Asian Journal of Accounting and Governance **9**: 77–86 (2018) ISSN 2180-3838
(http://dx.doi.org/10.17576/AJAG-2018-09-07)

Ownership Structures and Effects of Related Lending and Loan Guarantees on Firm Performance in Business Groups

YOGESH MAHESHWARI & PANKAJ GUPTA

ABSTRACT

This study identifies a sample of listed Indian business group firms, which exhibit an increasing trend in leverage, related lending and loan guarantees. Business groups in India, primarily adopt pyramidal structure in which decision making is done through control rights approach. The paper examines the ownership structures in business groups and studies the effects of related lending and loan guarantees on firm performance in such business groups through a panel data regression with fixed effects. The regression results suggest that lending and loan guarantees to related parties affect the operating performance of group firms positively. The relationship has been found to be significant for most of the categories of business groups studied for the two measures of firm performance, namely gross profit to asset ratio and return on assets. However, their effect on market value is found to be negative, leading to an inference that such deals are taken adversely by the market.

Keywords: Ownership, related lending, loan guarantees, related party transactions, firm performance

INTRODUCTION

Business groups in India, have a long known history of existence. They have been known to possess diversity both in terms of scale and scope, ranging from groups with only two or three firms in limited businesses (limited scale and scope) to groups with a number of firms in diverse businesses (large scale and scope). A business group is a dominant form of organization, which consists of a set of legally independent firms with strategic coordination. Business groups are found in almost every Asian economy be it China, India, Korea, or Japan. Despite its wide presence, business group structure is still an under researched area.

In India, business group is "an agglomeration of privately held and publicly traded firms operating in different lines of business, each of which is incorporated as a separate legal entity, but which are collectively under the entrepreneurial, financial and strategic control of a common authority, typically a family, and are interlinked by trust-based relationships forged around a similar persona, ethnicity or community" (Sarkar 2010). Business groups are extensively found to engage in related party transactions (RPT). Literature provides several reasons for the emergence of business groups such as risk sharing (Khanna & Yafeh 2007), helping firms raise debt from external market (Hoshi, Kashyap & Scharfstein 1991), and helping firms source capital through internal capital market (Gopalan, Nanda & Seru 2007; Manos, Murinde & Green 2007; Wang & Lin 2013). Khanna and Palepu (1997) proposed institutional voids theory and suggested that a business group is a successful organizational structure in emerging economies due to the fact that several institutional voids can be filled by groups after internalizing many functions. Some such functions include certification benefits (Marisetty & Subrahmanyam 2010), and internal capital market efficiency (Khanna & Palepu 2000a; Gopalan et al. 2007).

Besides advantages, the business group structure is also plagued with several deficiencies like earnings manipulation, crony capitalism, concentration of ownership, tax avoidance, and expropriation of minority investors through private benefits of control (Mursitama 2006). Despite all this, the demand for control in business groups has been increasing. The post liberalization period has witnessed an expansion in business groups in terms of firm affiliations. Against such a backdrop, the paper attempts to examine the impact of RPT on firm performance in business groups.

In groups, as opposed to diffused ownership structures, firms are managed by the controlling/ultimate owner. The owners and managers are alike and thus there are limited principal-agent problems. However, extensive conflict of interest between controlling owner and minority investors (principal-principal problem) is observable (Morck & Yeung 2003; Young, Peng, Ahlstrom & Bruton 2003). This type of conflict results into the expropriation of minority shareholders. One of the most notable forms of such expropriation is tunneling of resources across group firms. Sensitivity of investors towards expropriation is largely determined by the control motivations due to the fact that owner participates in decision process and control rights affect the choice of decisions. This works in two ways. On one hand, the separation of ownership and control in groups provides an incentive to the controller when resources transfer from one firm to another firm; and on the other, the inefficient monitoring role of incumbent

monitor generates possibilities for owner to collude with monitor and in *quid pro quo* the resources gets transferred from the firm to its related parties for private benefits of control.

Such an activity of tunneling affects the operating performance of a firm and benefits the ultimate owner (Bertrand, Mehta & Mullainathan 2002). The empirical evidences of tunneling are widely discussed and available in emerging economies, despite being furtive in nature. The effect of tunneling on performance is difficult to measure and such studies rely primarily on two broad methods, i.e. indirect method and direct method.

The indirect method to detect tunneling was first given by Bertrand et al. (2002), in which the effect of tunneling hypothesis for the transmission of earnings shock across group firms was tested. This methodology is widely followed by other studies, notably Friedman, Johnson and Mitton (2003) and Kali and Sarkar (2011). Though not immune to errors, subsequent improvement by Siegel and Chaudhary (2012) has made this method relevant even today. Besides earnings shock effect, another approach to indirect method is estimating market reactions to the earnings announcement of an announcing firm on the portfolio of non-announcing group affiliates (Bae, Cheon & Kang 2008). In contrast to this, the direct method to detect tunneling considers the impact of related party transactions on firm performance. Economies in which listing of related party transactions is mandatory, the market reaction on listing is observable (Cheung, Jing, Lu, Rau, & Stouraitis 2009; Cheung, Rau & Stouraitis 2006; Peng, Wei & Yang 2011). Else, the effect of RPT on some select performance measures of firms is investigated (Kang, Lee, Lee & Chool 2014; Ying & Wang 2013).

In India, tunneling evidences through indirect method have wide acceptability, but very few studies consider related party transactions to detect the tunneling effect. This may be due to several reasons like lack of regulations for listing on exchanges, non-uniform disclosure by companies and unequal grouping of related party transactions in database. This study is a sincere attempt to detect the implications of related party transactions on firm performance. The main objective of this paper is to examine the tunneling motive of controlling owner using two related party transactions, i.e. related lending and loan guarantees. In line with the extant studies, the net related lending and loan guarantees for a firm are clubbed and their impact on firm performance is examined for various group categories.

