152	-2.76	<b>0.006</b>
growth	-0.3183735	0.092809	-3.43	<b>0.001</b>
size	4.290006	3.002006	1.42	0.155
<i>CEO</i>				
ceointern	-0.1149013	0.2791578	-0.41	0.681
ceopower	0.1814573	0.3687361	0.49	0.623
ceofounder	-0.0551891	0.2182639	-0.25	0.800
ceoage	-0.0322896	0.0128882	-2.51	<b>0.012</b>
ceoverconfidence	0.3441802	0.3316234	1.04	0.299
ceocompensation	-0.0000188	9.0700006	-2.07	<b>0.039</b>
ceoboard	-0.248838	0.4027475	-0.62	0.537
ceogender	-0.5693509	0.1979829	-2.88	<b>0.004</b>
cespecialistfin	-0.6107907	0.3805881	-1.60	0.109
ceotenure	-0.0002067	0.0002354	-0.88	0.380
constant	5.3110588	1.3625180	3.90	<b>0.000</b>
<b>N. Observations:</b> 8.617				
<b>Firms:</b> 1.675				
<b>R2:</b> 0.55				
<b>R2 adjust:</b> 0.63				
<b>VIF:</b> 4.22				

**Source:** Prepared by the author.

Based on Table 2, the classical variables that showed a significant nominal level were: tangibility, liquidity, investments, profitability and growth opportunity. In addition, it is argued that all these variables that were significant, presented the negative coefficient, that is, they are inversely proportional to the increase in corporate indebtedness.

A practical example of this relationship of significance, with the sign of the coefficient, is that the higher the indebtedness of American firms, the lower the level of tangibility, liquidity, investments, profitability and growth opportunity. These results are in line with those shown by Frank and Goyal (2009).

In turn, the variables derived from the CEO's characteristics that were statistically significant were: age of the CEO, remuneration (salary and bonus) of the CEO and gender of the CEO; in addition to the constant of the econometric model. In these cases, as in the classical variables, the signs of the coefficients were also negative, which leads to the understanding that these variables also influence, in an inversely proportional manner, the level of market indebtedness of these companies.

At this point, some notes can be made based on the highlighted results: (i) the older the CEO, the lower the market indebtedness of the firm. This argument is in line with the results obtained by Custodio and Metzger (2014), as it is based on the understanding that younger CEOs tend to be risk-oriented, as a way to demonstrate immediate results, thus providing a higher level of indebtedness of organizations.

On the other hand, older CEOs postulate more conservative decisions, among them a lower level of exposure to risk, i.e., a lower level of indebtedness. This finding, as observed by Cao et al. (2015), is based on the argument that the financial performance gains of CEOs are related to the company's financial performance.

In this case, and considering the cost of debt, the CEO tends not to want to compromise his income, thus choosing not to make new debts that may impact his annual income, as established by Gounopoulos and Pham (2018).

The significance of the variable CEO Gender, with a reversed sign, provides an opportunity to discuss that women in decision-making positions - CEOs - tend to incur less debt in financial policies. In other words, the greater the presence of women in CEOs' positions, on average, the less indebtedness policy of corporations. The result is in line with the research of Faccio et al. (2016) and Fyre and Pham (2017).

After the result of this OLS regression, it was opportune to advance in the study of new variables that may offer new explanations for the choice of capital structure determinants. In this sense, Table 4 was constructed, selecting in the previous econometric model only the variables with statistical significance, adding the innovative variables: corruption, immigration and refugees. It is also considered that Table 3 presented the comparison of OLS models, fixed effects and random effects, as well as the expected sign in line with the theory.

