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The debt wish: Rent seeking by business groups and the structure of corporate borrowing in India

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Abstract Business groups play an important role in emerging economies. The transactions cost perspective, which has dominated our understanding of such groups, argues that the emergence of business groups is a natural response to market failures in developing countries. In this paper, we propose an alternate theoretical perspective – the rent-seeking view – that takes these groups as engaging in coordinated lobbying for the capture of rents created by governments. We develop and implement an empirical strategy to test for the rent-seeking view drawing from the property rights theory of corporate finance. We find strong empirical support for the rent-seeking view using a large cross-sectional data-set of firms in India.

Keywords Business groups · Rent-seeking · Transactions cost · Indian industry.

1. Introduction

Business groups, which are confederations of legally independent firms, are an important feature of emerging economies (Leff, 1978). In recent years there has been considerable interest, both in academic and in policy arenas, as to whether business groups enhance or diminish social welfare in these economies. The dominant perspective on business groups, the transactions costs minimizing perspective, argues that these groups play a significant role in allowing firms affiliated with these groups overcome obstacles of missing or inefficient markets and weak institutions that are an endemic characteristic of emerging economies (Leff, 1979; Khanna & Palepu, 2000).

According to the transactions cost minimizing view, financial markets in emerging economies are characterized by weak corporate governance and control, in part due to underdeveloped financial intermediaries and in part due to weak legal institutions. The information

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and agency problems associated with these market imperfections increase the cost of external financing of investment. Product and input markets suffer from weak contract enforcement that can lead to a diminished volume of trade as buyers and sellers fear opportunistic behavior.

By building up a brand name and a reputation for fair dealing, business groups can reduce transactions costs for firms to access technology and capital whether from domestic sources or abroad, or by trading internally, where the economic and social costs of opportunistic behavior can be large. Thus, the transactions costs view of business groups (Goto, 1982) argues that such groups help to resolve market failures in emerging economies, and consequently, can enhance economic welfare in these economies.

In this paper, we propose an alternate perspective on business groups, where firms affiliated to business groups are rent-seeking (Krueger, 1974; Buchanan, Tellison, & Tullock, 1980; Tullock, 2005). In economies where the government controls many aspects of industrial and financial activities, business groups engage in coordinated political lobbying for licenses, subsidies and other resources. The political power over policy domains that is gained is used by groups for their own ends, and this allows inefficient groups to prosper at the cost of the more productive stand-alone firms (Tomlinson, 1993). This is a view also articulated by Granovetter (2005: 432), who states that: "groups do not emerge to solve problems, but rather because of special skills and abilities of entrepreneurs, families and alliances to mobilize resources." The rent-seeking view of business groups would see these groups as diminishing economic welfare in emerging economies.[1]

So far, in the literature, much of the empirical research on business groups has concentrated on whether affiliation in a business group creates, or destroys, value for firms in the group relative to unaffiliated firms, and whether affiliated firms face less finance constraints on investment than unaffiliated firms (Chang & Choi, 1988; Hoshi, Kashyap, & Scharfstein 1991; Khanna, & Palepu, 2001; Lensink, Van Der Molen, & Gangopadhyay, 2003). The evidence here has been mixed. While affiliated firms do seem to face a lower degree of finance constraints on their investments, firms affiliated with groups are not necessarily more profitable than unaffiliated firms.

These studies, however, do not directly test the two alternate views of business groups. Thus, the results in these studies cannot be interpreted to provide support for one view over another. For example, an affiliated firm may be seen to be more profitable than an unaffiliated firm even if the business group the affiliated firm belonged to was rent-seeking. This could happen if political lobbying, on the part of the group, leads to greater expropriation of subsidies and licenses for its firms that artificially increase firm value, either directly, via lower costs, or indirectly, via greater market power. Similarly, an affiliated firm may face less finance constraints than unaffiliated firms if the political clout of the group enables its firms to obtain loans at preferential rates or directed credit from public financial institutions.[2]

[1] In addition, there is a wealth of evidence on Asia and Europe. See Hamilton and Biggart (1988), Wade (1990), Gerlach (1992) and Whitley (1992) and for studies of a variety of Asian as well as European economies which has established the power of business groups in the political domain that allows them to acquire substantial resources.

[2] On the role of business groups and their political clout, there is now a body of work on South Asian economic history providing details that correlate with contemporary concerns. Bayly (1993) and Tomlinson (1993) describe how in the eighteenth century merchant and service groups were the intermediaries between the agricultural economy and the state. These groups were able to organize and finance long distance trade through a large network of commercial paper. From the late nineteenth century managing agency houses, which organized and managed several enterprises, had been set up by British expatriates. These managing agencies developed wide spread networks throughout much of colonial India, and their presence provided a

In this paper, we pursue a different empirical strategy to test whether the rent-seeking view has stronger empirical support. We examine the differences in debt structure between affiliated and unaffiliated firms, exploiting the differences in cash flow and control rights associated with the various types of debt. We argue that, in the context of weak legal institutions and lax enforcement mechanisms characteristic of emerging economies like India, the crucial difference between the types of debt relates to the insecurity of property rights and the ownership of debt. In other words, whether the borrowing is secured or unsecured and whether the borrowing is from private or public sources are important contingencies.