We consider group firms being segregated into four categories, i.e. top fifty business groups (TFBG), other large business groups (OLBG), others business groups (OBG), and all business groups (ABG), as provided in the CMIE Prowess database. This classification scheme follows the scale and scope concept as given by Khanna and Palepu (2000a and 2000b), where scale refers to number of firms in a business group and scope denotes the number of diverse businesses that a business group is engaged in. The TFBG category refers to the groups which are large in terms of scale and scope, OLBG category has substantial scale and scope, OBG category is lowest in terms of scale and scope, and all of them put together belong to the ABG category. For TFBG firms, borrowings is substantially high and increases rapidly after 2008-09 period, but the RPT increases only from the year 2013 onwards. The borrowings of firms belonging to the OLBG and OBG categories is not increasing much after 2007-08 period, but an increasing trend is seen in the net related lending and loan guarantees of these group firms. Thus there is a difference in behavior of the firms belonging to larger groups than the firms affiliated to smaller groups. If the firms have access to external finance and use this for helping other affiliates (listed as well as non-listed), their performance is affected due to RPT in subsequent periods. The effect of such RPT can vary across each category.

The rest of the paper is organized as follows. Section 2 describes the available literature with special emphasis upon ownership and control in business groups and use of related party transactions; section 3 provides the development of hypotheses for the study; section 4 describes the sample, data and research methodology employed; section 5 deals with results and analysis, and section 6 finally concludes.

Literature Review

Given the essence of the paper, the literature review has been conducted under two heads, namely business groups and control motivations, and related party transactions in business groups. The first set of literature encompasses the existence and characteristics of business groups and the control motivations that exist in them. The second set concentrates on related lending and loan guarantees as related party transactions in business groups.

Business Groups and Control Motivations

Analyzing business groups, Leff (1978) built on the premise that economic theory can be relevant beyond the developed economies where it originated. Having their base in the well-known market imperfections, the groups were believed to impact the mitigation of factor-market imperfections. The work focused on the groups in developing economies. Granovetter (1995) followed this up with an inquiry into the very formation of business groups and as to why in all modern economies, individual firms aggregate into larger entities. The work also dealt with the role of these groups in economic development. Recognizing that diversified business groups dominated the private sectors of most of the economies, Ghemawat and Khanna (1998) showed how the changes in corporate scope that accompany competitive shocks in an economy are used to weigh the importance of different explanations for the existence of such business groups. Studying the restructuring of two large business groups of India, the paper explained the aspects of restructuring process that should relate to larger-sample empirical analyses.

Using data on ownership structures of large firms in developed economies to identify their ultimate controlling shareholders, La Porta, Lopez-de-Silanes and Shleifer (1999) found that except in economies with very good shareholder protection, relatively few of these firms were widely held. These firms were more commonly controlled by families or government and not financial institutions. Moreover, the controlling shareholders power over firms was found to be significantly in excess of their cash flow rights, primarily through the use of pyramids and participation in management. Claessens, Djankov, Fan and Lang (1999) examined the evidence on expropriation of minority shareholders by the controlling shareholders in publicly traded firms in nine East Asian countries. While higher cash flow rights were found to be associated with higher market valuation, higher control rights had an insignificant or negative effect on corporate valuation. The study determined the risk of expropriation to be the major principal-agent problem in such firms.

Building on pyramidal and horizontal ownership structures, Wolfenzon (1999) showed that given the option of setting up a new firm in either of the structures, an entrepreneur chose the pyramidal structure in order to allocate part of this value to the other shareholders of the parent firm. The study suggested a higher incidence of pyramidal structures in countries with poor investor protection, quite in line with the findings of La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998). Bebchuk (1999) developed a rent-protection theory of corporate ownership structure. The decision of a company's initial owner to maintain a lock on control when the company goes public was much influenced by the size of resultant private benefits of control. The separation of cash flow rights and voting rights was shown to be more relevant in a controlling shareholder structure rather than a dispersed ownership structure. The reasons for firms to make control partially contestable were also studied.

Bebchuk, Kraakman, and Triantis (2000) went a step further to study the incentive problems of controlling minority structures so as to analyze their agency costs. Ceteris paribus, the agency costs associated with such structures were found to increase very rapidly as the fraction of equity cash flow rights held by controllers declined. Khanna and Palepu (2000a) analyzed the performance of firms belonging to diversified business groups in India relative to unaffiliated firms and ascertained that accounting and stock market measures of firm performance initially declined with group diversification and subsequently increased once group diversification exceeded a certain level. The study concluded that most of the groups added value by replicating the functions of institutions that were missing. Almeida and Wolfenzen (2006) provided a new rationale for pyramidal ownership in family business groups saying that it facilitated the access to all retained earnings of a controlling firm for setting up a new firm, and to share the new firm's resources with shareholders of the original firm. Almeida, Park, Subrahmanyam and Wolfenzon (2007) suggested new measures to describe the complex ownership structure of business groups, and found that cash flow and voting rights were not the only ownership variables that were important for understanding the structure and performance of these groups.