**Tabela 3:** OLS, EA and EF regression with the classic variables, CEO and innovative features

<b>Dependent variable:</b>		<b>Market Debt</b>		
<b>Variables</b>	<b>Sign</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>Models</b>	<b>Expected</b>			
<i>Clásic</i>				
tangibility	+	-0.0000795*** (0.0000334)	-0.000798*** (0.0000205)	-0.0000875*** (0.0000239)
dividends	n.a	-0.0000794 (0.0000583)	-0.0000799 (0.0002338)	0.0000115 (0.0002826)
liquidity	-	-0.1598253*** (0.0511249)	-0.1598672*** (0.0658401)	-0.1005936 (0.0824708)
investments	+	-0.0000734** (0.0000399)	-0.0000734 (0.0000756)	-0.0000612 (0.000085)
profitability	-	-6.606095*** -2393501	-6.605852*** (1.058193)	-8.207225*** (1.338412)
growth	-	-0.3130847*** (0.0924389)	-0.3131001*** (0.1015715)	-0.2377343** (0.1184797)
size	+	5.3000006* -(3.030006)	5.310006 (0.0000102)	0.0000219 (0.0000317)
<i>CEO</i>				
ceointern	+	-0.0449917 (0.2971274)	-0.0449082 (0.6142581)	0.0202537 (0.6962093)
ceopower	+	0.1614992 (0.3731039)	0.1694859 (1.054867)	0.5008128 (1.223096)
ceofounder	+	-0.0792222 (0.2228543)	-0.083364 (0.8606304)	-0.5121614 (0.9608149)

ceoage	+	-0.0313978*** (0.0123681)	-0.0313765** (0.0175084)	-0.0253025 (0.0197346)
ceoverconfidence	+	0.3283791 (0.3326683)	0.3282808 (0.3118852)	0.5269672 (0.3517216)
ceocompensation	+	-0.0000191** -95000006	-0.0000191 (0.0000171)	-0.0000151 (0.0000195)
ceoboard	+	-0.253415 (0.4002926)	-0.2491664 (0.4319757)	-0.0781883 (0.4822268)
ceogender	+	-0.5010314*** (0.1756168)	-0.5039277 (0.6004151)	-0.5540724 (0.6722181)
ceospecialistfin	+	-0.5851072 (0.3783951)	-0.5851628 (0.742475)	-0.4132267 (0.8291856)
ceotenure	+	-0.0000485 (0.0002667)	-0.000988 (0.0147079)	0.0076742 (0.0165024)

---

***Inovadoras***

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imigração	-	-5490007 (0.000003)	-5.430007* (0.0000128)	6.4400070 (0.0000144)
refugiados	+	0.001337* (0.0001626)	0.0001338** (0.0000678)	0.0000968 (0.0000761)
corrupção	+	0.038306** (0.0022576)	0.0038329* (0.0021292)	0.0025099 (0.0024017)
constante		42750346 (1.182129)***	4.282218*** (1.580787)	3.426356** (1.786890)

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**N. Observations:** 8.617                      8.617                      8.617

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**Firms:** 1.675                                      1.675                                      1.675

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**R2 adjust:** 0.63                                      0.65                                      0.64

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**Source:** Prepared by the author. **Note:** Standard errors are in parenthesis. Statistical significance: \*\*\*p<0,01; \*\*p<0,05 and \*p<0,10.

Regarding the classical variables, a first consideration that can be made, through Table 3, is the statistical significance of the variables only: tangibility, liquidity (for this case in particular, it was not a significant nominal level for fixed purposes), profitability and growth opportunity. For the variables characteristic of CEOs, the behavior of significant nominal level persisted for the

variables CEO's age, compensation and gender (all, with inversely proportional influence - negative coefficients).

In addition to this, and which represents one of the novelties of this research, the corruption variable showed statistical significance, i.e., corruption has a directly proportional relationship with indebtedness.

In other words, the higher the level of corruption, the higher the level of indebtedness. If companies can buy favors from corrupt politicians, it is natural that they increase their indebtedness to take advantage of bribery opportunities that arise randomly. These results are consistent with evidence from Smith (2016). It is worth noting that this variable, as well as the refugee variable, are analyzed at the U.S. state level, i.e., the level of concentration and influence that they potentially represent on the indebtedness of companies besieged in each of these regions.