Using a property rights theory of corporate finance, we hypothesize that if the rent-seeking view of business groups is correct, then unsecured private creditors would be less likely to lend to affiliated firms. Our empirical context is India, an important emerging economy that has figured prominently in the existing literature on business groups. The Indian economy has several hundred business groups, and detailed data are available on the structure of debt, the group affiliation of firms and ownership variables for a large cross-section of both affiliated and unaffiliated firms.[3]

In the next section, we elaborate on our hypotheses that rent-seeking business groups would exhibit a certain type of debt structure. Section 3 presents the data and the variables to be used in the regression analysis and discusses the econometric methodology. Section 4 motivates the empirical analysis by first presenting some descriptive statistics and then presents the results of the regression analysis. Section 5 concludes the article.

2. The relationship between rent-seeking and debt structure

2.1. Types of debt in India

In India, firms borrow using five types of debt instruments. These are: (1) short-term borrowings from commercial banks; (2) long-term borrowings from term-lending institutions, which we will call institutional borrowing; (3) borrowings in the form of debentures which are corporate bonds that in some, but not in all, cases are converted to shares after a specific lock-in period; (4) fixed deposits, which are deposits that yield a specified rate of interest over a given period of time from the market; and finally (5) a residual category called 'other borrowing' which includes trade credit and other funds accessed from the inter-corporate market.

The four major types of debt can be classified according to the various characteristics of debt: whether the debt is monitored or arm's length, whether it is short-term or long term, whether it is provide by state-owned enterprises or privately owned and whether the debt is secured or unsecured. We provide such a classification in Table 1. Much of the classification

mimetic impetus for Indian entrepreneurs to resuscitate and reorganize the groups that had lain dormant for perhaps a century (Ray, 1979).

[3] A key feature of the colonial Indian state had been the close ties that the British mercantile and industrial interests had with the British administration (Bagchi, 1972). Political alliances between British commercial interest and the British administration in India were commonplace (Chapman, 1985). Similarly, the Indian business groups had established close relationships with the nationalist political groups that were fighting for India's independence (Chandra, 1975). Thus, a close, and symbiotic, relationship between business groups in general, whether these were British managing agency houses or Indian business groups, had existed for a considerable period of time with the government of the day and with the political bodies waiting, in the wings, to take over power after a change of regime (Goswami, 1985), based on the establishment of trust within a client and patron relationship (Morris, 1963).

Table 1 A typology of corporate borrowing

	Informed or arm's-length?	Short-term or long-term?	Private or state owned?	Secured or unsecured?
Bank borrowing	Monitored	Short term	Quasi-private	Unsecured
Institutional borrowing	Monitored	Long term	State	Secured
Debentures	Arm's length	Long term	Private	Secured
Fixed deposits	Arm's length	Long term	Private	Unsecured
Other borrowing	Both	Both	Both	Both

is self-explanatory, except the classification of banks as 'quasi-private' and institutional borrowing as being wholly 'state-owned', where further elaboration is necessary.

In 1969, the principal commercial banks, making short-term working capital loans to industry, were almost fully nationalized and continue to remain under state-owner ship. While barriers to entry of private banks have been relaxed since 1991, and there has been significant entry of domestically owned and foreign owned private banks in India, commercial banks in India now are pre-dominantly state-owned (Sen & Vaidya, 1997; Sarkar & Agarwal, 1997).

We argue, however, that in spite of the ownership of these banks being with the state, it would be more accurate to characterize the ownership of these banks as being essentially 'quasi-private'. This is for two reasons. Firstly, all nationalized banks in India had long histories operating as private banks, and even the largest state-owned bank, the *State Bank of India*, was privately owned till 1955. These banks were supervised by the Reserve Bank of India, India's central bank, which has an established tradition of independence from the government in a *de jure* sense. Thus, for commercial banks in India, control rights remained primarily with bureaucrats rather than being vested with politicians running the Ministry of Finance of the central government, many of whom became notorious for running *loan fairs* in the late 1980s.

