



EFFECTS OF MACROECONOMIC AND INSTITUTIONAL ENVIRONMENTS ON THE DEBT OF TEXTILE COMPANIES

EFEITOS DOS AMBIENTES MACROECONÔMICO E INSTITUCIONAL NO ENDIVIDAMENTO DAS EMPRESAS TÊXTEIS

Edgar Pamplona

Universidade Regional de Blumenau, Brasil
edgarpamplona@hotmail.com

Henrique Corrêa da Cunha

Universidade Regional de Blumenau, Brasil
edgarpamplona@hotmail.com

Tarcísio Pedro da Silva

Universidade Regional de Blumenau, Brasil
tarcisio@furb.br

Abstract

The article aims at examining the effects of macroeconomic and institutional environments on the debt of textile companies leading producer countries in the sector. The research utilizes panel data procedures within time span from 2009 to 2013 and sample of 10 companies from Brazil, 47 from China, 150 from India and 40 from Pakistan. The results show that, in general, *pecking-order* theory better explains the way of financing the textile industries under analysis. Moreover, in each country, specific factors of the companies under study, as for instance, profitability, size, leverage, financial slack, growth opportunities and business risk, are related to indebtedness within organizations. Finally, the study focuses on issues related to the countries' macroeconomic and institutional environment. They show that they are potentially significant to determine the different forms of financing organizations operating in the textile sector. This is the first study involving textile companies within the major producer countries in the sector on a consolidated basis. In addition, the use of variables linked to

macroeconomic and institutional factors of the countries is of great advantage. This is because these aspects, though relevant, have been neglected to the understanding of how companies finance themselves.

Keywords Determinants of capital structure; Macroeconomic and institutional environment; Textile companies.

Resumo

O artigo tem por objetivo examinar os efeitos dos ambientes macroeconômico e institucional no endividamento das empresas têxteis dos principais países produtores do setor. A pesquisa faz uso do procedimento de dados em painel, sendo o lapso temporal de 2009 a 2013 e a amostra é composta por 10 empresas brasileiras, 47 chinesas, 150 indianas e 40 paquistanesas. Os resultados apontam que, no geral, a teoria pecking-order melhor explica a forma de financiamento das indústrias têxteis analisadas. Além disso, em cada país, determinados fatores específicos das firmas estudados, sendo rentabilidade, tamanho, tangibilidade, folga financeira, oportunidade de crescimento e risco do negócio, possuem relação com o endividamento das organizações. Finalmente, o estudo se concentra em questões relacionadas ao ambiente macroeconômico e institucional dos países. Demonstra-se que estes são potencialmente significativos para determinar as diferentes formas de financiamento de organizações que operam no setor têxtil. Este é o primeiro estudo que considera empresas têxteis dos principais países produtores do setor de forma consolidada. Além disso, o uso de variáveis ligadas a fatores macroeconômicos e institucionais dos países é um grande diferencial. Isso ocorre porque esses aspectos, embora relevantes, foram negligenciados para a compreensão de como as empresas se financiam.

Palavras-chave: *Determinantes da Estrutura de Capital; Ambiente Macroeconômico e Institucional; Empresas Têxteis.*

1. Introduction

In finance, fundraising and composition are considered factors of the capital structure, according to seminal works in the area by Modigliani and Miller (1958; 1963). These thinkers point out that company owners and managers have reasons to prefer between an indebtedness plan or another. In this context, two major theories on the subject have emerged in the course

of history: *trade-off*, by Modigliani and Miller (1958; 1963); *pecking order*, by Myers and Majluf (1984).

Modigliani and Miller's *Trade-off* theory departs from the understanding that if one raises the level of indebtedness of a firm, one can, therefore, increase the tax benefit derived from the financial burden of such debt and, thus, one maximizes the value of the company. In contrast, Myers and Majluf's *pecking-order* theory suggests one should follow a hierarchy/preference as for funding sources. One should, primarily, prioritize the financing of investments with one's own resources.

Based on these understandings, numerous empirical studies have been developed worldwide. They intended to verify which are the determinants of the company's capital structure and decide which of the two theories has power to explain the modalities of financing utilized by organizations in different economic contexts. As for Brazil, Nakamura et al. (2007) have examined the determinants of capital structure of companies in the country. Their sample consisted of 91 companies in an analysis using panel data, from 1999 to 2003. Consistent with the literature, they tested, among others, numerous variables such as profitability, size, growth opportunity, business risk, tangibility. The findings, in short, show consistency with both *trade-off* and *pecking-order* theories. Specifically, they point out that the Brazilian managers tend to follow the logic of flexibility and control choice (*pecking-order*) together with the dynamics of optimal level of indebtedness of short-term adjustment (*trade-off*).

Ahmed and Hanif (2011) analyzed the empirical validity of both *trade-off* and *pecking-order* theories in Pakistan, with the sample of 132 textile companies, between 2001 and 2009. They applied the statistical technique of regression, with the independent variables of profitability, size, tangibility and growth and, thus, explored their relations with the debt of the sample organizations. Their findings showed that both *trade-off* and *pecking-order* theories have the power to explain the capital structure of textile companies in Pakistan. However, one must highlight that *pecking-order* theory has proved stronger relationship than *trade-off* theory.

Moreover, it is noteworthy that there are many other aspects influencing the companies' capital structure. Among these factors is the country's macroeconomic and institutional environment, which conditions the perception of risk that the company develops regarding its medium and long term investments. This perception of risk has the power to influence decisions regarding the organizations' capital structure.

An example is Duan et al. (2012) study. They found that the factors determining a company's capital structure are financing costs, company's performance, control of human resources and the owner's decisions. The authors indicate that these factors are related to the company's structure. They also suggest that the review of empirical studies on the subject showed that the analyses did not consider macroeconomic factors regarding the institutional environment in which the company operates, this being a gap in the research. Thus, the authors emphasize that the decisions about capital structure in organizations are taken, considering both internal factors (organizational structure) and external aspects (macroeconomic factors as, for instance, the quality of the country's institutional environment).

Brito, Corrar and Batistella (2007) report that variables related to both economic and institutional environment can influence the way companies finance themselves. Thus, this study has the following research problem: what are the effects of macroeconomic and institutional environments on the debt of textile companies within leading producer countries in the sector? Seeking to respond to this research question, the aim of this study is to assess the effects of macroeconomic and institutional environments on the debt of textile companies within leading producer countries in the sector.

