The Contingent Value of Business Group Affiliation: The Case of Debt Financing in Brazil

Autoria: Rodrigo Bandeira-de-Mello, Rosilene Marcon

Abstract

Business groups are a pervasive organizational form in emerging economies. Empirical results showed that group affiliates outperform independent firms. However, we tested the idea that the value of group affiliation is contingent to the firm political activity level in a society. From a sample of 332 firms in 14 industries we verified our hypothesis for the case of debt financing in Brazil. We gathered data on business membership and firm political connections (campaign contribution and board member political participation) for two different institutional settings, the second term of President Cardoso and the Lula's first presidential term, covering an 8-year period. We found strong support to our contingent model. The difference among affiliated and non-affiliated firms concerning the leverage-performance relationship varied whether the firm had political connections or not. The effects of business group moderation were greater among firms with no political contacts than among firms possessing political connections. These conclusions seem to indicate a persistence phenomenon in Brazil despite changes in the institutional setting.

1. Introduction

Business groups are pervasive in emerging economies. They are viewed as a response to the peculiar institutional characteristics. The usual definition takes business groups as a constellation of legally independent firms bounded together through economic or social linkages (GRANOVETER, 1995; KHANNA and PALEPU, 2000). Group affiliation is said to provide superior access to capital, labor and product markets in conditions of market failure, or political support for entrepreneurial initiatives or legal protection, or even legitimacy and social-based trust through linkages among group members. The general conclusion is that group-affiliated firms outperform their non-affiliated counterparts (YIU, LU, BRUTON, and HOSKISSON, 2007).

Research on business groups has evolved and constitutes a major topic in the research agenda of scholars interested in emerging economies. However, research on strategy and competitive advantage in Brazil has neglected the business group effects on firm performance (with some exceptions, for example Lazzarini, 2005). Industrial organization-based or Resource-Based researches in Brazil have emphasized the effects of specific strategic profiles, or superior resources, on firm performance. In the line of research of firm performance heterogeneity, observed performance variation of firms operating in Brazil has been associated to usual theoretical factors such as industry, firm and year (BRITO and VASCONCELOS, 2004). Some of these researches have tried to advance indigenous models which include relevant factors to local firms such as political alliances (BANDEIRA-DE-MELLO and MARCON, 2005) or the source of environmental turbulence (BANDEIRA-DE-MELLO, 2006).

The absence of business group effects in empirical research may foreclose premature conclusions about strategy effects on firm performance. In this paper, we addressed performance issues of business group affiliation in Brazil. But we did it in a novel way. We synthesized two previously separate streams of research, namely the economic institutional

approach of business groups and the non-market strategy research framework to advance and test the hypothesis that the value of business group affiliation in providing superior access to debt financing to its members is contingent to the level of firm political activities. Literature on business groups suggests that these organizational forms act as intermediary governances between group members and the capital providers. They fill the institutional void present in imperfect capital markets, in which weak intermediaries, such as investment banks, business analysts have to deal with information asymmetry and disclosure problems (KHANNA and PALEPU, 2000). High transaction costs impel the formation of groups aiming the provision of better debt or internal finance to group members. We argued here that business groups are not the only response to such imperfections. Firm political ties may substitute for group membership reducing the value of group affiliation.

We drew from these two bodies of literatures to test an alternative for filling the institutional void of capital markets in. We relied on a comprehensive sample of listed firms Brazil to test our interaction hypothesis between group membership and political connections. We verified these moderating effects in a longitudinal study covering two institutionally different periods in Brazil, the Cardoso presidential term (1999-2002) and President Lula's term (2003-2006).

The contribution of this paper is twofold. First, we fill the gap in the Brazilian literature on strategy and performance adding to the picture the role of business groups and firm political strategies. Second, our results from this Brazilian case, one of the largest emerging economies, allow us to specify the business group theory to take into account the contingent value of business group affiliation.

2. Theoretical framework

Conceptual and empirical research on business groups has occupied a central role in the agenda of strategy research in emerging markets. Yiu, Lu, Bruton, and Hoskisson (2007) identified four critical external contexts related to specific theoretical approaches to business groups: market conditions and the institutional economic theory (more specific the transaction cost theory), political factors and the political economy perspective, social relationships and the relational perspective, and external monitoring mechanisms from agency theory. We focused primarily on market conditions to explain business group formation and performance implications, and secondarily on the political perspective. More specifically, we applied the institutional void framework advanced by Khanna e Palepu (2000) to understand the phenomena in Brazil.