With respect to institutional borrowing, financial institutions, making long-term loans which are secured on the assets bought with these loans, were established, de-novo, by the government after independence. For example, the *Industrial Finance Corporation of India* was set up in 1948, and the *Industrial Development Bank of India* in 1964. These are the two major suppliers of long-term loans to Indian industry. There are also a number of specialized long-term lenders, owned by the government, such as the *Industrial Reconstruction Bank of India*, the *Small Industries Development Bank of India* and the *Shipping Credit and Investment Corporation of India*. Also, the state owned *Life Insurance Corporation of India*, given the nature of its business, has extremely large piles of cash that it deploys in various ways, through the purchase of equity shares and the provision of debt, in the corporate sector.[4]

Thus, unlike in most advanced market economies, long-terms loans to Indian firms are principally provided by specially created state-owned financial institutions. Unlike commercial banks, institutional lenders were managed by the Ministry of Finance, a unit of the Government of India. Thus, in this case, control rights for these institutions resided unambiguously with politicians, and there is a substantial amount of soft money provided to industrialists by these financial institutions (Majumdar, 1998). In addition, every state in India has bodies

[4] The only major private-sector financial institution in India is the *Industrial Credit and Investment Corporation of India*; however, on its board of directors the government has a presence and in practice it behaves much like a state-owned enterprise.

such as a *State Financial Corporation* or a *State Industrial Investment Corporation* to provide funds.

2.2. Hypothesis as to debt security

We focus on the distinctions between secured and unsecured debt, and on state versus the private ownership of debt. Since these types of debt have distinct control rights associated with each of them, predictions as to what type of control rights would be more likely to be exercised by lenders when the firms were group affiliated or not group affiliated can be made for these different types of debt.

Our first hypothesis relates to debt security. We begin by addressing the implications of unsecured versus secured borrowing. Secured creditors provide funds against collateral, which can be claimed in the event that the firm defaults on the borrowing. Unsecured creditors, on the other hand, cannot do so. More important, if the firm were to become bankrupt, secured creditors have higher order priority on claims over the firm's assets over unsecured creditors. The insecurity with property rights, that is associated with unsecured lending, would imply that unsecured creditors would be reluctant to lend to firms which they consider to be have low potential for growth, or firms which are of higher risk.

This prediction on unsecured versus secured debt hence provides our first testable hypothesis on which type of borrowing a 'rent-seeking' group affiliated firm is more likely to access relative to unaffiliated firms. If the rent-seeking view of business groups was correct, lenders would be aware that these groups are a collection of inefficient firms which have remained profitable by virtue of their ability to exert coordinated political lobbying for subsidies or protection. Unsecured creditors would be reluctant to lend to such firms, as they would be concerned with the recovery of their investments if these groups were to no longer enjoy political patronage, or if funds from the more profitable group firms they had lent to were diverted to the unprofitable firms in the group via tunneling. Thus, the rent-seeking hypothesis would predict that group firms are less likely to access unsecured sources of funds and more likely to access secured sources of funds than unaffiliated firms.[5]

Hypothesis 1: The proportion of borrowing from unsecured creditors such as commercial banks and fixed deposit holders will be lower for group-affiliated firms.

2.3. Hypothesis as to financial institution ownership

We next address the possible implications of state owned verses privately owned sources of funds. While in theory, state owned financial institutions are owned by the public, the *de facto* control rights belong to the state. Government ownership obviates collective action problems, as there are just a few government owners that can easily influence the management of firms to adopt the requisite strategies. This attribute ought to ensure superior monitoring and firm

[5] Two institutional features of the Indian economy provide further reason to believe that unsecured creditors will behave quite differently than secured creditors. This is the existence of weak bankruptcy laws and costly exit procedures (Anant, et al., 1992). The bankruptcy procedure is time-consuming, with firms rarely being shut down. There are also significant legal barriers to exit in India, with firms not allowed by the government to retrench workers or shut down and to sell their land without permission of the relevant local government authorities. Thus, while for all creditors the Indian bankruptcy and exit procedures are costly, these are even more so for unsecured creditors who are last among debtors to have a claim on the firm's assets. These creditors have much greater incentives to ensure that the firms they lend to are efficient and have high potential for growth.

performance, since ownership is not diffused among many owners but there is only one owner that can exercise strong control (Majumdar, 1998). Thus, the enjoyment of property rights will not be compromised. Nevertheless, while the agents of the state, the bureaucrats, have concentrated control rights, they have no significant cash flow rights because the cash flow rights of the firm is effectively dispersed amongst the tax payers of the country (Shleifer & Vishny, 1997).

The property rights view suggests that lending by state-owned lenders would be less determined by pure economic criteria and more motivated by political objectives. In fact, several studies have shown that countries with higher government ownership of banks are associated with lower financial development and lower growth of per capita income and productivity and that the lending behaviour of state-owned banks is politically determined (La Porta et al., 2002; Majumdar, 1998; Sapienza, 2004).