Considering control as an asset that can be bought and sold, Ferreira, Ornelas and Turner (2015) introduced a model of simultaneous and separable trading of ownership and control in a private information setting. Using a mechanism design approach, the study described the optimal mechanism for restructuring ownership and control. Khanna and Yafeh (2007) proposed business group taxonomy to formulate hypotheses and present evidence about the reasons for the formation, prevalence, and evolution of groups in different environments. They argued that business groups were responses to different economic conditions and could accordingly further or adversely affect economic welfare. Drawing from the elements of theories of business groups as well as capital structure, Manos et al. (2007) found that the leverage decisions of group-affiliated firms were significantly different from those of non-affiliated firms, suggesting that the business group ownership structure creates internal capital markets. It was also shown that group-affiliated firms enjoyed exceptional access to government and foreign loans. Using data from Chinese listed firms, Zhang, Gao, Guan and Jiang (2014) studied whether and how controlling shareholders colluded with managers with respect to tunneling. The separation of control and cash flow rights was found to be negatively associated with managerial pay-performance and turnover-performance sensitivity. The paper also arrived at a preliminary evidence for rent-sharing behavior between controlling shareholders and managers.

RELATED PARTY TRANSACTIONS IN BUSINESS GROUPS

This study considers related party transactions in two forms, namely, related loans and loan guarantees. Studying connected transactions between Hong Kong listed firms and their controlling shareholders, Cheung et al. (2006) found that firms announcing such transactions earned negative excess returns significantly lower than firms announcing similar arm's length transactions. Examining the functioning of internal capital markets in business groups in India, Gopalan et al. (2007) found intra-group loans to be an important means of transferring cash across group firms and that such transfers were typically used to support the financially weaker firms. Groups significantly increased the extent of loans when member firms were hit with a negative earnings shock, so as to avoid group firm default and consequent negative spillovers to the group.

Examining publicly traded Chinese firms that issued loan guarantees to their related parties thereby expropriating wealth from minority shareholders, Berkman, Cole and Fu (2009) found that the issuance of related guarantees is less likely at smaller firms, at more profitable firms and at firms with higher growth prospects.

Results also indicated that the identity and ownership of block holders affect the likelihood of expropriation. Cheung et al. (2009) examined related party transactions between Chinese publicly listed firms and their controlling shareholders and found that minority shareholders in these firms were expropriated through tunneling but also gained from propping up. On balance, however tunneling evidences were more than propping. Results also showed that related party transactions in tunneling had significantly less information disclosure than those in propping.

Exploring the relationship between the extent of related party transactions and operational performance, Chen, Chen and Chen (2009) showed that when the listed company is controlled by a related party, the higher the level of related party transactions the worse the operational performance of the listed company. Guo and Ma (2009) provided evidence of tunneling via related lending in listed firms in China. It was found that controlling owners engaged in tunneling through related lending. State ownership and pyramidal structure increased the level of tunneling lending, while the presence of large non-controlling shareholder reduced it. Tunneling was more when firms held more cash and debt.

Fisman and Wang (2010) came up with a coinsurance relationship between the controller and the listed firm, wherein the controller helped the listed firm out by paying a higher premium for services or goods provided by the firm to meet regulatory requirements and the listed firm provided loan guarantees when the controller was financially constrained or found it difficult to obtain external funds. Jiang, Lee and Yue (2010) documented the nature and extent of intercorporate loans, evaluated their economic consequences, examined factors that affected their cross-sectional severity, and reported on the mitigating roles of auditors, institutional investors, and regulators to explain the severity of the minority shareholder expropriation problem in China.

Using firm level panel data from India, Kali and Sarkar (2011) stated that the diversified structure of business groups in emerging economies facilitates expropriation of minority shareholders by controlling insiders through tunneling. It was found that the relatedness of the activity of a group affiliate to the activity of the core firm correlated with the wedge between control and cash flow rights of insiders as well as with the opacity in insider ownership. Peng et al. (2011) used data from China to test the implications of the model of Friedman et al. (2003). Results of the study suggested that when listed companies were financially healthy, their controlling shareholders were more likely to conduct connected transactions to tunnel their listed companies. Yeh, Shu and Su (2012) studied the effect of corporate governance on the level of related party transactions in Taiwan. The results showed that good corporate governance was effective in constraining such transactions. It moderates the relation between the motives and the level of related party transactions.

Hypothesis Development

After the economic liberalization and policy development measures adopted by India since 1991, there have been several changes in the disclosure of ownership, shareholder protection, access to finance and disclosure of related party transactions. Private firms in India are either standalone entities, belong to business groups or are foreign owned. In terms of asset size and market capitalization, group firms dominate the Indian corporate sector. Over the years, group firms have witnessed a rising trend in terms of debt financing, while the equity financing remained volatile (Sarkar & Sarkar 2012). Concentrated ownership has been found to lead diffused ownership. In concentrated ownership structure, the role of insiders is crucial. Insiders are of two types, i.e. managers and controlling shareholders. These insiders participate in strategic decision making process such as resource transfer between group firms. These resources are in the form of RPT and thus we analyze the impact of RPT on the performance of group firms.

Ownership Wedge and Leverage

In business groups, control motivation is examined through the separation of ownership and control. The separation of ownership and control can be measured through a proxy 'ownership wedge'. There exists a positive relationship between ownership wedge and leverage in the extant literature, which ultimately causes a negative impact on the value of group firms (Bany-Ariffin, Nor & McGowan 2010; Manos et al. 2007). Studies confirm that under greater separation of ownership and control, firms borrow heavily from external market and involve in expropriation through related lending and loan guarantees (Berkman et al. 2009; Jiang et al. 2010). Chong (2010) have empirically established a positive relationship between ownership wedge and use of bank debt financing. Accordingly, we hypothesize the following:

Hypothesis 1: Ownership wedge is positively related to leverage.