2.1 The institutional void framework

Institutional Economics has emphasized the role of institutions in organizing economic activity. Transactions among economic agents in a society are made possible thanks to well-defined, formal or informal, "rules of the game" (NORTH, 1981). According to this view, firms are conceptualized as deliberated efficient forms of organizing considering the transaction costs they face in doing business (WILLIAMSON, 1985). Without strong and adequate institutions transaction costs impede entrepreneurial activity and firms would have to rely on arm's length transactions (NORTH, 1981).

In a world of friction among agents in an imperfect market, business groups are an effective organizational response to these market failures. They are defined as "sets of legally separate

firms bound together in persistent formal and /or informal ways" (GRANOVETTER, 1994). Business groups are characterized by coordinating actions to increase firm survival and profitability in a hostile environment for business. They are pervasive in emerging economies. Examples are the Japanese *Keiretsus*, the Korean *Chaebols*, and many highly diversified *grupos* of firms presented in south America, and conglomerates in other late-developed countries (GUILLÉN, 2000; KHANNA and RIVKIN, 2001).

Third-party intermediation is an important characteristic of the institutional environment that provides the needed governance to reduce transaction costs among agents (NORTH, 1981, SPULBER, 1996). The context of emerging economies is generally characterized by weak intermediaries generating problems of information asymmetries, disclosure problems, and contract enforcement. Business groups are then an efficient response to fill this institutional void left by the absence of strong, specialized intermediaries (KHANNA and PALEPU, 2000).

Group affiliation reduces transaction costs in several markets, labor, products and capital markets (KHANNA and PALEPU, 2000). We focus here on the capital market. Intermediaries such as investment banks, business analysts, and regulatory agencies struggle to deal with weak-enforced and erratic legislation that generates disclosure problems, weak contract enforcement, and principal-principal agency problems to firms, entrepreneurs and investors. Group members overcome these problems of contracting in the capital market by internalizing its finance contracts. The costs of contracting in the market impel firms in a group to invest retained earning internally (GUILLEN, 2000). The group presence in several un-related industries may help smoothing out and compensating cash-flow problems, and cross-holding of debt and equity may provide efficient capital structure for group affiliates (Gonenc, Kan and Karadali, 2007; Ghatak and Kali, 2001; Lensink, Molen, and Gangopadhyay, 2003; Kali, 2003). The business group is an intermediate governance to reduce the transaction costs in contracting in the financial market.

This competitive advantage enjoyed by affiliated-firms in emerging economies focused on superior coping of hostile domestic market conditions. Guillen (2000) has found that business groups are more efficient under conditions of foreign trade and investment asymmetries. The unrelated diversification the business groups promote are more likely to pay off when institutions are not evolved (KHANNA and PALEPU, 2000). In such situation, non-market aspects may add another competitive advantage to business firms (LU and MA, 2007; KOCK and GUILLEN, 2001). Local firms may outperform foreigners because they deploy both market and non-market capabilities to access to two country resources, factors and institutions (WAN, 2005).

2.2 Firm political resources

The political economy perspective to studying business groups considers this organizational form benefiting from direct or policy-induced benefits when the state used it as a device to achieve political and economic policy objectives (YIU *et al*. 2007). However, Guillen (2000) found no evidence to support the hypothesis that the greater the autonomy and the size of a state, the greater the importance of business groups in its economy. The political aspect of the business group lives may be better understood by the rent-seeking view of groups exploiting its valuable political resources in exchange of favors from bureaucrats (KHANNA and PALEPU, 2000).