The research is justified by the importance of studies on the subject. Brito et al. (2007) argue that studies are controversial to this day for the finance area, due to its concern with capital structure. This fact is confirmed by Silva (2014), who, in a recent study, notes that even after more than half a century after the seminal work by Modigliani and Miller (1958), there is still wide debate regarding the composition of companies' capital structure.

For the present survey were selected textiles public companies operating in four of the five major producer countries of the segment in the world. More specifically, in accordance with IEMI (Institute of Industrial Marketing and Studies) data in 2010, these are China, India, Pakistan and Brazil. This is one of the most dynamic sector in the economy (ABIT - Brazilian Association of Textile and Clothing, 2013). The United States, which corresponds to the other country belonging to the top 5 global textile producers, was excluded from the search. The reason for the exclusion is the country's highly developed economy compare to the other four countries included in the study. They are all emerging countries, comparable among themselves, especially with regard to institutional and macroeconomic factors.

So, it is appropriate to say that the textile sector is important for the economy of these countries and the world. These countries differ in their macroeconomic and institutional

environments due to economic and cultural diversity, which provides robustness to the factors related to capital structure under analysis.

2. Review of Literature

Numerous studies have been conducted on the determinants of capital structure. Yet we have studies related to the textile industry on a consolidated basis among the countries Brazil, China, India and Pakistan, the essential nations for the sector. For the theoretical approach, we have conducted research on the subject in Jstor, Scielo, Science Direct, Scopus and Wiley Online Library, and journals. This research allows the justification of the study with relevant papers published by journals with high impact.

2.1 Capital Structure

In late 1950s and early 1960s, studies by Modigliani and Miller (1958; 1963) aimed at understanding how companies should finance their resources in order to maximize value. In this regard, they suggested that the companies should adopt policy that prioritizes the use of the third-party capital. Capital raising from them offers tax advantages derived from the fees paid on such resources. Therefore, this makes the cost of this capital source smaller. Such an understanding has subsequently provided the basis for the *trade-off* theory, which, therefore, calls for the use of third-party capitals.

However, further studies by Myers (1977) warn us that, although there are tax benefits in the contraction of debts to third parties, this practice also has disadvantages for the companies, which must be considered as, for example, the cost of bankruptcy coming from the leverage. Thus, it is essential that managers attempt to reduce to some extent the dependence on third-party resources. They consume the cash flows generated by the company, seeking a level of optimized debt (Myers, 1977; 1984).

In the 1980s, the study by Myers and Majluf (1984) brought another understanding concerning the companies' capital structure. Specifically, the authors suggest that there is a hierarchy/preference regarding the use of resources, in which the companies must prioritize, at first, financing through their own resources, subsequently asking help from third parties, and only in recent cases seeking funds through the issuance of shares. This fact is understood by the argument that it is more expensive for the company to convince foreign investors to invest in the organization, which raises the cost of these sources of funding. By contrast, when equity is utilized, the owner knows business and, therefore, understands the company's

reasons and needs, which reduces bureaucracy in resource raising and reduces cost. Later, these arguments were instrumental in the construction of the *pecking-order* theory.

In this context, it is clear that both *trade-off* and *pecking-order* theories have different biases, but they are held in an attempt to scale the capital structure that maximizes the value of companies. From these theories, numerous studies have been carried out in order to empirically identify which are the determinants of companies' capital structure around the world. For instance, the seminal study by Titman and Wessels (1988) in the North American context, which, in addition to their attempt to scale one of the theories – *trade-off* and *pecking order* – has the power to explain the capital structure of organizations in different economic contexts.

In Brazil, the first empirical studies on the subject appeared in the early 1990s. Nakamura (1992), for instance, examined the determinants of capital structure in Brazilian companies. For this purpose, he used 427 public and private companies with 1948-1989 data. The results showed that the companies in their borrowing decisions envision maximizing shareholders' wealth by opting for lower-cost funds. Finally, the research also found that debt is negatively related to profitability.

In China, Tong and Green (2004) examined companies' debt structure by attempting to relate it to both *trade-off* and *pecking-order* theories. The study focused on the analysis of the 50 top Chinese companies listed on the country's Stock Exchange since these possess more reliable information. The analysis period covered the years 2001 to 2002. The most relevant finding was the existence of negative influence between leverage and profitability. From a broader view, the results, when significant, indicated that *pecking-order* theory best explains the capital structure of the companies studied.

Sheikh and Wang (2011) sought to explore the factors affecting the capital structure of public-trade industrial enterprises in Pakistan. Their sample consisted of 160 companies listed on the Karachi Stock Exchange. An analysis of the years 2003-2007 was carried out by means of panel data. The findings showed that profitability, liquidity, volatility of results and tangibility are negatively related to debt, while the size has positive influence on the debt.

In the Indian context, Singh and Kumar (2012) empirically tested both *trade-off* and *pecking-order* theories in order to verify which of them best explains the reality of the companies in India. Dealing with data equivalent to the years 1990-2007, the research was conducted with a sample of 1,448 companies operating in 10 sectors. The results show that the capital structure of Indian companies is more aligned with the *trade-off* theory, with consistent results even when analyzed by sector.

Correa, Basso and Nakamura (2013) sought to verify the level of debt of the largest Brazilian companies. The sample consisted of 389 companies. The analysis was performed by panel data information during six years. The results show that debt and risk are positively related, while there is negative relationship between debt, profitability and tangibility. As for the theories tested, *pecking-order* seems more consistent to explain the capital structure decisions of Brazilian public companies.

Recently, Chen, Jiang and Lin (2014) have investigated the determinants of capital structure of China's enterprises through a sample with 1,481 companies listed on the Chinese 2011 Stock Exchange. The study applies descriptive statistics and panel analysis to achieve its objectives. The most relevant findings indicate that larger companies have higher debt while profitable firms use more domestic capital as resource. Furthermore, both intangibility and risk seemed to increase the debt, however, their influence is low in the capital structure.

2.2 Macroeconomic Environment

Empirical evidences suggest that specific factors in each country are relevant determinants of capital structure in emerging markets. Such factors include institutional infrastructure, legal and accounting practices, financial infrastructure and, especially, macroeconomic environment (Terra, 2007). Such an understanding is supported by Pozzo (2005), who reports that research on companies' capital structure incorporates the macroeconomic characteristics of the countries in the analyses.