Ownership Wedge, Related Party Transactions and Firm Performance

Buchuk, Larrain, Muñoz and Urzúa (2014) could not find robust evidence of minority shareholders losing out from intra-group loans. This was attributed to strict regulation and disclosure requirements for intra-group loans in the Chilean market. Kang et al. (2014) examined the use of related party transactions as a mechanism for tunneling among firms belonging to large business groups in Korea. The findings suggested that the control–ownership wedge was positively associated with the magnitude of related party transactions, which were shown to increase as voting rights increased and decrease as cash flow rights increased. Such transactions occurred when agency problem was severe and were used as a means of tunneling, thus

destroying firm value. Xiao and Zhao (2014) studied the effects of the agency conflicts between the controlling and the minority shareholders in China's publicly listed firms. The study found that higher excess control rights were associated with significantly larger amounts of related party loan guarantees for non-state and private firms. Studies by Guo and Ma (2009) and Berkman et al. (2009) examined the performance effect of related lending and loan guarantees on Chinese listed firms, respectively. These studies identify that RPTs have a positive relationship with leverage and a negative relationship with performance. Following the aforesaid studies, a positive relationship between ownership wedge and RPT and a negative relationship between RPT and firm performance can be hypothesized.

Hypothesis 2: Ownership wedge is positively related to RPT.

Hypothesis 3: RPT has negative impact on firm performance and the market penalizes firms involved in excessive related lending and loan guarantees.

Sample, Data and Research Methodology

The sample selection and data access remains a challenge for this study. We apply and adopt the established methods and employ the estimation scheme as given below. First, we identify the appropriate sample of group firms and availability of data. This is followed by the estimation of ownership wedge and consideration of related party transactions. This section of the study also describes the important regression models employed therein.

Sample and Data Selection

For the purpose of this study, the data on disclosure of ownership, related party transactions and financial information is sourced from the CMIE Prowess Database for the period 2009 through 2015. Our sample considers only the groups which have at least four listed firms at the time of data collection. Following this criterion, the sample narrows down to 350 listed group firms belonging to 64 business groups. Classifying the sample as per group affiliation, we have 218 firms from 34 TFBG, 73 firms from 16 OLBG, and 59 firms from 14 OBG category. The study leaves out the crisis period as during crisis the behavior of firms regarding debt, changes in equity ownership and resource transfer can be quite different than the normal period.

Estimation of Ownership Wedge and Related Party Transactions

The earlier studies such as Kali and Sarkar (2011) estimated ownership wedge using data on persons acting in concert (PAC). We take a departure from the extant method since our sample period is after 2006, wherein ownership disclosure no longer provides information on persons acting in concert. Instead, it exists in the form of promoters' shareholding. Therefore, we define ownership wedge as the difference of disclosed promoters' shareholding of a group firm and the median value of ownership of all group firms. The RPT between group firms are measured as the sum of net related lending, net loan guarantees, and net loans and advances. Such transactions have been considered for all related parties such as holding company, key personnel and relatives, parties where control exist, and subsidiary firms. The net amount of RPT is estimated as the difference of amount taken and given. The description of all the variables is shown in Table 1.

Research Method and Empirical Model

For analysis, we use the direct method of tunneling i.e. use of *RPT* on firm performance. The analysis is structured in three stages. In the first stage, relationship between ownership wedge and leverage is established. In the second stage, we consider the effect of leverage and wedge on the extent of *RPT* and finally, impact of *RPT* on firm performance is analyzed in the last stage. For the first hypothesis, the impact of wedge on leverage is estimated as under:

$$LEVERAGE = \alpha + \beta_1 * WEDGE + \beta_2 * AGE + \beta_3 * SIZE + \xi_{it}$$

To test our second hypothesis, we estimate the impact of ownership wedge on *RPT* as per the following equation.

$$RPT = \alpha + \beta_1 * WEDGE + \beta_2 * LEVERAGE + \beta_3 * AGE + \beta_4 * SIZE + \xi_{it}$$

The testing of our third hypothesis considers the impact of the *RPT* on *PBDIT*, *ROA* and *TOBIN'S Q* as follows:

$$PBDIT = \alpha + \beta_1 * RPT + \beta_2 * WEDGE + \beta_3 * LEVERAGE + \beta_4 * AGE + \beta_5 * SIZE + \xi_{it}$$

$$ROA = \alpha + \beta_1 * RPT + \beta_2 * WEDGE + \beta_3 * LEVERAGE + \beta_4 * AGE + \beta_5 * SIZE + \xi_{it}$$

$$TOBIN'S\ Q = \alpha + \beta_1 * RPT + \beta_2 * WEDGE + \beta_3 * LEVERAGE + \beta_4 * AGE + \beta_5 * SIZE + \xi_{it}$$

A fixed effect panel regression analysis has been employed to test the hypotheses. The sample period is 2009-2015. However, due to negligible *RPT* during the year 2013, the sample period has been reduced to 6 years.

TABLE 1. Variables definition and description

Variable Name	Variable Description
LEVERAGE	Ratio of total debt to total assets LEVERAGE = Total debt / Total assets
WEDGE	Ownership wedge, which is the difference of control rights and ownership rights WEDGE = Promoters equity ownership in a firm – Median value of promoters equity ownership in all group firms
RPT	Sum of total related lending and total loan guarantees RPT = Related lending + Loan guarantees = (Net outstanding loans advances taken/given + Net loans advances taken/given during year) + (Net outstanding loan guarantees taken/given + Loan guarantees taken/given during year) Net estimation is the difference between amount taken and the amount given by a firm. Negative value of RPT refers to the tunneling effect i.e. performance is adversely affected.
PBDIT	Gross profit to assets ratio, which is reflected as the proportion of profit before depreciation, interest, tax, and amortization to asset value PBDIT = Profit before depreciation, interest, tax and amortization / Total assets
ROA	Net profit divided by total assets ROA = Profit after tax/Total assets
TOBIN'S Q	Market to book ratio, computed as the ratio of market value of firm's assets to their book value TOBIN'S Q = (Market value of equity + Book value of debt)/Total assets
AGE	Log of total number of years since incorporation of the firm
SIZE	Logarithm of total assets value

Our equations, as above, have been evolved after giving due consideration to the fact that there exists no reverse causality among these variables (Claessens, Djankov, Fan & Lang 2002; Guo and Ma 2009; Kohlbeck & Mayhew 2010; Ganguli 2013).