Non-market strategies, specifically, firm political strategies are usually deployed by firms to proactively influence public policy. Among usual strategies are lobbying, campaign contribution, advocacy advertizing, constituency building, coalition building, and personal services form public appointment (LENWAY and REHBEIN, 1991; HILLMAN and HITT, 1999; KEIM, ZEITHALM and BAYSINGER, 1984; BONARDI *et al*. 2006; KEIM, ZEITHAM, 1986; SCHULER, 1986; HILLMAN, ZARDKOOHI and BIERMAN, 1999; APLIN and HEGARTY, 1980). Extant models considers the existence of political markets, in which politicians, regulators, bureaucrats, members of the judiciary are in the supply side and firms, organized stakeholder groups and even foreign countries are in the demand side (BONARDI, HILLMAN and KEIM, 2005). The products exchanged in this political market are usually superior information, influence, uncertainly and transaction costs reduction (HILLMAN, ZARDKOOHI and BIERMAN, 1999).

The non-market strategy literature for developing countries usually admits indirect individual benefits for firms, such as asymmetric effects over firm regulations (SHAFFER, 1995; McWILLIAMS, VAN FLEET and CORY, 2002), and deterrence of foreign competition (SCHULER, 1996). However, the context of emerging economies favors a more personal business-government relation outcome, such as personal protection (PEARCE, 2001), bribes in exchange of favors, firm specific gains in entry decisions or first movers advantages in entry in countries with corrupt governments (VAALER, 2008; RODRIGUEZ, UHLENBRUCK and EDEN, 2005; FRYNAS, MELLAHI and PIGMAN, 2006).

Political resources such as contacts with the powerful enable deployment of valuable political strategies. For business groups, literature advocates they add another source of competitive advantage for group members (LU and MA, 2007; KHANNA and PALEPU, 2000, ENCARNATION, 1989; WHITE, 1974; AMSDEN, 1989; ROBISON, 1986). Extant empirical research on business groups either model political and economic aspects independently or packed in a group membership dummy variable (GUILLEN, 2000). They are usually treated as separate phenomena and their interacting aspect has not been well understood. As consequence, political contacts business groups possess are usually understood as an add-on feature that increases competitive advantage. We argued that this is not the whole picture.

3. The debt financing market in Brazil

Contrary to extant literature on business groups, we argued that the value of group affiliation was not independent to the level of political resources. In other words, the deployment of political resources and strategies is differential whether a firm is affiliated or not. Group membership and political resources are not independent but they interact to each other. We chose the Brazilian financial market context to derive and test our hypothesis on the interaction between group membership and political resources.

In emerging markets like Brazil institutions should be regarded as a variable that influence organizing and strategizing (PENG and HEAT, 1996). During the eighties, the federal government issued several stabilization plans and promoted economic shocks to control inflation rates that had risen up to four-digit figures (BAER, 1996). The Plano Real in early 1990's, in Cardoso's first presidential term, used exchange rates as a way to fight inflation what raised interest rates and generated a banking crisis (BAER, 1996). On the political side, corruption scandals abound in the press today as they show illegal campaign financing and

illegal connections among firms and the government, that is, the executive, the legislative and the judiciary.

Interference of the government into business affairs, political and economic instability at macro-levels, and corruption at micro-levels (HOSKISSON *et al*. 2000) resembles non-facilitative governments (PEARCE, 2001). In this context of lack of institutional trust (CHILD and FAULKNER, 1998), firms are more dependent on key resources possessed by interest groups such as the government. Business-government relationship helps firms to fill the 'institutional void' (KHANNA and PALEPU, 1997, 2000) providing "lubricating mechanisms" that reduce transaction costs. Pearce (2001) has found that in China and in other transition economies firms establish close connections with the powerful seeking for protection and privileged information.

Similar situation arises in Brazil, where the electoral system facilitates close relationships between politicians and firms. As Samuels (2002) argues, at-large electoral districts, the Brazilian states, make difficult for politicians to claim credit for their actions. If we add to this an open list of candidates, reelection becomes too costly. Politicians then trade 'pork' for money in order to invest in publicity of what they have done in office (SAMUELS, 2002).While there are others political strategies firms can use (MCWILLIAMS, FLEET and CORY, 2002), like hiring former government members for their boards (HILLMAN, ZARDKOOHI and BIERMAN, 1999), campaign financing is an important one, mainly in Brazil. While money plays a large issue in Brazilian electoral campaigns, most of them come from firms directly to candidates in exchange of personal services and not to support public policy (SAMUELS, 2001).