On the other hand, payments of corrupt practices in cash are part of the corporate liquidity that allows companies to make investments without having to access external sources of capital; in this sense, firms avoid the transaction costs and information asymmetry costs that are often associated with share issues. In this context, rationale theories that could explain why companies hold liquidity to serve their cash payments for certain activities, including corruption, move towards the Trade Off and Pecking Order theories (Apergis; Apergis, 2017).

Another piece of evidence worth highlighting is the significant outcome of the refugee variable. The consistency of this evidence suggests that in environments with a higher concentration of refugees, the level of indebtedness is higher. As refugee assistance organizations in the United States are not necessarily focused on building a long-term settlement process, companies end up hiring refugees for temporary or even no formal labor ties.

However, there is evidence that American companies are using this migratory group for two purposes: (i) to establish a direct contractual relationship with state governments, through the programs for admission and reception of refugees; (ii) to receive, through the admission only refugees, credit lines more accessible with financial institutions.

Additionally, Table 4 was created with the purpose of gathering all variables that presented significance in the statistical model of Table 3. In this context, it is possible to visualize the variables that presented a significant nominal level, highlighting that tangibility, liquidity, investment, profitability, growth opportunity, among others, presented results, on average, is directly proportional to market indebtedness. Corruption and refugees also presented nominal and



significant evidence, in line with the theoretical model, differently from the immigration variable, which in this case presented no significant relationship.

**Table 4:** OLS, EA and EF regression with the classic variables, CEO characteristics, innovative that presented significant nominal level

<b>Dependent variable:</b>	<b>Market Debt</b>		
<b>Model Variables</b>	<b>Sign Expected</b>	<b>Sign Evidence</b>	<b>(1)</b>
tangibility	+	-	-0.0000858** (0.0000366)
liquidity	n.a	-	-0.1234134*** (0.0434863)
investments	+	-	-0.0000716** (0.0000388)
profitability	+	-	-6.806954*** (2.543077)
growth	-	-	-0.2428413*** (0.0900015)
size	+	+	6.990006* (4.090006)
ceoage	+	-	-0.0254355** (0.0126846)
ceocompensation	+	-	-0.0000163** (7.090006)
ceogender	+	-	-0.7012526*** (0.294146)
corruption	+	+	0.0038001** (0.0024027)
refugees	+	+	0.0001329** (0.0001637)
immigration	-	n.a	6.5200007 (0.0000289)

_cons	0.7499751*** (2.70532)
<b>N. Observations:</b>	8.617
<b>Firms:</b>	1.675
<b>R2 adjust:</b>	0.49

**Source:** Prepared by the author. **Note:** Standard errors are in parenthesis. Statistical significance: \*\*\*p<0,01; \*\*p<0,05 and \*p<0,10.

Table 4 offers some findings, for example: (i) a positive sign was expected regarding tangibility, according to the studies by Raja and Zingales, (1995) and Chen (2004), however, in this study the sign was inversely proportional, that is, the higher the market indebtedness, the lower the tangibility; (ii) regarding liquidity, there was no clear theoretical sign regarding the expected sign (Sbeti; Moosa, 2012), in turn, Table 5 informs the negative sign regarding indebtedness;

(iii) Regarding the investment variable, the positive sign was expected (Kaplan; Zingales, 1995; Cho, 1998), that is, the higher the investment, the higher the indebtedness of the organizations. However, for a special emphasis in this research, the relation was inversely proportional: the higher the indebtedness, the lower the investment grade of the American companies; (iv) the profitability variable followed the same line as the investment variable, that is, the expected positive sign (Graham, 2000; Fama; French, 2002,), however, the sign shown was also inversely proportional. Piaw and Jais (2014) emphasize that the higher the level of indebtedness the company presents, the higher would be the expected return - profitability;

(v) already the variable opportunity for growth, which signaled a negative relationship (Guney et al., 2011; Dang et al., 2014), was also made with the same sign in this research. In other words, the theory and the empirical result signal that the higher the indebtedness of organizations, the greater the opportunity for growth;

(vi) the variable size of the company, widely discussed in the literature in the positive relationship with indebtedness (Frank; Goyal, 2009; Dang; Garrett, 2015), was also evidenced with the same relationship, under the argument that the larger the company in size (net revenue and/or total assets), the higher will be the indebtedness; (vii) with respect to the variables age, compensation and gender of the CEO, the expected signs, for these three cases, is a negative relationship (Cao et al, 2017; Brockman et al., 2017; Skala; Weill, 2018).