Results and Analysis

The analysis is divided in two parts. First, we do a univariate analysis and study the correlation among the variables. The section lists the summary statistics for the variables and their correlation matrix. This is followed by a multiple regression analysis and a discussion on it. The regression analysis is done to investigate the relationship between leverage and ownership wedge, related party transactions and ownership wedge, and related party transactions and firm performance in all the four categories of business groups.

Univariate Analysis and Correlation

Table 2 provides the summary statistics for variables used in the study. The mean value of performance is quite high for *PBDIT* (0.453) and *TOBIN'S Q* (1.171), but low for *ROA* (0.038). The mean value of variable *RPT* and *WEDGE* are -7.691 and 0.004 respectively. Negative value of *RPT* signifies that a firm on an average lends more to its related parties. Among control variables, the mean value of *AGE* is 3.553 representing 34 years while that of *SIZE* is 3.543 representing INR 3491.30 million.

Table 3 presents the correlation matrix of the variables. While *PBDIT* and *TOBIN'S Q* have been found to have positive correlation with *RPT* with coefficient values of 0.038 and 0.073 respectively, there is a negative correlation between *ROA* and *RPT* with a value of -0.061. The *PBDIT* and *ROA* are negatively correlated with *WEDGE* and *LEVERAGE*, but *TOBIN'S Q* has a positive correlation coefficient. This suggests that operating performance is low in firms with

TABLE 2. Summary statistics for the variables

Variable	Mean	S.D.	Maximum	Minimum	25th Quartile	75th Quartile	Obs.
PBDIT	0.453	8.131	227.666	-1.129	0.037	0.060	1943
ROA	0.038	1.607	68.200	-17.000	-0.002	0.061	1948
TOBIN'S Q	1.171	1.831	37.828	0.087	0.573	1.131	1617
RPT	-7.691	338.238	7.218	-14928.571	-0.013	0.000	1948
WEDGE	0.004	0.0131	0.515	-0.665	-0.062	0.057	2100
LEVERAGE	0.576	2.568	60.000	0.001	0.190	0.491	1693
SIZE	3.543	1.058	6.069	-1.000	2.951	4.283	1848
AGE	3.553	0.582	5.023	1.098	3.178	3.970	2100

TABLE 3. Correlation matrix for the variables

N=1494	PBDIT	ROA	TOBIN'S Q	RPT	WEDGE	LEV	SIZE	AGE
PBDIT	1.000							
ROA	0.237	1.000						
TOBIN'S Q	-0.086	-0.033	1.000					
RPT	0.038	-0.062	0.073	1.000				
WEDGE	-0.056	-0.029	0.022	0.032	1.000			
LEV	-0.095	-0.148	0.295	0.146	0.015	1.000		
SIZE	0.041	0.141	-0.070	-0.196	-0.167	-0.235	1.000	
AGE	-0.089	-0.062	0.004	0.065	-0.126	-0.013	0.098	1.000

WEDGE and *LEVERAGE*. We also found that *LEVERAGE* is positively correlated with *WEDGE* and *RPT* with coefficient values of 0.015 and 0.146 respectively. The correlation coefficients of *RPT* with *WEDGE* and *LEVERAGE* are 0.032 and 0.146 respectively, indicating a positive correlation between them.

REGRESSION ANALYSIS

In this section we work upon the regression models, as outlined in the paper earlier, to examine the relationship between leverage, ownership wedge, related party transactions and firm performance in different group categories. The results of different regressions are reported below.

RELATIONSHIP BETWEEN *LEVERAGE* AND *WEDGE*

Table 4 provides the regression results for *LEVERAGE* and *WEDGE*. The relationship is found to be significant for firms belonging to the *TFBG* and *OLBG* categories. The coefficient of *WEDGE* is negative for both these group categories with values of -0.023 and -0.113 respectively. The coefficient value of -0.023 suggests that for *TFBG* category firms when *WEDGE* increases (decreases) by one standard deviation, the *LEVERAGE* decreases (increases) by 0.023 percent. Similarly, an increase (decrease) of one standard deviation in *WEDGE* reduces (increases) *LEVERAGE* by 0.113 percent for *OLBG* category firms. Negative coefficient values for these categories reject the hypothesis that firms with greater separation between ownership and control tend to employ higher leverage. For *OBG* and *ABG* categories, the relationship is found to be negative and insignificant.

Thus for all the four categories of business groups studied, a negative relationship has been found to exist between leverage and ownership wedge. This relationship has been significant in two group categories. These results are in contrast to the extant findings of Berkman et al. (2009), Jiang et al. (2010) and Chong (2010), who found the relationship to be positive for the two variables.