Financial resources are particularly important to firms in this context because while capital structure decisions affect performance they serve as a buffer to environmental turbulence (BANDEIRA-DE-MELLO e MARCON, 2006). However, several problems such as weak disclosure and information asymmetries increase the costs of transacting in financial markets in Brazil (COELHO and LIMA, 2007). We argued that firms may use political resources to reduce transaction costs in contracting debt financing in imperfect financial markets.

Decisions for an efficient capital structure for local firms operating in emerging economies may differ from those of developed economies, despite the theoretical debate found in international literature (DURAND, 1952; MODIGLIANI e MILLER, 1958, JENSEN e MECKLING, 1976; TITMAN e WESSELS, 1988). Fewer financing options, less developed capital markets, high interest and inflation rates, weak enforcement of contracts, principal-principal agency costs are some characteristics pertaining to the turbulent reality of local firms that impact the relationship between leverage and performance. Indeed, empirical work in Finance has shown that environmental turbulence is found to moderate the relationship between leverage and performance. While for less turbulent environments the leverage effect on performance is positive, for turbulent contexts this effect is negative (SIMERLY and LI, 2000). In Brazil, Abras *et al*. (2003) study the relationship among leverage, performance and environment in four sectors and found the same negative relationship in three sectors.

The negative relationship between leverage and performance may be associated with the preference of Brazilian firms to assume a low leverage position. Indeed, the Pecking Order Theory is preferred in Brazil over the Static Trade Off Theory (GOMES e LEAL, 1999; MOREIRA e PUGA 2000; LEMES Jr. *et.al,*.2002, KAYO e FAMÁ, 2004; PEROBELLI e FAMÁ, 2002, PEROBELLI *et al*. 2005; MEDEIROS e DAHER, 2008). The Pecking Order

Theory favors a less firm leverage because retaining earnings are the first option to fund firm activities and investments (MYERS, 1984; MYRES & MAJLUF, 1984). This option is related to the shortage of financial resources in the economy, and high debt costs. Firms who succeed in acquire better debt financing have superior access to long term loans in public development banks (such as BNDES) at a cost considerably lower that interest rates in short term loans offered by private banks (BARCELOS, 2002). If we add to this picture the shortage of long term loans, a weak secondary markets for securities (PRATES e LEAL, 2005), and the difficulties of local firms in accessing foreign financial markets (LA PORTA *et al*. 1998; DEMIRGUC-KUNT and MAKSIMOVIC,1999; RAJAN and ZINGALES, 1995; CARVALHO, 2007), the access of good debt financing become central do local firm performance.

Instead of promoting the reduction of transaction costs, the government intervention in the financial markets in Brazil is viewed as an instrument for politicians to bargain for political support and personal interests (SAPIENZA, 2004; DINÇ, 2005). Indeed, the history of the public banks (PINHEIRO, 2007; BAER, 2001), the corruption and the inefficiency of the judiciary system (LA PORTA et al. 1998; CARVALHO, 2007) support this view. Carvalho (2007) found that The greater the corruption the more difficult it is to access to long term loans.

Concerning the effectiveness of investor protection devices, Brazil is below the international average, implying high debt costs and a strong pecking order (LA PORTA *et al*. 1998), and confirming the proposition that firms may benefit from superior debt promoted by business group affiliation. However, the power of business-government relationships in providing superior access to debt financing may substitute for business affiliation superiority in providing better leverage through internal finance. Therefore, we posit the following hypothesis:

> *H1: Political connections are a substitute for business group membership in providing access to superior debt financing.*

We expected that the business group moderation on the leverage-performance relationship was affected by the development of political connections. Since the expected sign for the leverage effects on performance is negative, affiliated firms would be more likely to reduce this negative effect than non-affiliated firms. However, this difference was expected to diminish if we take into account the possession of political connections.

4. Data and methods

The availability of reliable data for strategy research in emerging economies is always problematic and challenging for researchers (HOSKINSSON et al., 2000). To attenuate these limitations, we constrained our population to publicly-traded companies and relied on multiple sources to increase data reliability. Listed firms provided audited information instead of self-reported figures of non-listed firms, while multiple sources allowed for data triangulation. Indeed, very much effort was taken to gather data on the three critical variables in this study, namely, firm financial and performance data, business group membership, and firm political ties for the period we defined in this longitudinal study: the Cardoso second presidential term (1999-2002) and the Lula's first (2003-2006). The choice of these two

periods allowed us to test our hypothesis in two different institutional settings. This enhanced robustness of our confirmatory findings.