However, the relationship shown in this research was negative, i.e., the older the CEO's age, the CEO's compensation and she is a female CEO, the lower the companies' market indebtedness, respectively;

(vii) in relation to the corruption variable, the theory signals that the relationship with indebtedness is positive, since the higher level of corruption positively influences the decision of cash and debt taking, debt policy, etc (Smith, 2016).

The sign of the econometric model, for this variable, confirms the theoretical assumption - positive sign. Corruption shows signs in the results presented, although explained by the relationship between companies and the state government. Not by chance, the next variable to be presented is (viii) refugee: the relationship of this variable, as highlighted in the theoretical framework (Cortes, 2004), is positive.

The econometric results are in line with the theory, considering the premise that the companies, by adhering to the refugee reception program, with the American states, provide a significant increase in the increase of indebtedness, through the facilities that the resident state can offer to financial institutions. In general, the higher the level of refugees in organisations, the higher the level of indebtedness.

Although immigration previously presented a significant nominal level, in Table 3, when combined with the other variables (Table 4), it presented no relation, that is, no inference can be made about it.

The states that showed significant nominal level are: Alabama, Arkansas, Arizona, South Carolina, Dis. Columbia, Idaho, Kansas, Massachusetts, Maryland, Maine, Michigan, Mississippi, New Hampshire, Nevada, Pennsylvania, Rhode Island, Texas and Vermont. The results indicate that in these states, the level of corruption and the concentration of refugees are higher, as argued earlier, such as adherence to the state program and influence on the credit rate of the states with financial institutions.

A note that is made is, for the fixed effects, the relation of significance of corruption and refugees, as well as the statistical significance, also for the variable American states. A possible explanation for this relationship is a discussion that indicates that the interaction of companies located in American states with a higher level of corruption tend to be more corrupt. This relationship is made possible by the effect of public migration policies, which produce commercial

agreements with state governments, and commercial banks (more attractive credit rates for companies that adhere to the migration plan of companies).

A possible argument for this relationship of corruption, as highlighted by Gauthier and Goyette (2014), companies that operate acts of corruption have, on average, a high number of commercial contracts with state governments, especially. The logic, according to the authors, develops the following dynamic: the company initially establishes a commercial agreement with the government. After this initial door, new agreements and commercial relations naturally develop. Later on, this accumulation and evolution of new commercial agreements tend to produce corrupt acts, as Gauthier and Goyette (2014).

Finally, a new regression has been established by extracting only the immigration variable, i.e. only the possible relationship of corruption and refugees. The results, as shown in Table 5, were consistent and aligned with previous results.

**Table 5:** OLS, EA and EF regression with the variables corruption and refugees

<b>Dependent variable:</b>		<b>Market Debt</b>		
<b>Model</b>	<b>Sign</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>Variables</b>	<b>Expected</b>			
<i>Clássic</i>				
Tangibilidade	+	-0.0000802** (0.0000332)	-0.000002*** (0.0000203)	-0.0000871*** (0.0000235)
Liquidez	-	-0.1450093*** (0.0477969)	-0.1450093** (0.0658396)	-0.0894734 (0.0823927)
Investimentos	+	-0.0000696* (0.0000417)	-0.0000696 (0.0000717)	-0.0000652 (0.00008)
Rentabilidade	-	-6.736101*** (2.383360)	-6.736101*** (1.0564220)	-8.184862*** (1.334031)
oporcrescimento	-	-0.2669351*** (0.0849979)	-0.2669351*** (0.1017497)	-0.200952* (0.1183889)
tamanho	+	4.300006 (3.000006)	4.300006 (9.330006)	0.0000269 (0.0000313)
<i>CEO</i>				
ceorage	+	-0.0278902**	-0.0278902*	-0.0209876