Among most frequent macroeconomic variables in literature, there are GDP growth, GDP per capita, and inflation rate, which are observed in several studies as, for example, those by Demirgüç-Kunt and Maksimovic (1999), Jong, Kabir and Nguyen (2008), Bastos, Nakamura and Basso (2009) and Martins and Terra (2014).

Pozzo (2005) reports that volatility in macroeconomic environment affects a country's growth. In unfavorable conditions, we face high level of uncertainty, which causes debtor's estimating difficulty. The final cost of funding directly affects the level of companies' debt.

Accordingly, empirical studies, as the one by Demirgüç-Kunt and Maksimovic (1999), have demonstrated the importance of using macro-economic variables. The authors (1999) report in their extensive research, including the analysis of 30 countries' companies in the longitudinal period between 1980 and 1991, that differences in GDP per capita among nations have the potential to account for 44% (measured by the indicator of the coefficient) of the variation in long-term financing of the companies focused in the study.

More recently, the range of studies that consider macroeconomic factors has been extended in order to specifically analyze underdeveloped countries. By the importance that they have presently been gaining in worldwide economy, several nations have earned the condition of emerging countries. It is visible in literature a range of studies in the context of Latin-America, which discuss about countries like Brazil, Chile, and Mexico. The studies show that macroeconomic variables are related to companies' capital structure in the region, either in greater or smaller scale (Pozzo, 2005; Bastos et al., 2009; Martins & Terra, 2014).

Due to the potential globalization on the world market providing competition on a large scale, the study of macroeconomic factors has become essential. These factors affect the way companies are financed in different locations, which, consequently, determine the competitiveness of organizations. Thus, the following research hypothesis becomes possible:

H_1 - There is influence of the macroeconomic environment on the debt of textile enterprises of the major producer countries in the sector.

2.3 Institutional Environment

Institutional environments are composed of laws, rules and expectations. They require repositioning of the resources of organizations to meet market needs. In this sense, the quality of an institutional environment implies risk perception regarding investments.

From a broader perspective, institutional approach recommends that interaction between organizations and institutions determines the dynamics of economic activities (North, 2005). From this scenario, North (1990) reports that institutions become structures that define how business transactions must occur. Scholars supporting institutional approach, as DiMaggio and Powell (1983) and North (1990), realize that institutional environment determines the behavior of individuals and, consequently, the functioning of decisions in organizations.

The quality within institutional environment is strongly related to the perception of safety (or uncertainty) of long-term investments of an organization in a specific market. Regions with volatile and uncertain institutional environments generate concerns about possible alternatives for a company to exploit the opportunities of a given market. Thus, the commitment of an organization with market-specific features with long-term returns will be riskier in a region with poor institutional environment.

Thus, Khanna and Palepu (1997) argue that in developing countries there are opportunities both encouraging investment and enabling the emergence of commercial

transactions. However, although these regions evidence some institutional support for the fostering of business transactions, the authors (1997) argue that there are numerous institutional shortcomings making investments uncertain and risky. On the other hand, in developed countries with mature institutional environments, the "rules of the game" (institutions) are clear, and this makes the perception regarding investments and, hence, the long-term commitment, less risky.

In addition, it is reported that a company operating in a region with a high level of uncertainty will have more resistance to commit specific resources (which cannot be used for other purposes) to meet market requirements. In a market with formal precarious institutions (norms and laws), Oliver (1992) suggests that the company's level of long-term commitment with the market will be lower, since the factors enabling the investment today may change at any time.

In order to enable the qualification of a country's institutional environment, the World Bank created worldwide governance indicators. These indicators include the following criteria: corruption perception, political stability, voice and accountability, governmental effectiveness, regulatory quality, and rule of law. According to the World Bank, these indicators reflect the quality of institutions established in the country. So, they show market risk or stability in the nations.

Linking the aforementioned indicators to the institutional approach it is possible to assess that the indicators are strongly related to the normative, cognitive and regulatory pillars proposed by Scott (1995). In addition, based on all the arguments in this section, the following research hypothesis appears:

H_2 - There is influence of institutional environment on the indebtedness of textile companies within leading producer countries in the sector.

3. Methodology

In order to verify the effects of macroeconomic and institutional environments on the debt of textile companies within leading producer countries in the sector, this research is characterized as descriptive regarding its objectives, since it observes variables without manipulating them. The approach to the problem is outlined as quantitative because it makes use of statistical techniques. The procedures include documental analysis, since the data used are derived from the database *Thomson®* and information disclosed in the World Bank's website.

The study's population corresponds to textile companies in Brazil, China, India and Pakistan. These emerging countries are among the largest worldwide producers in the sector. Companies were excluded if they did not have all the information needed for the calculation of the variables of the study, which resulted in a final sample of 10 Brazilian companies, 47 Chinese companies, 150 Indian companies, and 40 Pakistani companies. Data collection covered the period 2009-2013, a time lapse of five years, which is usually used for research in this area of finance, as it is verifiable in studies by Nakamura et al. (2007), Brito et al. (2007) and Sheikh and Wang (2011).

For the analysis of data, was initially carried out a separated study of the countries. It aimed at verifying particular determinants of capital structure of each of them. Therefore, this initial step referred to the study of debt variables (dependent) with specific firms (independent). In the second phase, the analysis is performed with data on a consolidated basis of the four countries with the complementary use of macroeconomic and institutional variables (independent). So, Table 1 below contains the variables of the research.