The ECONOMATICA database provided the list of sample firms, and firm financial and performance figures. We started with initial list of the year of 1999. From 352 firms in the initial list, 20 firms disappeared until the end of President Lula's first term in 2006. These firms either went to bankrupt, merged or were acquired. In order to assure continuity to our longitudinal study, we only sampled firms who lasted from 1999 to 2004, covering two different presidential terms. IPOs in the period increased were not considered. The final sample size was 332 firms in 14 sectors.

Different from the Chilean case (KHANNA e PALELU, 2000), in Brazil there is not a formal definition for business groups nor an official list of firm group membership. We had to rely on two popular sources of the Brazilian business press: the EXAME "Maiores e Melhores" issues, and the database of "Balanço Anual". While we acknowledge that a more scientific measure is needed, the use of business press data has not been a problem in research on business groups. To collect data on several countries, Guillen (2000) relied on several business press magazines. To identify business groups in Brazil, he used the same EXAME data we used here. Khanna and Rivkin (2001) relied on the "America Economica" publication to identify major conglomerates in Brazil and on several other business press publications to collect group membership in other countries. EXAME "Maiores e Melhores" publications provided the composition of the largest 100 Brazilian groups to 2006, and the "Balanço Anual", the 300 largest from 1998 until 2004. We cross-matched information from these two sources to produce our final listing. We started with the EXAME composition and checked if they appeared in the other source. We decided to consider the 100 largest instead of broadening the sample to the 300 largest due to the threshold effect on group size. As found in Khanna and Palepu (2000)'s longitudinal study, a minimum group size exists for affiliates to captures benefits from group membership. Finally, we captured only enduring group effects through sampling only firms with stable group membership from 1999 to 2006.

The last critical variable to this study was political connections with the government. This is a very subtle phenomenon that resists to formal measurement. Previous researches have used informal interviews with business leaders or government members (PEARCE, 2001), firm donation to political campaigns or corruption scandals uncover by the popular press. We relied on two sources to provide proxies for the business-government relationship: donation for political campaigns and board member participation in the government. First, we used public data on firm donation to political campaigns. As discussed in the previous section, the Brazilian political texture makes politicians, political parties and firms are dependent to each other. Disclosure problems make this self-reported data somewhat problematic. Anecdotal events have shown that reported figures are from reality. On the other hand, Samuels (2001) found correlation between the office for which the candidate was trying election and its power to influence the sector of the donating firm in Brazil. It is, as the author said, much more advantageous for a construction company to have a governor as a friend than a senator. Therefore, to avoid using the amount donated we decided to use a dummy variable to discriminating between donating and non-donating firms in the two major campaigns for President, senators, national and state congressman, and governors, covered by the research period: the 1998 election for the 1999-2002 Cardoso term, and the 2002 election for Lula's presidential term in 2003-2006.

The other source we used for political connections was the participation of firm board members in the government. We analyzed the vitae of each board member of each of the 332 firms for each year of the 8-year period. Usual participation included national and state secretary appointments, president of govern-owned enterprises and public banks, in the ongoing or previous governments. Firm access to the government bureaucracy continues to be possible even when shifts in power occur. The paternalism in the Brazilian public administration renders such connections long-standing (NUNES, 2003) and valuable to the firms. This proxy has also been used elsewhere to capture personal services from the US official assignments in an event study that used the nomination reported in the business press (HILLMAN, ZARDHOOHI and BIERMAM, 1999). We also measured board member participation in the government by a dummy variable.

We intended to verify whether political connections served as a substitute for the intermediate governance form the business groups provided to their affiliates in accessing the debt financing market in Brazil. We expected the business groups effects on reducing the negative impact on leverage on performance diminished when political connections were taken into account. Since the expected sign for the leverage effects on performance is negative, affiliated firms would be more likely to reduce this negative effect than non-affiliated firms. However, this difference diminishes if we consider the possession of political connections. Group membership is modeled as a first-order moderator and political connections as a second-order moderator. Firm performance is the dependent variable. To test this hypothesis we estimated a three-way interaction regression model.