The above argument provides us with our second testable hypothesis on which type of borrowing a rent-seeking group affiliated firm is more likely to have access to relative to unaffiliated firms. If the rent-seeking view was correct, group affiliated firms would be more likely to borrow from state-owned financial institutions relative to unaffiliated firms. These firms would prefer to use their political connections to capture 'soft' funds where were less likely to be monitored. Knowing full well the reality of the political economy within the Indian context, group affiliated firms would use the full resources of the group in organizing funds for their activities from the state owned financial institutions.

Hypothesis 2: The proportion of borrowing from state-owned financial institutions will be higher for group-affiliated firms.

3. Data, variables and estimation strategy

3.1. Data

This study has used firm-level data for 1,026 Indian firms listed on the *Bombay Stock Exchange* for the period 1988 to 1993 to evaluate the predilections of group affiliated and unaffiliated firms for different types of debt. The data were collected from multiple sources. The *Center for the Monitoring of the Indian Economy* (CMIE) provided initial data. The corporate borrowing data was taken from the balance-sheets of individual firms. Thereafter, details on ownership and aspects of firm behavior and performance were collected from the *Bombay Stock Exchange* and the office of the *Registrar of Companies* in the *Ministry of Law, Justice and Company Affairs* of the Government of India.

The principal limiting factor was the availability of ownership data, which were not readily available for all firms. In conjunction with the guidance provided to us by officials of the *Department of Statistical Analysis and Computer Services* of the Reserve Bank of India, we were able to collect ownership data for the sample of firms included in the study. The data collected are cross-sectional and not time-series because of difficulties associated with obtaining consistent ownership patterns data over extended time periods. We cannot construct a cross-sectional and time-series panel data set. Each observation in the data set belongs to one specific year.

3.2. Dependent variables

Our data base provides details of the composition of the total debt that each company has. Given the relative level of debt within the firms' capital structure as a whole, which we

control for using the debt equity ratio *(DEBT)*, we estimate the determinants of different types of debt for the companies studied. Our five dependent variables of interest are the types of debt held by firms in India: (1) bank borrowings *(BANK)*; (2) borrowings from financial institutions *(INST)*; (3) debentures *(DEB)*; (4) fixed deposits *(FIXED)*; and (5) other borrowings *(OTHER).* These five variables are measured as proportions of total debt, rather than in absolute terms.

3.3. Independent variables

Our principal independent variable is group affiliation *(GROUP)* which is a dummy variable that takes the value one if the firm is affiliated to a business group, and is zero otherwise. There are several business groups in India, with older ones such as the *Tatas*, the *Birlas*, the *Dalmias*, the *Hukumchands*, *Walchand Hirachand*, the *Sarabhais*, the *Lalbhais*, and *Shri Rams* being complemented and supplanted by many other groups, many of them new, such as the *TVS Group*, the *Reliance Group*, the *Piramals*, the *Anands* and many others too numerous to mention. The *Center for the Monitoring of the Indian Economy* classified each company level observation in the data base as belonging to one of the business groups, if it did so, and there were, of course, several observations that were for independent companies without any such affiliations.

We also introduce several control variables that may impact on the choice of debt structure by firms. The choice of debt made by firms could also depend on the type of owner that had a higher degree of ownership in the firm. Firms with a higher degree of state ownership would more likely tap public sources of funds rather than private sources and could prefer long-term debt, where the degree of monitoring would not be as large as short-term debt. The opposite would be true for privately owned firms, whether foreign and domestically owned. We introduce the extent of government ownership *(STATE),* the extent of foreign ownership *(FOREIGN)* and the extent of domestic institutional and corporate ownership *(DOMESTIC)* as control variables.

We introduce two other control variables for ownership: directors' share in equity *(DIRECTORS)* and the ownership of shares of the top 50 shareholders. *(TOP 50 SHARE)* According to the property rights view of equity structure, the greater the cash flow rights of managers in a particular firm, the more likely is it that the managers will not divert the firm's assets to their own ends, and will be interested in maximizing the value of the firm. This would suggest that such firms with lower potential agency would be more likely to opt for short-term debt than long-term debt, and for arms-length debt over monitored debt. Concentrated ownership in the form of higher equity ownership among the top 50 shareholders would fulfill the same objective as large shareholders can engage in concerted action to discipline managers, and have the incentive to do so (Shleifer & Vishny, 1997). All ownership variables were also measured on a 0 to 100 continuous scale as were the debt variables. We, thus, comprehensively control for the equity capital structure of each firm and its probable impact.

Additionally, we include firm size *(SIZE)*, which is measured as the logarithmic value of sales, the age of the firm *(AGE),* the debt to equity ratio *(DEBT)* and a dummy variable *(LIBERAL)* as control variables. Large firms have a greater variety of capabilities and can enjoy economies of scale (Penrose, 1959). Additionally, larger firms can exploit market power (Shepherd, 1986), both in product-markets as well as in factor-markets, an issue particularly germane to India where institutional factors have fostered rent-seeking (Bardhan, 1984; Rudolph & Rudolph, 1987; Marathe, 1989), and are able to earn greater profits. Thus, they would be more able to access unsecured sources of funds such as bank borrowing and fixed deposits as compared to smaller firms. In addition, large firms could also reflect industry

related factors, influencing minimum scale of operations, as a consequence of which some firms are relatively larger than others in a cross-industry data set.