RELATIONSHIP BETWEEN *RPT* AND *WEDGE*

Table 5 presents the regression results for *RPT* and *WEDGE*. As per hypothesis, a positive relationship between *RPT* and *WEDGE* is expected. However, *RPT* is found to have significant negative relationship with *WEDGE* for *OLBG* category and no significant relationship for all other categories. For *OLBG* category firms, our analysis rejects the hypothesis. The coefficient values of *RPT* with *WEDGE* of -0.133 signifies that a one standard deviation increase (decrease) in the values of *WEDGE* cause a decrease (increase) in value of *RPT* by 0.133 percent. For *TFBG* and *OBG* category firms, our analysis supports the hypothesis as shown in the Table 5. The relationship is found to be significant in case of *OBG* category. The coefficient value of *RPT* with *WEDGE* of 0.241 suggests that a one standard deviation increase (decrease) in the values of *WEDGE* cause an increase (decrease) in value of *RPT* by 0.243 percent.

The results of the regression analysis suggest that two categories of business groups exhibit a positive relationship between related party transactions and ownership wedge, of which one has been significant. They are thus in line with the existing findings of Kang et al.

TABLE 4. Relationship between leverage and ownership wedge

Business Group	Dependent Variable	Independent Variables			
		WEDGE	*SIZE*	*AGE*	*Constant*
ABG	*LEVERAGE*	0.011	-0.352***	0.518***	0.000
TFBG		-0.023***	-0.002	-0.001	-0.061***
OLBG		-0.113*	1.641***	0.234	0.000
OBG		-0.076	-0.711***	1.337***	0.000

***, **, * is the significance at 1, 5, and 10 percent level respectively.

TABLE 5. Relationship between *RPT* and ownership wedge

Business Group	Dependent Variable	Independent Variables				
		WEDGE	*LEVERAGE*	*SIZE*	*AGE*	*Constant*
ABG	*RPT*	-0.033	-0.183***	1.637***	-1.589***	0.000
TFBG		0.042	0.129	1.629***	-1.833***	-0.013
OLBG		-0.133*	-0.621***	1.883***	-1.326***	0.000
OBG		0.241**	0.071	1.180***	0.845**	0.000

***, **, * is the significance at 1, 5, and 10 percent level respectively.

TABLE 6. Relationship between firm performance and *RPT*

Business Group	Dependent Variable	Independent Variables					
		RPT	*WEDGE*	*LEVERAGE*	*SIZE*	*AGE*	*Constant*
ABG	*PBDIT*	0.010	0.187***	-0.203***	-0.539***	-0.508***	0.000
TFBG		0.021	0.191***	0.324	0.328***	-0.171	0.011
OLBG		0.134***	0.166***	0.303***	-1.265***	-0.496**	0.000
OBG		0.198***	-0.341***	0.038	-0.648***	-0.336*	0.000
ABG	*ROA*	0.610***	0.102**	0.920***	-2.120***	-1.572***	0.000
TFBG		0.632***	0.678***	0.608**	-3.073***	0.748***	0.001
OLBG		0.134***	0.166***	0.303***	-1.265***	-0.496**	0.000
OBG		0.198***	-0.341***	0.038	-0.648***	-0.336*	0.000
ABG	*TOBIN'S Q*	-0.052**	-0.211***	-0.488***	0.082***	0.555***	0.000
TFBG		-0.056**	-0.247***	-0.459**	0.388***	0.007	0.032*
OLBG		-0.317***	-0.059	0.987***	1.238***	-0.520**	0.000
OBG		-0.106	0.494***	-0.282***	-1.011***	3.075***	0.000

***, **, * is the significance at 1, 5, and 10 percent level respectively.

(2014) and Xiao and Zhao (2014). However the other two group categories have shown contrary results to these. In one of these categories, the negative relationship has been found to be significant.

RELATIONSHIP BETWEEN FIRM PERFORMANCE AND *RPT*

The regression results testing our third hypothesis that *RPT* has negative impact on firm performance are shown in Table 6. The results have been found to be mixed for various group categories. It is obvious from the table that all performance measures except *PBDIT* for *ABG* and *TFBG* categories have significant relationship with *RPT*.

The *PBDIT* has significant positive relationship with *RPT* for *OLBG* and *OBG* categories with coefficient values of 0.134 and 0.198 respectively. This indicates that a one percent increase (decrease) in the value of *RPT* increases (decreases) the *PBDIT* for *OLBG* and *OBG* categories by 0.134 percent and 0.198 percent respectively.

The impact of *RPT* on *ROA* is found to be positive and significant for all group categories. The coefficient values of *RPT* for *ABG*, *TFBG*, *OLBG*, and *OBG* categories are 0.610, 0.632, 0.684, and 0.085 respectively with significance at one percent level. In a comparison across all categories, one percent increase (decrease) in the *RPT* increases (decreases) the *ROA* most for *TFBG* (0.632 percent) and least for *OBG* (0.085 percent). These two results show that related party transactions by and large increase the operating performance of other large and other business group category firms.

Thus the aforesaid two measures of firm have a positive relationship with related party transactions for all the four business group categories. More so, the relationship has been significant in most of the cases. These findings are in contrast to the existing ones of Guo and Ma (2009) and Berkman et al. (2009).

The impact of *RPT* on *TOBIN'S Q* is found to be different than that for *PBDIT* and *ROA*. For all group categories, *RPT* affects the market value negatively and the results are robust except for OBG category. The coefficient values are -0.052, -0.056, -0.317, and -0.106 for *ABG*, *TFBG*, *OLBG*, and *OBG* categories. These findings suggest that market penalizes excessive related party transactions in group firms. An overall comparison shows that the market value is most affected for *OLBG* (-0.317 percent) and least for *TFBG* (-0.056 percent) categories.