Indicators	Formula	Authors
Dependent Varibales – Debt Level Indicators		
ETC	$\frac{(Current Liabilities + Non Current Liabilities)}{Asset (accounting)}$	Nakamura <i>et al.</i> (2007); Brito <i>et al.</i> (2007).
ECPC	$\frac{Current Liabilities}{Asset (accounting)}$	Brito <i>et al.</i> (2007); Bastos <i>et al.</i> (2009).
ELPC	$\frac{Non Current Liabilities}{Asset (accounting)}$	Bastos <i>et al.</i> (2009); Bastos e Nakamura (2009).
Independent Variables – Firms’ Specific Factors		
RENT	$\frac{EBIT}{Total Assets}$	Bastos <i>et al.</i> (2009); Bastos e Nakamura (2009).
TAM	$LN Total Assets$	Titman e Wessels (1988).
TANG	$\frac{Permanent Assets + Inventories}{Total Assets}$	Bastos <i>et al.</i> (2009); Bastos e Nakamura (2009).
FFIN	$\frac{AC - Inventory}{Current Liabilities}$	Campos e Nakamura (2015).
OC	$\frac{(Total Assets t - AT t - 1)}{Total Assets t - 1}$	Titman e Wessels (1988);
RISC	$\frac{(Standard Deviation EBIT)}{Total Assets}$	Bastos e Nakamura (2009).
Independent Variables – Macroeconômíc Factors		
CRES_PIB	2009-2013 GDP Growth	Bastos <i>et al.</i> (2009).
PC_PIB	LN (GDP/Total Population)	
INFL	Anual Inflation Rate	
Independent Variables - Institutional Factors		
VOI_ACCT	Annual Indicator of Participation	Gungoraydinoglu e Öztekin (2011);

	in the Country's Decisions	Duan <i>et al.</i> (2012).
POL_STAB	Annual Indicator of Political Stability in the Country	
GOV_EFFECT	Annual Indicator of Effectiveness Of the Government in the Country	
REG_QUAL	Annual Indicator of Quality of regulations in the Country	
RUL_LAW	Annual Indicator of Compliance with Laws in the Country	
CONT_CPT	Annual Indicator of Control Corruption in the Country	

Note: ETC – Total Debt at Book Value; ECPC – Short-Term Debt at Book Value; ELPC – Long-Term Debt at Book Value; RENT – Return on Assets; TAM – Size; TANG – Tangibility; FFIN = Financial Slack; OC – Growth Opportunity; RISC – Business Risk; CRESC_PIB – GDP Growth; PC_PIB - GDP per capita; INFL - Inflation; VOI_ACCT – Participation in Decisions (Population's Active Voice); POLAB – Political Stability; GOV_EFFECT – Governmental Effectiveness; REG_QUAL – Quality of Regulations; RUL_LAW – Compliance with Laws; CONT_CPT – Control of Corruption.

Source: Survey data.

Table 1 - Dependent and Independent Variables

It is worth mentioning that the variables of the institutional environment of each country (VOC_ACCT, POL_STAB, GOV_EFFECT, REG_QUAL, RUL_LAW and CONT_CPT) are evaluated. The evaluation utilizes global governance indicators, published annually by the World Bank. These indicators assess six dimensions of institutional environment. The quality of the institutional environment is measured on a scale with values between -2.5 and +2.5. Lower values represent a poor institutional environment and the higher values indicate a more secure and stable institutional environment. Macroeconomic indicators (CRES_PIB, PC_PIB and INFL) are extracted from the same World Bank database. Finally, there are the other variables of the study. They are both the dependent and independent variables, related to specific factors within the companies. They are calculated through the use of accounting information collected from *Thomson®* database.

With the use of the variables outlined in Table 1, regression models were developed for panel review in two basic equations. They are shown below:

$$ETC = \beta_0 + \beta_1 RENT + \beta_2 TAM + \beta_3 TANG + \beta_4 FFIN + \beta_5 OC + \beta_6 RISC + \beta_7 Year2009 + \beta_8 Year2010 + \beta_9 Year2011 + \beta_{10} Year2012 + \beta_{11} Year2013 + \varepsilon \quad (1)$$

$$ETC = \beta_0 + \beta_1 RENT + \beta_2 TAM + \beta_3 TANG + \beta_4 FFIN + \beta_5 OC + \beta_6 RISC + \beta_7 CRES_PIB + \beta_8 PC_PIB + \beta_9 INFL + \beta_{10} VOI_ACCT + \beta_{11} POL_STAB + \beta_{12} GOV_EFFECT + \beta_{13} REG_LAW + \beta_{14} RUL_LAW + \beta_{15} CONT_CPT + \beta_{16} Year2009 + \beta_{17} Year2010 + \beta_{18} Year2011 + \beta_{19} Year2012 + \beta_{20} Year2013 + \varepsilon \quad (2)$$

According to the equations 1 and 2 above, the study will still have models which relate the ECPC and ELPC variables, thus totaling six equations. These equations will be used

to verify the determinants and effects of macroeconomic and institutional environments on the debt of textile companies in the main countries industry producers. Therefore, descriptive statistics and regression are used with panel data by *Stata14*® software.

4. Empirical Results and Discussions

4.1 Determinants of Capital Structure – Specific Factors of the Firm

The initial analysis shows the descriptive statistics of the variables used in the study in order to have a first parameter about the objects of study data. Thus, it follows Table 2 for further inferences.

Variables	Brazil		China		India		Pakistan	
	average	DP	average	DP	average	DP	average	DP
ETC	0,99	0,65	0,47	0,18	0,72	0,24	0,68	0,27
ECPC	0,53	0,46	0,38	0,17	0,35	0,21	0,42	0,18
ELPC	0,46	0,26	0,09	0,08	0,36	0,24	0,25	0,24
RENT	0,02	0,11	0,04	0,06	0,05	0,08	0,10	0,09
TAM	19,33	0,93	19,52	0,78	17,93	1,32	17,78	1,27
TANG	0,64	0,11	0,53	0,15	0,67	0,17	0,75	0,13
FFIN	0,92	0,89	1,25	1,11	1,13	1,23	0,48	0,32
OC	0,00	0,28	0,12	0,21	-0,01	0,27	0,01	0,24
RISC	0,08	0,08	0,05	0,08	0,05	0,05	0,06	0,04

Note: The table shows the distribution of both dependent and independent variables (factors specific within firms). They show both mean and standard deviation. The definitions of the variables are presented in Table I.

Source: Survey data.

Table 2 - Descriptive Statistics of Variables per Country (Brazil , China, India and Pakistan)

In Table 2, the first three information represent the dependent variables of the study and are, therefore, the capital structure. In this sense, in a comparative analysis of the four countries under study, it is clear that Brazilian companies present, in all three indicators, the highest levels of indebtedness. Noteworthy is the total debt of Brazilian organizations in the sample of 0.99. That is, on average, most of the capital used by the Brazilian textile companies under analysis is derived from third parties. This occurs because there are some organizations in the sample that have unfunded liabilities (negative equity), indicating the presence of accumulated losses.

When profitability indicator is analyzed, it is noted that Brazilian companies have, on average, the lowest scores, with the highest standard deviation, which indicates greater dispersion. Drawing a parallel between capital structure and profitability indicators, it is noted

that the leverage, because it is excessive, may further damage the performance of these organizations.