A similar argument could be made for older firms, which are more established, that have built up a greater reputation for themselves, in their abilities to seek rents. We also add a variable that interacts the *AGE* and *GROUP* variables since older group firms could well have substantial experience in rent-seeking vis-à-vis many of the younger group affiliated firms. Another control variable is the debt to equity ratio, controlling for the existing extent of leverage, to which we have already made reference.

Next, we add a dummy to control for time-specific shocks to the debt structure variables due to changes in regulatory policies that may have occurred during the period under consideration. The year 1991 was a critical landmark in the economy of India as far-reaching policy changes took place with the opening up of the economy to foreign investment and the forces of competition. In a sense, a profound mindset change occurred in policy-making and its likely impact is to have forced the pace of change in the mind-set of entrepreneurs. Our observations straddle the period 1998 to 1993 and enable us to account for the impact of liberalization, since observations within the data base are available for the period before liberalization as well as after liberalization. The *LIBERAL* variable is a dummy variable that takes on the value 0 if the observation is for the years prior to liberalization and 1 if the observation is for 1991 and later years.

We also include a variable (*SALES GROWTH)* which controls for past sales growth. It is a variable that reflects those exogenous industry related factors that might influence growth of firms as well as endogenous managerial factors that enable firms to grow. In addition, firms that display relatively higher growth in sales might desire greater levels of financial accommodation from lenders so as to fund their growth.

3.4. Estimation issues

The predilections for each type of debt by firms are strategic decisions that are not made independently of each other. Concomitantly, there are likely to be various unobserved firm-specific features and features within the competitive and institutional environments and consequent strategies that are also related to each other. We treat the five separate equations, where each type of debt is a dependent variable, as a system of equations which we estimate using the Seemingly Unrelated Regression Estimation (SURE) method. To achieve efficient estimates, it is necessary to estimate the equations for the five dependent strategy variables simultaneously and allow for the correlation of error terms between the equations.

A subsidiary estimation issue relates to treating the *SIZE* variable as endogenous. Treating the size variable as endogenous helps us deal with the issue of firms' heterogeneity. Large firms are likely to have become larger because of specific managerial capabilities or the possession of intangible skills that are unique. These attributes may motivate or, in some cases, deter lenders from the larger firms. On the other hand, instrumental controls need to be incorporated for some of the factors that, while not really related to the financing decision, help determines firms' size patterns.

Our empirical complexities motivate the use of a simultaneous three-stage least squares (3SLS) instrumental variable method, in which part of the explanatory variables may be predetermined and all the parameters of the model are estimated jointly. These 3SLS estimates are consistent and asymptotically normal, and these asymptotic properties are equivalent to that of the full information maximum likelihood estimator (Zellner & Theil, 1962; Judge et al., 1988).

We use four variables as instruments: the ratio of advertising expenses to total expenses *(ADVERTISING),* the ratio of marketing expenses to total expenses *(MARKETING)* and the ratio of distribution expenses to total expenses *(DISTRIBUTION)* and the ratio of net fixed assets to sales which captures capital intensity of a firm *(CAPITAL).* These variables are expected to be strongly and positively correlated with firm size. Advertising can lead to product differentiation, which can lead firms to grow, while marketing expenditures lead to more information about firms' products being available.

Distribution expenditures widen the physical range of coverage and the variable proxies for geographic market heterogeneity (Caves & Barton, 1990). Larger firms, with more resources at their command, are more likely to incur expenditures on advertising, marketing and distribution activities in order to maintain or increase their market share. Capital intensity can enhance the minimum efficient scale requirements and lead to larger firms. On the other hand, these variables are unlikely to be correlated with corporate borrowing; thus, these variables provide suitable instruments to control for the endogeneity of firm size in the equations to be estimated.

The addition of these variables as instruments affecting the *SIZE* variable also helps us take into account industry related factors. Industry characteristics are captured by variables that measure advertising, marketing and distribution intensities (Caves & Barton, 1990), and these industry features simultaneously influence how large a firm can become. Since the *SIZE* variable, per-se, reflects both heterogeneous firm-specific influences as well as external industry-related features at work, the instruments also help account for some of these influences within the regression framework.