		(0.0119282)	(0.0173545)	(0.0195761)
ceocompensation	+	-0.0000147**	-0.0000147	-8.050006
		(7.3100006)	(0.0000167)	(0.0000191)
ceogender	+	-0.5774591***	-0.5774591	-0.6709725
		(0.2034668)	(0.5969916)	(0.6687628)
<b><i>Innovation</i></b>				
corruption	+	0.0039112*	0.0039112**	0.0024942
		(0.0021648)	(0.0021232)	(0.0023958)
refugees	+	0.0001315*	0.0001315***	0.0001017*
		(0.0000773)	(0.0000512)	(0.0000578)
state	+	0.0291689***	0.0291689***	0.0294389***
		(0.0098074)	(0.0080739)	(0.0091936)
_cons		2.42749***	2.4274900**	2.027583*
		(0.6003747)	(1.0065495)	(1.216565)
<b>N. Observations:</b>		8.617	8.617	8.617
<b>Firms:</b>		1.675	1.675	1.675
<b>R2 adjust:</b>		0.55	0.49	0.39

**Source:** Prepared by the author. **Note:** Standard errors are in parenthesis. Statistical significance: \*\*\*p<0,01; \*\*p<0,05 and \*p<0,10.

The Table 5, in summary form, shows one of the academic and practical contributions that this research aims to provide. The relationship between corruption and refugees is part of a context of a public side (state governments) and a private side (commercial enterprises and banking institutions). In this context, the program of companies that register to receive refugees intends to receive the credit facility from the government.

In turn, this legal and public relationship with the public tends to produce, in the long run, corrupt acts, as Dincer and Johnston (2017) assert. In other words, the volume of contracts with the state government tends, over the years, to highlight potential problems of corruption and investigation by the American Department of Justice.

## 7.2 Econometric analysis with the presence of an instrumental variable

In this section, the aim is to discuss endogeneity, a common and very preeminent aspect in empirical studies, as well as the solution through the instrument, according to Table 6.

**Table 6:** OLS, EA and EF regression with the variables corruption, immigration, refugees and introduction of instrumental variables

<b>Painel</b>						
<b>Variável dependente:</b>	<b>Endividamento de Mercado</b>					
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>
	<b>OLS</b>	<b>EF</b>	<b>EA</b>	<b>VI</b>	<b>EAVI</b>	<b>EFVI</b>
<b>Classic</b>						
tangibility	-0.0000663*** (0.0000297)	-0.0005603*** (0.0000204)	-0.0000764*** (0.0000235)	-0.500006*** (0.6840007)	0.4870006*** (0.562007)	0.445006*** (0.6240007)
liquidity	0.5023921** (0.2617564)	0.5023921*** (0.123976)	0.5600998*** (0.1455398)	0.258349*** (0.0103872)	0.2583695*** (0.0018564)	0.2629974*** (0.0021851)
investments	-0.000023 (0.0000357)	-0.000023 (0.0000721)	-0.0000288 (0.0000802)	0.000017*** (2.630006)	0.0000167*** (1.980006)	0.000016*** (2.130006)
profitability	-7.271452*** (2.596944)	-6.277892*** (1.154024)	-8.341834*** (1.377578)	0.250265*** (0.0528841)	0.2288033*** (0.285233)	0.1181216*** (0.0341237)
growth	-0.1731391** (0.0945747)	-0.1731391* (0.105241)	-0.1413061 (0.1200744)	0.0217824*** (0.0044998)	0.0210623*** (0.0027828)	0.0207323*** (0.0030954)
size	-0.0000101* (5.640006)	-0.0056780 (0.000011)	1.120.006 (0.0000381)	-1.36006*** (2.360007)	-1.37006*** (2.80007)	-1.670006** (8.640007)
<b>CEO</b>						
ceoidade	-0.0278134** (0.0120324)	-0.0278134* (0.0173705)	-0.0207342 (0.0195838)	0.0001288 (0.0004904)	0.0001483 (0.0004809)	0.0002617 (0.0005239)
ceoremuneracao	-0.0000152** (0.7750006)	-0.0000562 (0.0000167)	-9.390006 (0.0000191)	-2.21007 (0.4680007)	-2.97007 (-4.600007)	-4.740007 (-5.070007)
ceogenero	-0.6090427*** (0.1983758)	-0.6090427 (0.5969533)	-0.719122 (0.6685769)	0.0376724*** (0.0159584)	0.038364** (0.181875)	0.0414608*** (0.0198074)
<b>Innovation</b>						
corrupcao	0.004143** (0.0021969)	0.004143** (0.0021238)	0.0028754 (0.002396)	0.000102** (0.0000568)	0.0001088** (0.0000587)	0.000156*** (0.000064)
refugiados	0.000129* (0.000129)	0.000129*** (0.000129)	0.0000939* (0.0000939)	-4.220006*** (4.220006)	-4.220006** (4.220006)	-3.690006*** (3.690006)