These data should be understood by a number of threads that has been systematically happening to the Brazilian textile sector. From a historical perspective, Rangel, Silva and Costa (2010) show that, over the years, Brazil has been losing share in the world market for textile products. This is happening mainly due to recurrent falling competitiveness of its industry in the sector. The data show that, for example, in the period 1994 to 2006, China's exports in the sector grew 12.37% against a modest growth rate of 1.68% for the Brazilian industry in the same period.

Latest figures show that the parameter remains similar. According to the data provided by CNI - National Confederation of Industry (2012), it appears that in 2012 the jobs generated by the textile industry in Brazil fell 4.1% over the previous year. The real payroll index was down 5.4%; the number of hours worked in production was 6.3% lower than the previous year; and besides the average yield was 1.4% lower in 2012 compared to 2011. These data may explain why, in the period studied, the variable of growth of Brazilian companies shows to be zero, while in China, in the same period, companies in the sector grew by 12%. The companies from India and Pakistan, despite the low growth, demonstrate to be more profitable and less indebted than Brazilian companies. This fact suggests that the Asian market has imposed stiff competition while Brazilian companies are finding it extremely difficult to compete in the industry textile.

The other indicators also point out that Brazilian companies have greater risk than their Asian competitors. Pakistani organizations have more investments in tangible assets in proportion to the total assets. Both Brazilian and Pakistani companies have indicators of financial slack inferior to 1, which, if not controlled, can cause problems to honor the contracts signed by these organizations in the future.

Table 3 below shows the results of the regression analysis on panel conducted in order to verify the determinants of capital structure of textile companies from Brazil, China, India and Pakistan.

Variables	Brazil			China		
	ETC	ECPC	ELPC	ETC	ECPC	ELPC
	Random	Random	Random	Fixed	Fixed	Fixed
	Effects	Effects	Effects	Effects	Effects	Effects
	(1a)	(2a)	(3a)	(1b)	(2b)	(3b)
	Coefic.	Coefic.	Coefic.	Coefic.	Coefic.	Coefic.
RENT	0,2032	0,1973	0,0335	-0,3269**	-0,2873	-0,0289
TAM	0,0223	0,0018	0,0165	-0,0447	-0,0495**	0,0051
TANG	-0,1003	-0,4733	0,3574	0,0960	0,0049	0,0861
FFIN	-0,0990	-0,0952	-0,0348	-0,0667*	-0,0668*	0,0001
OC	-0,3337*	-0,3502*	0,0242	0,0553	0,0465	0,0099
RISC	6,2290*	4,2805*	2,0218*	-0,7358*	-0,0485	-0,6903*
_CONS	0,1840	0,5209	1,1633	1,4139	1,4299*	-0,0201
R ² Within	-----	-----	-----	0,3996	0,3705	0,3476
R ² Between	-----	-----	-----	-----	-----	-----
R ² Overall	0,7208	0,6256	0,6621	-----	-----	-----
Significance model	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*
Amount of observations	50	50	50	235	235	235
LM de Breusch-Pagan	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*
F de Chow	-----	-----	-----	0,0000*	0,0000*	0,0000*
Hausman Test	0,1365	0,9462	0,2945	0,0000*	0,0001*	0,0003*
Variables	India			Pakistan		
	ETC	ECPC	ELPC	ETC	ECPC	ELPC
	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
	Effects	Effects	Effects	Effects	Effects	Effects
	(1c)	(2c)	(3c)	(1d)	(2d)	(3d)
	Coefic.	Coefic.	Coefic.	Coefic.	Coefic.	Coefic.
RENT	-0,3586*	0,3486*	-0,7068*	-0,5588*	-0,5006*	-0,0602
TAM	-0,1380*	-0,0695**	-0,0665**	-0,0195	0,0048	-0,0290
TANG	0,1673**	-0,2750*	0,4444*	-0,0675	-0,6030*	0,5505*
FFIN	-0,0138*	-0,0936*	0,0797*	-0,1013*	-0,2693*	0,1694*
OC	0,0022	-0,1225*	0,1206*	-0,0340	-0,0298	-0,0052
RISC	0,1157	0,1806	-0,0500	0,1063	-1,2041	1,2801
_CONS	3,1067*	1,8613*	1,2079**	1,1730	1,0462	0,2015
R ² Within	0,1640	0,4381	0,4332	0,2748	0,5067	0,2020
R ² Between	-----	-----	-----	-----	-----	-----
R ² Overall	-----	-----	-----	-----	-----	-----
Significance model	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*
Amount of observations	750	750	750	200	200	200
LM de Breusch-Pagan	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*
F de Chow	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*	0,0000*
Hausman Test	0,0000*	0,0011*	0,0000*	0,0000*	0,0307**	0,0000*

Note: * Significance at the level of 1%; ** Significance at the level of 5%.

Source: Survey data.

Table 3 - Determinants of Capital Structure considering the specific factors of the Firm per Country (Brazil, China, India and Pakistan)

According to data in Table 3, three models of panel were applied to each country. The first was for the total debt; the second, for short-term debt; and, finally, there is the long-term debt. R², which determines the explanatory power of each model, ranged between a minimum of 16.40% to the total book indebtedness of India (1c), and the maximum of 72.08% for the total debt of Brazil (1a).

In a separate analysis of the results, we note that in Brazil the variable business risk shows itself positively related to the three debt levels studied, with statistical significance at the level of 5%. This fact allows us to infer that the higher the business risk, the higher the debt of textile companies in Brazil. These findings converge with the study by Brito et al (2007), who also found a positive relationship between risk and debt in a study with the largest Brazilian companies. The authors emphasize that it would be expected that firms with high risk presented lower indebtedness. This was because they are more likely to contain sufficient cash flow to meet their commitments. However, this is not happening in the Brazilian scenario. This seems to be a dangerous practice and can, in severe cases, lead certain organizations to bankruptcy.

Also in Brazil, the variable growth opportunity is demonstrated to be statistically significant with the total book indebtedness and short-term debt. This result seems reasonable if the difficulties of competition that the Brazilian textile sector has had are taken into consideration. It becomes clear that in bad times, large investments can be dangerous because they carry high debt that can compromise the performance of the companies if the market does not react. Furthermore, the relationship found is consistent with the study by Nakamura et al. (2007). These authors have found a negative relationship between growth opportunities and indebtedness in a survey of 91 Brazilian public companies.