4. Results

4.1. Descriptive statistics

We first present summary statistics of the variables to be used in the empirical analysis in Table 2 for all companies and then for group and non-group companies separately. Fifty-five percent of the firms in our sample are members of business groups. We find that there is a remarkable variation in the structure of debt among Indian firms; for example, there are firms in our sample which rely primarily on only one source of borrowing. Bank borrowing is the most important source of borrowing at 41 per cent followed by borrowing from other financial institutions at 30 per cent. Debentures and fixed deposits comprise 11 and 6 per cent of total borrowing respectively, while other borrowing comprises 13 per cent.

The average holding of shares by the private corporate sector is 26 per cent, while the government and foreigners hold an average of 16 and 11 per cent of shares respectively. Concentration of ownership of shares is not a widespread phenomenon in India. Directors hold an average of 9 per cent of the shares while the top 50 shareholders hold an average of 6 per cent. There is also a large variation in the size and age of firms and in debt-equity ratios in our sample.

Separating the sample into group and non group firms, we find that bank borrowing is less important for group firms than for non-group firms. On the other hand, debentures and fixed deposits are more important as sources of borrowing for group firms than for non group firms. The government is more likely to own a high proportion of shares for group firms than non groups. Interestingly, concentration of share ownership and managers' ownership of shares is higher for non group firms than group firms. Group firms are somewhat larger and older in age, on average, than non group firms.

Table 2 Summary statistics

	All companies				Group affiliated companies				Non group affiliated companies			
Variable	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max
BANK[a]	40.5	23.9	0.00	100.00	37.2	22.5	0.00	100.00	44.5	25.1	0.00	100.00
INST[a]	30.1	25.2	0.00	100.00	29.5	24.4	0.00	100.00	30.8	26.2	0.00	100.00
DEB[a]	11.0	16.6	0.00	94.90	13.4	17.8	0	100.0	8.1	14.4	0	87.5
FIXED[a]	5.6	12.1	0.00	100.00	6.3	12.1	0	100.0	4.8	12.0	0	100.0
OTHER[a]	12.6	17.1	0.00	100.00	13.4	17.8	0	100.0	11.7	16.1	0	100.0
FOREIGN[b]	10.7	16.3	0.00	74.06	10.6	15.9	0	74.0	10.8	16.7	0	74.1
STATE[b]	14.9	15.5	0.00	99.99	15.8	14.4	0	74.4	13.9	16.7	0	99.9
DOMESTIC[b]	25.9	18.1	0.00	92.67	31.1	17.3	0	92.7	19.5	16.9	0	74.1
DIRECTORS[b]	8.8	12.4	0.00	75.97	5.7	10.1	0	76.0	12.7	13.8	0	61.8
TOP 50[b]	5.8	6.7	0.00	90.52	4.9	5.1	0	42.9	7.0	8.1	0	90.5
SIZE[c]	3.8	1.2	0.09	7.68	4.1	1.2	0.3	6.6	3.3	1.1	0.1	7.7
AGE	24.7	20.9	1.00	130.00	27.4	22.9	1	92	21.3	17.7	1	130
DEBT	2.1	3.8	0.00	68.80	2.1	4.2	0	68.8	2.0	3.3	0	35.7
LIBERAL	0.883	0.322	0.00	1.00	0.883	0.322	0.00	1.00	0.883	0.322	0.00	1.00
*GROUP*AGE*	15.11	21.80	1	130	27.39	22.91	1	130	0.00	0.00	0.00	0.00
SALES GROWTH[d]	55.68	373.83	(80.80)	7734.30	67.14	472.28	(80.80)	7734.30	41.59	192.74	(70.30)	3633.30
Number of firms	1026				566				460			

[a]As a percentage share of total debt; [b]As a percentage share of total equity; [c]Log of sales; [d]Brackets signify negative figures

Table 3 provides the correlation matrix between the variables used in the empirical analysis. No correlation coefficient between the explanatory variables exceed 0.5, suggesting that multicollinearity is not an issue that we need to address in the regression analysis.

4.2. Regression estimates

The 3SLS estimates are presented in Table 4. The explanatory power of the individual regressions varies from 0.013 to 0.106, while the system R^2 is 0.107. The chi-square test of overall significance of the explanatory variables is significant at the 1 per cent level. The important result is the large positive coefficient on the group variable for the equation on institutional borrowing, which is significant at the 5 per cent level, along with the large negative coefficient on the group variable for the equation on bank borrowing which is also significant at the 1 per cent level.