	(0.0000765)	(0.0000513)	(0.0000578)	(-1.520006)	(-1.410006)	(-1.530006)
estadoam	0.0278025***	0.0278025***	0.0283455***	-0.000443***	-0.000427***	-0.0003398
	(0.0094998)	(0.0080835)	(0.0091901)	(0.000222)	(0.0002228)	(0.0002446)
_cons	0.6799683	0.6799683	-0.4618112	-0.0377953	-0.040974	-0.0582647
	(0.885476)	(1.374209)	(0.277507)	(0.0413327)	(0.0336045)	(0.0369928)
<b>N. Observations</b>	8.617	8.617	8.617	8.617	8.617	8.617
<b>R2</b>	0.46	0.58	0.55	0.60	0.65	0.68

**Source:** Prepared by the author. **Note:** Standard errors are in parenthesis. Statistical significance: \*\*\* $p < 0,01$ ; \*\* $p < 0,05$  and \* $p < 0,10$ .

Inbreeding represents a major obstacle in interpreting the basic specifications. By means of an instrumental variable approach, the concentration of the population of a state around its capital was used as an instrument for the corruption of companies and in states. In general, the results of all these tests suggest a significant relationship between corruption, refugees, market indebtedness and population concentration by state.

In addition, the evidence is robust for a series of additional tests that control the possibility that market indebtedness has a simultaneous impact on corruption and refugees, as well as on the behaviour of CEOs.

First, the results are robust for using an alternative measure of corruption research at the company level, complementing the fact that using the most corrupt states could have a higher number of convictions. Second, the use of state population concentration around the state capital as an instrument for corruption was applied.

In summary, an instrumental variable approach was applied. The instrument used is the concentration of a state population around its capital, measured by the per capita population index of the region, as aligned with the Campante and Do (2010) survey.

After estimating the two models in panel data, fixed effects and random effects, the Hausman test was applied to analyze the consistency between the two models, i.e., the test analyzes whether there is correlation between individual errors and explanatory variables. For all cases, the test signalled the use of random effects in econometric models.

Finally, H1 was not rejected, since the classical variables, in general, have a positive relationship with the capital structure of the companies; H2 was rejected, considering that the CEOs variables have a positive impact on the indebtedness, however, in the study a contrary

direction was verified; H3 was confirmed in this research, considering that corruption has a positive relationship with indebtedness, and, finally, H4 was not totally rejected, since it was verified that and refugees have a positive relationship with the capital structure of the companies.

## **6. CONCLUSIONS**

The objective of this research was to analyze the impacts of the choice of new factors and/or determinants of the Capital Structure of companies. In turn, as specific objectives, the possible associations were evaluated: : (i) To relate, in the same model, the set of classical variables to the set of innovative variables; (ii) To identify and compare possible similarities of indebtedness of companies that are located in states with a high probability of corruption level and states with cases of corruption already sentenced;

(iii) To analyze the impact, at the state level, of immigration and refugees on the financial policy of companies, interacting these results in areas with higher incidence of corruption; (iv) To interact the classical variables of capital structure exclusively with the profile of the CEO's of the companies.