In China, there is initially the variable profitability negatively influencing the total book indebtedness of textile companies in the country. This relationship is convergent with the understanding of the *pecking-order* theory. It advocates, in the first order, that companies should make use of equity, understanding that the said source of funds has lower cost. Thus, its most intensive provides superior results (Myers & Majluf, 1984). This earned context in the Chinese textile industry is converging with the study by Tong and Green (2004). In their survey of the 50 largest public companies in China found that the *pecking-order* theory best explains the financing modalities in the country's companies. Besides, a recent study by Chen et al. (2014) has found the same relationship in robust sample of companies listed on China's stock market.

Still in China, the other three variables were significant at the 5% level with, at least, one of the three levels of debt studied. The size is negatively related to size with short-term debt and the financial slack influences negatively both total and short-term debt. Finally, business risk is negatively related to both total and long-term debts. Overall, our findings for Chinese textile industries differ from the results found by Chen et al. (2014), who investigated 1,481 companies listed on the Chinese Stock Exchange. They have found positive

relationship between size and debt, as well as the risk that positively influences the debt of the country's companies, despite showing little impact. However, it is noteworthy that our findings converge with the theoretical understandings of Brito et al. (2007). These indicate that smaller companies tend to borrow more in the short term compared to larger companies. These organizations use more intense short-term credit lines. Additionally, business risk negatively influences debt because the lower the risk, the greater becomes the borrowing capacity. The company possesses stability that provides leverage to its activity.

In the context of India, in turn, it is clear that profitability has a significant relationship with the three levels of debt. Profitability is negatively related to both total and long-term debt and positively related to short-term debt. On the one hand, these findings demonstrate that *trade-off* theory prioritizes the use of debt in order to enjoy tax benefits (Modigliani & Miller, 1963). On the other, they show that *pecking-order* theory initially supports the use of capital generated internally to finance the activities of the organizations (Myers & Majluf, 1984). This theory has input to explain how companies within the Indian textile sector should set its capital structure in order to maximize results. Singh and Kumar (2012) found in their survey of 1,448 Indian companies that *trade-off* theory is the one that best represents the type of indebtedness of companies in the country. The findings are partially converged with those for textile industries that make use of both *trade-off* and *pecking-order* theories.

Moreover, still in India, one can infer that size (negatively), tangibility (negatively and positively), financial slack (negatively and positively) and growth opportunity (negatively and positively) have influence on, at least, one of the debt levels studied. In this regard, especially the tangibility variable has the highest rates and indicates that companies with higher tangibility are most indebted in the long run. Those companies with lower tangibility tend to use more short-term funds. Carvalho, Kayo and Martin (2010) argue that capital investment decisions, specifically in tangible resources, are intended to generate future cash flows. They seek to make the company's financial performance sustainable in the long run. Therefore, it is reasonable that companies invest more in fixed assets. Thus, they increase their tangibility and tend to have higher long-term debt, as this is evidenced in India.

Finally, as for the companies in Pakistan, it was found that profitability negatively influences both total book and short-term indebtedness. These factors are significant at the 5% level. Thus, one can infer that Pakistani companies with less debt show higher profitability, thus confirming the assumptions of *pecking-order* theory. These findings converge with the studies research by Ahmed and Hanif (2011), who conducted research on Pakistani textile companies and by Sheikh and Wang (2011), who analyzed public companies listed in

Pakistan's Karachi Stock Exchange. Both studies conclude that the *pecking-order* theory best explains the modality of financing the country's firms.

In addition, tangibility in Pakistani textile companies is negatively related to the short-term debt and positively related to long-term debt. Financial slack has negative influence on both total and short-term debt and positive on long term debt. In this sense, emphasis lies on the fact that companies with high financial slack have greater long-term debt. This seems interesting because organizations can, this way, allocate, in the near future, resources in order to intensify their activities. Or they can even make investments in tangible assets, having time to generate future cash flows for subsequent discharge. As for tangibility, our findings partly converge with those by Sheikh and Wang (2011), who have inferred that there is a negative relationship between tangibility and debt in Pakistani companies.

4.2 Effects of Macroeconomic and Institutional Environments

In this sense, we try to understand existing economic and cultural differences among the countries under study. In Table 4 below, we show how they affect the capital structure of the textile companies:

Variables	Brazil, China, India e Pakistan (Consolidated)		
	ETC	ECPC	ELPC
	Fixed Effects	Fixed Effects	Fixed Effects
	(1e)	(2e)	(3e)
	Coefic.	Coefic.	Coefic.
RENT	-0,4429*	-0,0794	-0,3624*
TAM	-0,1313*	-0,0858*	-0,4445**
TANG	0,2990*	-0,1030**	0,4039*
FFIN	-0,0088**	-0,0645*	0,0557*
OC	0,0010	-0,0168	0,0177
RISC	-0,3282	-2,2310	-0,0907
CRES_PIB	0,0035	0,0052	-0,0014
PC_PIB	0,1609*	0,4480*	-0,2922*
INFL	0,0068*	0,0015	0,0053**
VOI_ACCT	-0,9457*	-1,2344*	0,2989
POL_STAB	-0,0290	0,2005*	-0,2318*
GOV_EFFECT	-0,2060	-0,2821**	0,0704
REG_QUAL	0,2283	0,4193*	-0,1904
RUL_LAW	0,0522	0,2228	-0,1828
CONT_CPT	0,1004	0,4190*	0,5150*
_CONS	1,5536*	-1,3646**	2,9248*
R ² Within	0,2211	0,4807	0,4067
R ² Between	-----	-----	-----
R ² Overall	-----	-----	-----
Significance Model	0,0000*	0,0000*	0,0000*
Amount of Observations	1.235	1.235	1.235
LM de Breusch-Pagan	0,0000*	0,0000*	0,0000*
F de Chow	0,0000*	0,0000*	0,0000*

Hausman Test	0,0001*	0,0000*	0,0000*
--------------	---------	---------	---------

Note: * Significance at the level of 1%; ** Significance at the level of 5%.
Source: Survey data.

Table 4 - Determinants of Capital Structure considering both specific factors of the Firm and Consolidated Institutional Macroeconomic Environment in Brazil, China, India and Pakistan

As shown in Table 4, the negative relationship between profitability with total indebtedness and long-term levels, whose significance is 5%, confirms the individual findings, overwhelmingly identified in each country. They pointed out the *pecking-order* theory as the one with greater power to explain how textile companies located in major producers in the sector in the world should behave in order to maximize their performance.