Controlling for all other characteristics, group affiliated firms borrow about 10 per cent less from banks and about 7 per cent more from institutional lenders, as compared to unaffiliated firms. The coefficient on the group variable for the equation on debentures is positive and significant at the 5 per cent level while the coefficient of the equation for fixed deposits is statistically insignificant. Thus, the results suggest that group affiliated firms use relatively more institutional borrowings and debentures, and relatively less bank borrowings than unaffiliated firms, controlling for various other factors such as the composition of ownership, size, age and the extent of leverage.[6]

Our results provide support for the 'rent-seeking' view of business groups firms in India. We find that firms belonging to business groups are less able to access unsecured sources of borrowing such as bank borrowing, relative to secured sources of borrowing such as institutional borrowing and debentures. Among the two secured sources of borrowing, the large value of the coefficient on this variable relative to that for debentures; the coefficient on the former is three times that of the latter, thus providing further support for the rent-seeking view of business groups. Group affiliated firms, by virtue of the political lobbying that the groups they belong to can undertake on their behalf, are more likely to obtain funds from state-owned creditors rather than obtain them from private creditors.

Among the control variables, the coefficients of state ownership for the equations related to institutional borrowings and bank borrowings are significant and the signs are as expected: positive for institutional borrowings and negative for bank borrowings. Larger firms are less likely to access institutional borrowing and more likely to access bank borrowing and fixed deposits. Thus, given their ability to exercise market power in product markets and reap economies of scale, and by virtue of their reputation, these firms are able to convince unsecured creditors such as banks and fixed deposit holders that their funds will be returned, and can access funds from these sources of borrowing, relative to firms that are smaller in size.

We also find that older firms seem less likely to access institutional borrowing and more likely to access fixed deposits. Firms with higher debt to equity are more inclined to access institutional borrowing. The dummy variable capturing the impact of liberalization is signif-

[6] Tests for exogeneity show that the instrumental variable specification is valid for all of the equations, and for these the null hypothesis of exogeneity is rejected. We are correct in treating the variable *SIZE* as endogenous. The Hausman (1978) χ^2 test statistic is 19.50 (significant at 1 percent) for the *BANK* equation; it is 33.62 (significant at 1 percent) for the *INST* equation, 3.27 for the *DEB* equation (significant at 10 percent), 7.61 for the *FIXED* equation (significant at 1 percent) and 3.74 for the *OTHER* equation (significant at 10 percent). The critical value of the χ^2 test statistic with 1 degree of freedom, at the 5 percent level, is 3.841.

Table 3 Correlation matrix of variables used in the regression analysis

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	*BANK*	1.00																
2.	*INST*	−0.50	1.00															
3.	*DEB*	−0.28	−0.29	1.00														
4.	*FIXED*	−0.18	−0.26	−0.01	1.00													
5.	*OTHER*	−0.27	−0.30	−0.14	−0.06	1.00												
6.	*GROUP*	−0.15	−0.02	0.16	0.06	0.05	1.00											
7.	*FOREIGN*	−0.01	−0.05	−0.01	0.17	−0.01	−0.01	1.00										
8.	*STATE*	−0.18	0.15	0.05	0.01	−0.02	0.06	0.11	1.00									
9.	*DOMESTIC*	−0.05	−0.01	0.09	−0.07	0.07	0.32	−0.27	−0.19	1.00								
10.	*DIRECTORS*	0.15	−0.01	−0.08	−0.08	−0.08	−0.28	−0.22	−0.21	−0.33	1.00							
11.	*TOP* 50	0.11	−0.03	−0.10	−0.05	0.03	−0.16	−0.14	−0.19	−0.14	0.22	1.00						
12.	*SIZE*[c]	−0.14	−0.11	0.31	0.09	−0.01	0.34	0.13	0.29	0.05	−0.21	−0.21	1.00					
13.	*AGE*	0.01	−0.23	0.11	0.18	0.07	0.14	0.05	0.15	0.04	−0.04	0.01	0.37	1.00				
14.	*DEBT*	−0.09	0.15	−0.02	−0.05	−0.03	0.01	−0.07	0.07	0.02	0.02	−0.01	−0.06	0.01	1.00			
15.	*LIBERAL*	−0.04	−0.03	0.07	0.01	0.03	0.01	0.01	−0.02	0.01	0.01	−0.01	0.11	0.04	−0.01	1.00		
16.	*GROUP* AGE*	−0.06	−0.16	0.13	0.13	0.08	0.63	−0.02	0.16	0.18	−0.17	−0.07	0.39	0.72	−0.04	0.03	1.00	
17.	*SALES GROWTH*	−0.23	0.07	−0.03	−0.03	−0.02	0.02	−0.03	0.01	−0.02	−0.02	−0.07	0.03	−0.01	−0.04	−0.07	−0.04	1.00