During the study, the intentions of testing these relationships were made using the theoretical framework of Corporate Finance, as well as the cooperation of behavioral variables and the inclusion of variables such as corruption, immigration and refugees. Through 1.675 U.S companies extracted directly from WRDS during 2010 and 2017, the variables were divided into econometric models for analysis and discussion of results.

Overall, the results obtained in this study provide important implications for researchers, managers, and public policy makers. For researchers, corruption is expected to be a significant determinant of the level of corporate indebtedness. For managers, it is important to consider the adverse effect of political corruption on the nature of debt. A higher level of indebtedness produces a corrupt environment with low investor and shareholder protection. In addition, managers of multinational corporations should consider the possible effect of different levels of corruption as well as its interaction with migratory flows.

The findings do not encourage corrupt activities for both private companies and employees, because the importance of the study is that it can initiate the discussion of the externality of



corruption for the permanence of private companies, at least in the long term. Undoubtedly, the results signal that corruption has positive externalities for private companies.

In practical terms, the results of this study provide empirical evidence that the level of corruption in an economy has a direct and positive effect, assuming the following findings: (i) corruption is significant in environments with a higher concentration of refugees; this brings a direct and positive relationship with the level of indebtedness of organizations located in the states that absorb this workforce; (ii) these results, considering the significant nominal levels, were evidenced only for those seeking refuge, and not for immigrants.

The explanatory arguments point out that when companies adopt refugees for work, through the relationship with the state government, they have better credit rates with financial institutions, thus becoming more competitive; as well as the possibility of developing new trade agreements with state governments. These same companies, which in turn initiate the relationship with the state government, have indications of corruption pointed out in the following years, as the reports of corruption processes in the U.S. Department of Justice point out.

It is worth mentioning that the capital structure of companies changes significantly, through the influence and support that state governments develop directly with banking institutions. Having easier access to credit enables the company to require cheaper debt and make the necessary investments for its growth.

For this reason, CEOs, another variable studied, must take appropriate measures to reduce the level of corruption in the economy, in addition to developing more effective debt policies, considering the presence and incidence of immigration and refugee flows in the respective U.S. states. In addition, they should seek to strengthen security laws, corporate governance mechanisms, and their implementation to improve overall investor protection in the economy. This will help mitigate various agency problems and make it easier for companies to make financial decisions and obtain higher ratings.

Specifically, public policy makers should evaluate new public policies considering the following arguments: (i) the greater influence of refugees provides, on average, a higher level of indebtedness. Based on this assumption, producing public policy actions to provide greater engagement of this group within society and, especially, on the impact they have within business organizations, will develop direct impacts on the debt structure of companies;

(ii) immigrants, in turn, still need more studies regarding their influence on the financial structure of companies, to a lesser extent highlighted in the survey results; (iii) the areas of greater influence of corruption were confirmed, according to the areas of level of corruption, in the "unusual segment of corruption", offering new discussions and reflections on the expectation of corruption vs. the practice; (iv) the characteristics of the CEOs have influence in the choice of the determinants of the capital structure, opening the door to discussions on their level and quality of influence, for future studies.

Public policy makers should evaluate new public policies considering the following arguments: (i) the greater influence of refugees provides, on average, a higher level of indebtedness. Based on this assumption, producing public policy actions may signal a greater engagement of this group within society;

(ii) greater control in trade agreements between parties, businesses and the government, could produce greater transparency and reduce the possibility of corrupt acts; (iii) immigrants, in turn, still need more studies regarding their influence on the financial structure of companies, to a lesser extent highlighted in the results of the research; and (iv) using the index of the Institute for Corruption Studies, the states with the greatest influence of corruption were confirmed in this research, providing the possibility of research, for future studies, with this index in relation to other variables (lobbying, bankruptcy, taxation and leniency agreements).

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