As for the institutional factors, it is clear initially that there is inverse and statistically significant relationship between the effectiveness of government, the population's active voice and participation in the decision making process with short-term debt at book value. These results suggest that when the government becomes more effective and the population participates actively in the country's decisions, short-term corporate debt becomes smaller. Likewise, the total debt also has an inverse relationship with the population's active voice and participation in the decision-making process.

Regarding macroeconomic aspects, the findings show a significant positive relationship relative to GDP per capita and short-term and total debt. The model suggests that countries with higher GDP per capita become appealing markets for investment. As a result, companies have more confidence in acquiring total and mostly short term debt – as it is evidenced by the magnitude of the coefficient. Together, these findings corroborate the claim by Brito et al. (2007). They infer that factors linked to economic and institutional environments may impact the way organizations are financed and, thus, they support the acceptance of hypotheses 1 and 2, drawn up for this study.

In addition, one can also infer that the long-term debt has an inverse relation to GDP per capita. In this context, considering the profile of the countries included in the sample, the institutional precariousness of these markets and the numerous existing institutional gaps, they make investments and long-term commitment in these uncertain and risky regions. Thus, the results of the study support arguments expressed by Oliver (1992) and Khanna and Palepu (1997). They suggest that, since instability and institutional precariousness can alter the rules of the game (Scott, 1995), they tend to prevent investments and long-term commitments from becoming effective in these regions.

5. Conclusion and Future Research

This study aimed at verifying the effects of both macroeconomic and institutional environments on the debt of textile companies within leading producer countries in the sector. The results show that Brazilian companies have, on average, higher debt and lower profitability. This finding consolidates empirical implications by Rangel et al. (2010), who have suggested that the textile industry in Brazil has been losing ground in the global market, mainly to Asian competitors. In this sense, especially stand out the good results realized by Pakistani companies, the strong growth of China's enterprises and the low risk business that Indian companies show in the sector. These are factors that consolidate Asia's production force in the textile industry worldwide.

Specifically regarding the determinants of capital structure, one can point out that in Brazil the forms companies employ to finance themselves are influenced by two variables, growth opportunity and risk in business. In China, profitability, size, financial slack and business risk are the determinants of debt. In India, the capital structure is affected by profitability, size, leverage, financial slack and opportunity for growth. Finally, in Pakistan, the determinants of capital structure are profitability, tangibility and financial slack. In addition, it was found that macroeconomic factors such as GDP per capita and inflation, as well as institutional aspects as the population's active voice and participation in decision-making, political stability, governmental effectiveness, quality of regulations and the country's control of corruption influence the way companies finance their activities. These findings converge with the ideas exposed by Brito et al. (2007), which call attention to the importance of considering the economic and institutional environment in studies about capital structure.

In reference to suitability with the two main theories of finance, *trade-off* and *pecking-order*, the second, mostly, proved to be superior in order to adequate the way of financing the textile industries under analysis. In this regard, Table 5 below summarizes the findings regarding adherence to the theories analyzed:

Brazil			China			India			Pakistan		
RENT	ETC (+)	NS	RENT (-)	ETC (+)	Pck-O	RENT (-)	ETC (+)	Pck-O	RENT (-)	ETC (+)	Pck-O
RENT	ECPC (+)	NS	RENT	ECPC (+)	NS	RENT (+)	ECPC (+)	Trd-O	RENT (-)	ECPC (+)	Pck-O
RENT	ELPC (+)	NS	RENT	ELPC (+)	NS	RENT (-)	ELPC (+)	Pck-O	RENT	ELPC (+)	NS

Note: NS – Non-Significant; Trd-O - *Trade-off*; Pck-O - *Pecking-order*.

Source: Survey data.

Table 5 - Summary of the results found in Brazil, China, India and Pakistan regarding adequacy with *Trade-off* or *Pecking-order* theory

Therefore, it is clear that textile companies in China, India and Pakistan, especially, have better performance when using their own funds to finance their operations. This finding was convergent with the assumptions suggested by Myers and Majluf (1984) regarding *pecking-order* theory. They have suggested that the utilization of resources generated internally by companies have lower cost and, therefore, provide increased profitability.

The different results among the countries, especially when the general good indicators found in the Asian market are compared with the poor performance of Brazilian organizations, can be understood and confirmed by recent theoretical propositions of Yasmin and Altaf (2014). They report that the southern Asian economies, such as those in China and India, currently show competitive advantage in the textile sector and demonstrate remarkable growth in changing trade patterns worldwide. In this regard, Pakistan emerges as a third force, with great potential to stand out in the industry, increasing its exports in order to maximize employment and production efficiency in the country (Yasmin and Altaf, 2014). This process can be understood as the nation's consolidation, according to the findings of the research.

Finally, it is sensible to emphasize that this study contributes to the understanding of one of the most important areas in finance, the capital structure (Correa et al., 2013). The study collaborates with researches within a major global industry. Regarding the textile sector, besides contributing to the knowledge of four emerging countries, Benachenhou (2013) argues that little is known about such countries, despite the growing occupation these countries have been systematically reaching in the world economy.

As a limitation, there is mainly the difference involving the number of companies analyzed in each country. They range from a minimum of 10 to a maximum of 150, in the case of Brazil and India, respectively. The analysis covered the period of five years. In Brazil, 50 observations were statistically accepted, thus reducing the effects of the limitation. For future studies, it would be pertinent to recommend the comparison of other industries located in emerging countries. Due to both globalization and growing importance of these nations, a

deeper knowledge of their particularities would be required, in special of their weaknesses and potentialities.

References

Indústria Têxtil e de Confecção Brasileira - ABIT. (2013). *Cenários, Desafios, Perspectivas e Demandas*, Retrieved July 26, 2018, from http://www.abit.org.br/conteudo/links/cartilha_rtcc/cartilha.pdf.

Ahmed, S., & Hanif, M. (2011). Determinants of Capital Structure in Textile Sector Pakistan. *Science Series Data Report*, 4(2), 1-21.

Bastos, D. D., & Nakamura, W. T. (2009). Determinantes da estrutura de capital das companhias abertas no Brasil, México e Chile no período 2001-2006. *Revista Contabilidade & Finanças*, 20(50), 75-94.