Table 4 Regression Estimates

	Dependent variables				
	BANK	*INST*	*DEB*	*FIXED*	*OTHER*
Intercept	41.22*** (5.03)	50.39*** (5.29)	−2.61 (3.33)	1.28 (2.51)	10.17*** (3.60)
GROUP	−10.07*** (2.69)	6.94** (2.83)	3.74** (1.74)	1.15 (1.34)	−1.69 (1.93)
FOREIGN	−0.09* (0.05)	0.13** (0.06)	−0.05 (0.04)	0.05* (0.03)	−0.03 (0.04)
STATE	−0.36*** (0.06)	0.53*** (0.06)	−0.02 (0.03)	−0.07** (0.03)	−0.06* (0.04)
DOMESTIC	−0.06 (0.05)	0.10* (0.05)	0.03 (0.04)	−0.08*** (0.02)	0.02 (0.03)
DIRECTORS	0.11 (0.07)	0.09 (0.07)	−0.01 (0.04)	−0.07** (0.03)	−0.12** (0.05)
TOP 50	0.16 (0.12)	−0.10 (0.13)	−0.13* (0.08)	−0.04 (0.06)	0.12 (0.08)
SIZE	4.18*** (1.44)	−9.62*** (1.52)	2.71*** (0.96)	1.64** (0.72)	0.82 (1.03)
AGE	−0.02 (0.07)	−0.12* (0.07)	0.06* (0.04)	0.10*** (0.03)	0.01 (0.05)
DEBT	−0.39** (0.19)	0.58*** (0.20)	−0.06 (0.13)	−0.04 (0.10)	−0.08 (0.14)
LIBERAL	−5.01** (2.37)	2.56 (2.50)	2.50* (1.57)	−0.84 (1.18)	−0.01 (0.05)
*GROUP***AGE*	0.07 (0.07)	−0.04 (0.08)	−0.06 (0.05)	−0.04 (0.03)	0.07* (0.05)
SALES GROWTH	0.00 (0.00)	0.00 (0.00)	−0.00 (0.00)	−0.00 (0.00)	−0.00 (0.00)
INDIVIDUAL R^2	0.028	0.025	0.106	0.051	0.013
SYSTEM R^2			0.107		
Test of overall significance: χ^2 60 d.f. 116.20***					

Notes. (a)***, ** and * denotes significance at the 1, 5 and 10 per cent levels respectively; (b) standard errors in parentheses

icantly negative only in the bank borrowing equation and this implies that the desire to tap into the commercial bank borrowings stream has abated after liberalization since there may be several other available options, including possibly several global ones, for fund raising. Neither the group-age interaction variable nor the sales growth variable is significant.[7]

5. Conclusion

Much of our recent understanding of business groups in emerging economies is dominated by the transactions cost perspective which argues that the emergence of business groups are a natural response to market failures in developing countries, and that these groups perform "many of the special functions required by entrepreneurs in underdeveloped countries" (Leff, 1979: 53). Accordingly, business groups enhance economic welfare in emerging economies.

In this article, we propose and test for an alternate view of business groups in India. This is the rent-seeking view. This view takes business groups as a coalition of firms often owned by the same family engaging in coordinated lobbying for the capture of rents created by highly interventionist governments. Thus, according to this view, business groups participate in directly unproductive activities that diminish economic welfare in developing countries (Bhagwati, Brecher, & Srinivasan, 1984).

In this article we develop a set of hypotheses, using the property rights view of corporate finance, on the choice of debt structure that we should observe by rent-seeking group firms. Using a large cross-section of Indian group affiliated and unaffiliated firms, we find strong support for the rent-seeking view of business groups in the case of India. We establish that

[7] We had also included a group and size interaction term in a specification and that variable, too, did not turn out to be significant.

group affiliated firms are more likely to access soft funds from institutional borrowers than unaffiliated firms, controlling for other characteristics that can affect firms' choice of debt.

The origins of modern organized rent seeking in Indian industry go at least back to the Second World War.[8] The rent-seeking behavior by business groups, which originated during the Second World War, continued after independence and the phenomenon has still been observable in contemporary India. For example, Das (2002) describes how almost all the major business groups in India have had representative offices, with a senior manager or even a family member as a plenipotentiary in charge, in cities like Bombay and New Delhi, so as to foster good relationships with government bodies and institutions located in those metropolitan cities.

Our findings, that business groups tend to seek relatively higher amounts of institutional borrowing, follow a well established trend of pre-emption of resources. Institutional borrowings provide much of the long term resources that industries need to establish their operations. The sources of supply of these funds are limited when compared to the sources of supply of bank borrowing for normal day to day operations. The firms that belong within a business group have the ability to exploit their position and garner these long term resources. Thus, business groups in India can be seen as one more manifestation of pervasive rent-seeking that has characterized much of the Indian economy since independence.

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[8] Recent documentation shows that much of the regulations characterizing the *License Raj* in the late twentieth century find their heritage in the *Defence of India Rules of 1939*. The supply shortages caused by the Second World War created a system in which official agencies shared out markets and capacity through a rigorous licensing system (Mohan & Aggarwal, 1990). In this milieu, the Indian business groups, which had established themselves earlier, worked closely with the government at the Centre and with those of the various provinces in pre-independent India.

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