Conclusion

This paper attempts to examine the ownership structures and ascertain the impact of related party transactions on firm performance in business groups in India. Related lending and loan guarantees are the two related party transactions that have been studied in this paper. In the process, it identifies the linkages between ownership structure, leverage and related party transactions for firms belonging to business groups in India. A panel data regression with fixed effects is conducted in three stages for the four group categories. At the first stage, the relationship of leverage with ownership wedge is studied. It has been found that leverage has a significant negative relationship with ownership wedge for the top-50 and other large business groups. At the second stage, we establish relationship between related party transactions and ownership wedge. The results show that related party transactions have significant negative relationship with ownership wedge for other large and other business groups. The last stage of our work examines the impact of related party transactions on firm performance. Three proxies of performance, namely, gross profit to assets ratio, return on assets, and market to book ratio were employed for this purpose. The empirical analysis shows a significant positive relationship of gross profit to assets ratio and return on assets with related party transactions for most of the categories of business groups. This leads to the inference that in business groups in India, firms with increased related party transactions witness improved operating performance. This is in contrast to the existing findings. This positive impact of related lending and loan guarantees on the firm performance in most of the categories of business groups considered in the study may possibly result from the fact that in emerging economies like India, financial markets are affected by information asymmetry, imperfect intermediation and weaker regulation. Firms using group financing are able to save themselves from such external market failures. Internalization of activities may also help business groups in developing alternatives to market mechanisms that could reduce transaction costs. However, market to book ratio for assets has been found to have a significant negative relationship with such transactions. This suggests that although related party transactions increase the operating performance of the firm, they are considered negative by the market and the market value of such firms is affected adversely.

The study will help investors to be cautious while investing in firms engaging in too much related lending and loan guarantees to other firms in their business group. Policy makers may want to make stringent policy guidelines to curb the excessive use of such transactions and have strong governance norms so as to protect the minority investors' rights. A limitation of the study is that leverage and ownership wedge have been considered as independent variables in the models used, despite ownership wedge already being included in the leverage model. This has been done keeping in view the intended relationship of the variables in the study. As a part of future scope of the study, the governance role of board of directors can be included while studying the value effect of related lending and loan guarantees in group firms.

Acknowledgement

The authors are thankful to the two anonymous referees for their comments.

References

Almeida, H.V. & Wolfenzon, D. 2006. A theory of pyramidal ownership and family business groups. *The Journal of Finance* 61(6): 2637-2680.

Almeida, H., Park, S., Subrahmanyam, M. & Wolfenzon, D. 2007. Beyond cash flow and voting rights: Valuation and performance of firms in complex ownership structures. *Working paper*, Stern School of Business.

Bany-Ariffin, A.N., Nor, F.M. & McGowan, C.B. 2010. Pyramidal structure, firm capital structure exploitation and ultimate owners' dominance. *International Review of Financial Analysis* 19(3):151-164.

Bae, G.S., Cheon, Y.S. & Kang, J.K. 2008. Intragroup propping: Evidence from the stock-price effects of earnings announcements by Korean business groups. *The Review of Financial Studies* 21(5): 2015-2060.

Bebchuk, L.A. 1999. A rent-protection theory of corporate ownership and control. *Working Paper 7203*, National Bureau of Economic Research.

Bebchuk, L.A., Kraakman, R. & Triantis, G. 2000. Stock pyramids, cross-ownership, and dual class equity: The mechanisms and agency costs of separating control from cash-flow rights. In Randall K. Morck (Ed.), *Concentrated Corporate Ownership* (pp. 295–318). Chicago: University of Chicago Press.

Berkman, H., Cole, R.A. & Fu, L.J. 2009. Expropriation through loan guarantees to related parties: Evidence from China. *Journal of Banking & Finance* 33(1): 141-156.

Bertrand, M., Mehta, P. & Mullainathan, S. 2002. Ferreting out tunneling: An application to Indian business groups. *The Quarterly Journal of Economics* 117(1): 121-148.

Buchuk, D., Larrain, B., Muñoz, F. & Urzúa, F. 2014. The internal capital markets of business groups: Evidence from intra-group loans. *Journal of Financial Economics* 112(2): 190-212.

Chen, Y., Chen, C.H. & Chen, W. 2009. The impact of related party transactions on the operational performance of listed companies in China. *Journal of Economic Policy Reform* 12(4): 285-297.

Cheung, Y., Jing, L., Lu, T., Rau, P.R. & Stouraitis, A. 2009. Tunneling and propping up: An analysis of related party transactions by Chinese listed companies. *Pacific-Basin Finance Journal* 17(3): 372-393.

Cheung, Y. L., Rau, P. R., & Stouraitis, A. 2006. Tunneling, propping, and expropriation: Evidence from connected party transactions in Hong Kong. *Journal of Financial Economics* 82(2): 343-386.

Chong, B. S. 2010. The impact of divergence in voting and cash-flow rights on the use of bank debt. *Pacific-Basin Finance Journal* 18(2): 158-174.

Claessens, S., Djankov, S., Fan, J. & Lang, L. 1999. Expropriation of minority shareholders in East Asia. Washington DC. Policy Research Paper, 2088: 1-47.

Claessens, S., Djankov, S., Fan, J.P. & Lang, L.H. 2002. Disentangling the incentive and entrenchment effects of large shareholdings. *The Journal of Finance* 57(6): 2741-2771.

Ferreira, D., Ornelas, E. & Turner, J.L. 2015. Unbundling ownership and control. *Journal of Economics & Management Strategy* 24(1): 1-21.

Fisman, R. & Wang, Y. 2010. Trading favors within Chinese business groups. *The American Economic Review* 100(2): 429-433.