Besides political connections, group membership, and firm leverage, we used a set of usual controlling variables, past performance, industry fixed effects, and firm size to estimate the three-way regression model. Yearly values were averaged for each 4-year period. Firm performance was measured by the Return-on-Assets (ROA) profitability metric. Business group was assigned to "1" if a firm had donated or had a board member political participation in any one year of the period.

We estimated the coefficients using hierarchical OLS procedures (SPSS 13). Despite the discussion of whether OLS estimation would be adequate for modeling categorical variables indicating membership in nested designs (Khanna e Palepu, 2000), we found no severe departures from OLS assumptions of independent observations through the analysis of residuals. Normality was obtained for the continuous predictors, but not for the dependent variable. However, the ideal ratio of 15 cases per variable was obtained allowed non-severe departures from normality.

A close firm-by-firm screening on leverage and performance data indicated several aberrant cases. The non-inclusion of these observations generated several missing values. We regressed them on firm size, leverage and industry and we did not find significant relationships, indicating a random behavior. The pattern of missing values and its large number in respect of sample size allowed us to estimate coefficients using pairwise deletion of missing values. Influential multivariate outliers were detected and decided for exclusion using Cook's distance and residual analysis.

5. Results

5.1 Descriptive statistics

Table 2 reports descriptive statistics and t-tests of mean-differences between group affiliates and non-affiliates, and between firms possessing political connections and firms without government ties.

Table 2: Descriptive statistics and t-test of mean differences

Cardoso's term (1999-2002)

Variables	Political Connections		Group Membership		Pearson Correlation					
	without	with	non-affiliate	affiliate	1	2	3	4	5	6
1. ROA	-4,62	-1,30	-4,79	2,66^	1	0,127*	0,418^	-0,427	0,120	-,068
2. Sales	385.384	823.945*	433.693	1.063.538^		1	0,136*	0,024*	0,146^	0,181^
3. Past Profitability	2,85	10,70	2,81	5,86^			1	-0,141*	0,100	0,061
4. Leverage	144,45	185,26	147,01	210,97^				1	0,167^	0,157*
5. Group	n.a.	n.a.	0	1					1	0,189
6. Political Connections	0	1	n.a.	n.a.						1

Lula's term (1999-2002)

Variables	Political Connections		Group Membership		Pearson Correlation					
	without	with	non-affiliate	affiliate	1	2	3	4	5	6
1. ROA	-5,69	1,27^	-4,41	3,50^	1	0,115	0,664^	-0,362^	0,125*	0,155*
2. Sales	771.185	1.591.046	938.205	1.773.172		1	0,163*	0,054	0,082	0,109
3. Past Profitability	5,99	9,26*	6,62	10,16			1	-0,900	0,800	0,103
4. Leverage	162,50	165,39	159,84	182,52				1	0,80	0,013
5. Group	n.a.	n.a.	0	1					1	0,221*
6. Political Connections	0	1	n.a.	n.a.						1

* p<.05 ^p<.01

Firms with political connections were larger than their counterparts during the Cardoso's term and more profitable during Lula's term. Besides ROA, group membership discriminated sales, past profitability and leverage during 1999-2002. Group affiliates were larger, more leveraged and experienced greater performances than non-affiliates. As for the Lula's term, affiliates were more profitable even though there were no other significant differences. As hypothesized, correlation coefficients pointed to a negative correlation between ROA and leverage in both periods. Obviously, some group affiliates possess political connections. Table 3 shows the cross-tabulation of the two variables.

Table 3: Cross-tabulation of political connections and group membership

	Cardoso's term (1999-2002)		Lula's term (2003-2006)	
	non-affiliates (0)	affiliates (1)	non-affiliates (0)	affiliates (1)
no political connections (0)	241	22	217	16
political connections (1)	53	16	77	22

According to our sample, firms with political connections were more present during Lula's term, 99 firms against 69 firms in the 1999-2002 period. Among non-affiliated, firms that decided to pursue political associations increased from 18% in the Cardoso's term to 26% during Lula's term. This suggested a more political activity of firms during a latter period. The group affiliates were the same since we considered stable group membership. The great

majority of firms did not possess neither political connections nor belong to any of the largest 100 groups.