Bastos, D. D., Nakamura, W. T., & Basso, L. F. C. (2009). Determinantes da Estrutura de Capital das Companhias Abertas na América Latina: um Estudo Empírico considerando Fatores Macroeconômicos e Institucionais. *Revista de Administração da Mackenzie*, 10(6), 47-77.

Benachenhou, A. (2013). *Países Emergentes*, Fundação Alexandre de Gusmão, Brasília.

Brito, G. A. S., Corrar, L. J., & Batistella, F. D. (2007). Fatores Determinantes da Estrutura de Capital das Maiores Empresas que atuam no Brasil. *Revista Contabilidade e Finanças*, 18(43), 9-19.

Campos, A. L. S., & Nakamura, W. T. (2015). Rebalanceamento da Estrutura de Capital: Endividamento Setorial e Folga Financeira. *Revista de Administração Contemporânea*, 19(EE), 20-37.

Carvalho, F. M., Kayo, E. K., & Martin, D. M. L. (2010). Tangibilidade e Intangibilidade na Determinação do Desempenho Persistente de Firms Brasileiras. *Revista de Administração Contemporânea*, 14(5), 871-889.

Chen, J., Jiang, C., & Lin, Y. (2014). What Determine Firm's Capital Structure in China? *Managerial Finance*, 40(10), 1024-1039.

Confederação Nacional da Indústria - CNI. (2012). *Indicadores Industriais: um ano perdido para a indústria de transformação*, Retrieved July 30, 2017, from

http://arquivos.portaldaindustria.com.br/app/conteudo_24/2013/02/06/20/20130206100852258662a.pdf.

Correa, C. A., Basso, L. F. C., & Nakamura, W. T. (2013). A Estrutura de Capital das Maiores Empresas Brasileiras: Análise Empírica das Teorias Pecking Order e Trade-Off, usando Panel Data. *Revista de Administração Mackenzie*, 14(4), 106-133.

Demirgüç-Kunt, A., & Maksimovic, V. (1999). Institutions, Financial Markets, and Firm Debt Maturity, *Journal of Financial Economics*, 54(3), 295-336.

DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147-160.

Duan, H., Chik, A. R. B., & Liu, C. (2012). Institutional Environment and Capital Structure: Evidence from Private Listed Enterprises in China. *International Journal of Finance Research*, 3(1), 15-21.

Gungoraydinoglu, A., & Öztekin, Ö. (2011). Firm and country-level Determinants of corporate leverage: Some New International Evidence. *Journal of Corporate Finance*, 17(5), 1457-1474.

Jong, A., Kabir, R., & Nguyen, T. T. (2008). Capital Structure Around the World: The Roles of Firm- and Country-specific Determinants. *Journal of Banking & Finance*, 32(9), 1954-1969.

Khanna, T., & Palepu, K. (1997). Why focused strategies may be wrong for emerging market. *Harvard Business Review*, 75(4), 41-54.

Martins, H. C., & Terra, P. R. S. (2014). Determinantes Nacionais e Setoriais da Estrutura de Capital na América Latina. *Revista de Administração Contemporânea*, 18(5), 577-597.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48(3), 261-297.

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: correction. *The American Economic Review*, 70(3), 433-443.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187-221.

- Myers, S. C. (1977). Determinants of Corporate Borrowing. *Journal of Financial Economics*, 5(2), 147-175.
- Myers, S. C. (1984). The Capital Structure Puzzle. *Journal of Finance*, 39(3), 575-592.
- Nakamura, W. T. (1992). *Estrutura de Capital das empresas no Brasil: evidências empíricas*. Thesis. Universidade de São Paulo, São Paulo, São Paulo, Brasil.
- Nakamura, W. T., Martin, D. M. L., Forte, D., Carvalho Filho, A. F., Costa, A. C. F., & Amaral, A. C. (2007). Determinantes da Estrutura de Capital no Mercado Brasileiro - Análise de Regressão com Painel de Dados no Período 1999-2003. *Revista Contabilidade e Finanças*, 18(44), 72-85.
- North, D. C. (2005). *Understanding the process of institutional change*. Princeton University Press, Princeton.
- North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press, Cambridge.
- Oliver, C. (1992). The antecedents of deinstitutionalization. *Organization studies*, 13(4), 563-588.
- Pozzo, H. D. (2005). *Análisis de la Estructura de Capital de las Firmas y sus Determinantes en América Latina*. Dissertation. Universidad Nacional de La Plata, La Plata, Argentina.
- Rangel, A. S., Silva, M. M., & Costa, B. K. (2010). Competitividade da Indústria Têxtil Brasileira. *Revista de Administração e Inovação*, 7(1), 151-174.
- Scott, W. R. (1995). *Institutions and Organizations*. Sage.
- Sheikh, N. A., & Wang, Z. (2011). Determinants of Capital Structure: An Empirical Study of Firms in Manufacturing Industry of Pakistan. *Managerial Finance*, 37(2), 117-133.
- Silva, E. S. (2014). *Estudo da Estrutura de Capital das Principais Economias Emergentes e Desenvolvidas Mediante Cenário de Crise*. Dissertation. Universidade Federal de Pernambuco, Recife, Pernambuco, Brasil.
- Singh, P., & Kumar, B. (2012). Trade-off Theory vs Pecking Order Theory: Evidence from India. *Journal of Emerging Market Finance*, 11(2), 145-159.
- Terra, P. R. S. (2007). Estrutura de Capital e Fatores Macroeconômicos na América Latina. *Revista de Administração da Universidade de São Paulo*, 42(2), 192-204.

- Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *The Journal of Finance*, 43(1), 1-19.
- Tong, G., & Green, C. J. (2005). Pecking-order or trade-off hypothesis? Evidence on the capital structure of Chinese companies. *Applied Economics*, 37(19), 2179-2189.
- World Bank. (2015). *World Development Indicators*, Retrieved July 1, 2015, from <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>.
- World Bank. (2015). *Worldwide Governance Indicators*, Retrieved July 1, 2015, from <http://info.worldbank.org/governance/wgi/index.aspx#reports>.
- Yasmin, B., & Altaf, S. (2014). Revealed Comparative Advantage of Carpets and Textile Floor Covering Industry in Pakistan, India and China. *Journal of Economic Cooperation and Development*, 35(4), 113-134.