Friedman, E., Johnson, S. & Mitton, T. 2003. Propping and tunneling. *Journal of Comparative Economics* 31(4): 732-750.

Ganguli, S.K. 2013. Capital structure-does ownership structure matter? Theory and Indian evidence. *Studies in Economics and Finance* 30(1): 56-72.

Ghemawat, P. & Khanna, T. 1998. The nature of diversified business groups: A research design and two case studies. *The Journal of Industrial Economics* 46(1): 35-61.

Gopalan, R., Nanda, V. & Seru, A. 2007. Affiliated firms and financial support: Evidence from Indian business groups. *Journal of Financial Economics* 86(3): 759-795.

Granovetter, M. 1995. Coase revisited: Business groups in the modern economy. *Industrial and Corporate Change* 4(1): 93-130.

Guo, F. & Ma, S. 2009. Related lending: Evidence of tunneling and propping in China. *Corporate Ownership & Control* 7(2): 173-188.

Hoshi, T., Kashyap, A. & Scharfstein, D. 1991. Corporate structure, liquidity, and investment: Evidence from Japanese industrial groups. *The Quarterly Journal of Economics* 106(1): 33-60.

Jiang, G., Lee, C.M. & Yue, H. 2010. Tunneling through intercorporate loans: The China experience. *Journal of Financial Economics* 98(1): 1-20.

Kali, R. & Sarkar, J. 2011. Diversification and tunneling: Evidence from Indian business groups. *Journal of Comparative Economics* 39(3): 349-367.

Kang, M., Lee, H., Lee, M. & Chool, J. 2014. The association between related-party transactions and control-ownership wedge: Evidence from Korea. *Pacific-Basin Finance Journal* 29: 272-296.

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

Khanna, T. & Palepu, K. 2000a. Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. *The Journal of Finance* 55(2): 867-891.

Khanna, T. & Palepu, K. 2000b. The future of business groups in emerging markets: Long-run evidence from Chile. *Academy of Management Journal* 43(3): 268-285.

Khanna, T. & Yafeh, Y. 2007. Business groups in emerging markets: Paragons or parasites? *Journal of Economic Literature* 45(2):331-372.

Kohlbeck, M. & Mayhew, B. W. 2010. Valuation of firms that disclose related party transactions. *Journal of Accounting and Public Policy* 29(2): 115-137.

Leff, N.H. 1978. Industrial organization and entrepreneurship in the developing countries: The economic groups. *Economic Development and Cultural Change* 26(4): 661-675.

Manos, R., Murinde, V. & Green, C. J. 2007. Leverage and business groups: Evidence from Indian firms. *Journal of Economics and Business* 59(5): 443-465.

Marisetty, V.B. & Subrahmanyam, M.G. 2010. Group affiliation and the performance of IPOs in the Indian stock market. *Journal of Financial Markets* 13(1): 196-223.

Morck, R. & Yeung, B. 2003. Agency problems in large family business groups. *Entrepreneurship Theory and Practice* 27(4): 367-382.

Mursitama, T.N. 2006. Creating relational rents: The effect of business groups on affiliated firms' performance in Indonesia. *Asia Pacific Journal of Management* 23(4): 537-557.

Peng, W.Q., Wei, K.C.J. & Yang, Z. 2011. Tunneling or propping: Evidence from connected transactions in China. *Journal of Corporate Finance* 17(2): 306-325.

La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. 1999. Corporate ownership around the world. *The Journal of Finance* 54(2): 471-517.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. & Vishny, R. 1998. Law and finance. *The Journal of Political Economy* 106(6): 1113-1155.

Sarkar, J. 2010. Business groups in India. In A.M. Colpan, T. Hikino, & J.R. Lincoln (Eds.), *The Oxford Handbook of Business Groups* (pp. 294-310). USA: Oxford University Press.

Sarkar, J. & Sarkar, S. 2012. *Corporate governance in India*. India: Sage Publications.

Siegel, J. & Choudhury, P. 2012. A re-examination of tunneling and business groups: New data and new methods. *Review of Financial Studies* 25(6): 1763-1798.

Wang, H.D. & Lin, C.J. 2013. Debt financing and earnings management: An internal capital market perspective. *Journal of Business Finance & Accounting* 40(7-8): 842-868.

Wolfenzon, D. 1999. A theory of pyramidal ownership. W*orking Paper. Harvard University: Cambridge, MA*.

Xiao, S. & Zhao, S. 2014. How do agency problems affect firm value? Evidence from China. *The European Journal of Finance* 20(7-9): 803-828.

Yeh, Y.H., Shu, P.G. & Su, Y.H. 2012. Related-party transactions and corporate governance: The evidence from the Taiwan stock market. *Pacific-Basin Finance Journal* 20(5): 755-776.

Ying, Q. & Wang, L. 2013. Propping by controlling shareholders, wealth transfer and firm performance: Evidence from Chinese listed companies. *China Journal of Accounting Research* 6(2): 133-147.

Young, M., Peng, M., Ahlstrom, D. & Bruton, G. 2003. Principal-principal agency. *Chinese Management Review 6:* 17-45.

Zhang, M., Gao, S., Guan, X. & Jiang, F. 2014. Controlling shareholder/ manager collusion and tunneling: Evidence from China. *Corporate Governance: An International Review* 22(6): 440-459.

Yogesh Maheshwari*
Indian Institute of Management Indore
Rau-Pithampur Road
INDORE 453556
INDIA
E-mail : maheshwari@iimidr.ac.in

Pankaj Gupta
MYRA School of Business
Yelwal
Mysuru 571130
INDIA
E-mail: Pankaj.gupta@myra.ac.in

*Corresponding author