5.2 Regression analysis results

Table 4 reports standardized coefficient estimates and significance tests for both periods, the Cardoso's term (1999-2002) and Lula's term (2003-2006). Following Cohen et al. (2003), we tested the moderation effects by introducing the interaction terms in an hierarchical fashion and looking the significance of increments in R-squared. We mean centered leverage to reduce collinearity among the product terms their components. We found no variance inflation factors (VIF) greater than 2.50 in the regression results indicating no collinearity problems. The two final models of each period had an excellent good fit. Model 4 showed a 59% of explained variance, and Model 8, 75%. The hierarchical regression analysis suggested the presence of the three-way interactions in both periods, as the increment in R-squared and the respective coefficients are significant in all usual levels.

Table 4: Results of regression analysis with ROA as the dependent variable

Variable	Cardoso's term (1999-2002)				Lula's term (2003-2006)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Sales	.203** (2.814)	.321*** (4.984)	.340*** (5.611)	.346*** (5.816)	.048 (.653)	.071 (1.075)	.071 (1.260)	.070 (1.268)
Past Profitability	.376*** (5.251)	.279*** (4,705)	.254*** (4.550)	.249*** (4.530)	.672*** (10.445)	.620*** (11.849)	.617*** (13.871)	.618*** (14.068)
Industry fixed effects	Included	Included	Included	Included	Included	Included	Included	Included
Leverage		-.564*** (-10.576)	-.761*** (-12.459)	-.809*** (-13.014)		-.473*** (-9.279)	-.805*** (-13.408)	-.829*** (-13.764)
Political connections		.034 (.661)	.000 (-.008)	.013 (.256)		.151** (2.936)	.172*** (3.925)	.183*** (4.208)
Group membership		.092# (1.740)	.047 (.886)	.046 (.887)		.115* (2.251)	.123** (2.810)	.111* (2.553)
(2-way interaction) Political connections*Leverage			.258*** (4.585)	.335*** (5.478)			.397*** (7.414)	.433*** (7.838)
(2-way interaction) Group membership*Leverage			.140** (2.609)	.265*** (3.919)			.158*** (3.745)	.223*** (4.398)
(3-way interaction) Political connections*Group membership*Leverage				-.199** (-2.953)				-.114* (-2.245)
Constant	-30.973*** (-3.541)	-46.013*** (-5.873)	-48.200*** (-6.552)	-49.184*** (-6.788)	-15.401# (-1.702)	-22.088** (-2.808)	-23.034*** (-3.451)	-23.383*** (-3.548)
R2-adjusted	.228	.505	.580	.593	.445	.645	.745	.751
Δ F	5.34	41.93	20.25	7.78	9.869	31.230	31.781	5.041
p-value Δ F	.000	.000	.000	.006	.000	.000	.000	.026

p <. 010 *p <. 05 **p < .01 ***p < .0001

To accurately interpret the role of both moderators we looked the results of final Models 4 and 8. First, as expected, the negative coefficients for leverage indicated its negative effects on performance for non-affiliated firms with no political connections, the reference group. The two-way interaction term coefficients involving leverage represented the conditional moderating effect constrained to the groups of non-affiliated firms with political contacts and to affiliated firms without political connections. Their positive signs suggested superior debt financing in both periods, as these firms reduced the negative effect of leverage on firm performance, compared to firms in the reference group.

The significance of the three-way interaction terms conveyed the idea that the dynamics of business group moderation on leverage effects was moderated by political connections. More specifically, the difference among affiliated and non-affiliated firms concerning the leverage-performance relationship varied whether the firm had political connections or not. If fact, the negative signs suggested the effects of business group moderation were greater among firms with no political contacts than among firms possessing political connections.

Consistent with hypothesis H1, political connections acted as a substitute for group membership benefits. Instead of relying on group internal finance, cross-holding of debt and superior loan warranties, independent firms holding these connections were also able to reduce the negative effects of leverage in performance. Table 5 presents the estimated slope coefficients of the relationship between leverage and performance, for each level of both moderators. Note that the difference among affiliated and non-affiliated firms is greater among firms with no connections. That is, if non-affiliated firms decide to pursue the development of political connections, they will profit from similar benefits of affiliated firms concerning debt financing. For instance, for the Cardoso's term, the slope difference among group members and non-members is .265 (-.544 – [-.809]) for firms connections. This difference diminishes to only .066 (-.408 – [-.474]) for firms with political contacts. The three-way product term coefficient is precisely the difference of these slope differences, that is, -.199 (.066-.265), which showed to be significant at all levels. Besides, the benefits of investing in political connections are greater for non-affiliated, who could experience a reduction from -.809 to -.474 (which is the significant coefficient of .335), while for the affiliated firms these reduction would be from -.544 to -.408 (.136).

Table 5: Slope coefficients for the leverage-performance relationship

	Cardoso's term (1999-2002)		Lula's term (2003-2006)	
	non-affiliates (0)	Affiliates (1)	non-affiliates (0)	Affiliates (1)
no political connections (0)	-.809	-.809+.265 = -.544	-.829	-.829+.223 = -.606
political connections (1)	-.809+335 = -.474	-.809+.265+.335-.199 = -.408	-.829+.433 = -.396	-.829+.433+.223-.114 = -.287

Hypothesis H1 hold for both periods despite institutional changes. Political connections acting as a substitute for group membership benefits in acquiring good debt was found to be a stable pattern reproduced in both Cardoso's term (1999-2002) and Lula's term (2003-2006).

6. Discussion

Business group empirical research has failed to take into account the interaction effects between the economic and the political perspective. They are usually viewed as complementing each other to provide competitive advantage to affiliated firms. Group members may benefit from internal finance, such as compatibility of cash flows of groups broad scope operation and cross-holdings of debt and equity (GONENC, KAN AND KARADALI, 2007; GHATAK AND KALI, 2001; LENSINK, MOLEN, AND GANGOPADHYAY, 2003; KALI, 2003), and also from political connections to attract investments and exchange favors.

Extant literature views these two effects as acting independently to each other. We challenged this idea by positing and testing the hypothesis that political connections substitutes business

affiliation benefits in accessing good debt financing. We investigate two different institutional setting for the Brazilian debt financing market, the Cardoso's second presidential term (1999-2002) and President Lula's first (2003-2006). We found strong evidences to support our substitution hypothesis. Political connections moderate the business group effects on the leverage-performance relationship.

Our results have implications to the business group literature and to strategy research in Brazil. Contrary to extant literature (LU and MA, 2007; KHANA and PALEPU, 2000; MAKHIJA, 2004; KOCK and GUILLEN, 2001), political connections did not seem to be a source of competitive advantage for business members in the financial market. Independent firms were able to match these advantages. The marginal value of investing in political connections was found to be greater among non-affiliated firms than member firms indicating a negative interaction or a substitution effect among group membership and political connections. A similar result was found by Yiu, Bruton and Lu (2005)'s study on China that showed that endowed government resources did not help business groups to create a competitive edge.

Another implication of our results is that the value of business groups is contingent. Contingency approach to business group value has already been suggested in the case business group affiliates participating in international joint ventures (Lu and Ma, 2007). We suggest that any contingency model business groups and financial market should consider the level of political activity of firms in a society. The greater this level, the lesser the value of group membership in acquiring good debt.

The contingency idea implies the logic of fit among different external and internal characteristics of business groups. Indeed, Yiu et al. proposes a model of alignment between distinct roles of group affiliates in the environment and coupling and order between the parent firm and its affiliates. The authors suggest fit organizational forms for each case in the crossing of these two dimensions. For the case of groups having a political role and for the case of groups filling institutional economic voids, the model suggests emphasis on internal transactions. According to our results, developing external transactions with the support of the government to access better debt financing conditions diminishes the group affiliation superiority.

Finally, our results showed that business groups are important phenomena in Brazil and strategy research should take them into account. Existing empirical models to measure competitive advantage for firms in Brazil have not controlled for business groups effects or political connections. This absence may confound results.

7. **Conclusion**

Capital structure decisions are important to firms operating in emerging markets since environmental turbulence is negatively related to firm performance. Debt financing capabilities is therefore important to build competitive advantages in imperfect financial markets. Business groups are a solution to these problems, but their value is contingent to the level of firm political activity in the society. Independent firms may be able to develop similar capabilities as long as they develop valuable political resource. These conclusions seem to indicate a persistence phenomenon in Brazil despite changes in the institutional setting.

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