BEYOND INSTITUTIONAL VOIDS: BUSINESS GROUPS, INCOMPLETE MARKETS, AND ORGANIZATIONAL FORM

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We extend the “institutional voids” perspective on business groups by examining the value-adding potential of two of the characteristic features of business groups: their diverse portfolio and multi-entity organizational form. We maintain that portfolio diversity affords affiliates privileged access to opportunities hidden by incomplete strategic factor markets. We hypothesize that the multi-entity organizational form enables superior sensing and seizing of these growth opportunities by affiliate firms. We further suggest that, in the context of institutional reforms, these characteristics strengthen business group affiliates’ ability to capitalize on the expanded set of opportunities made available by the reform program. Empirical analyses on a sample of Indian firms over the period 1994–2010 support our hypotheses. Implications for theory and future directions are discussed. Copyright © 2013 John Wiley & Sons, Ltd.

INTRODUCTION

How do business groups add value? This question has been central to research on business groups, an organizational form that is widely prevalent in emerging economies (Carney et al., 2011; Chang and Hong, 2000; Khanna and Palepu, 1997, 2000a; Leff, 1978). Defined as a network of legally independent firms, operating in diverse industries, with a common dominant owner, and coordinated through multiple formal and informal ties, the dominant explanation currently is that business groups add value to member firms by filling the voids created by market and institutional failures in emerging economies (Goto, 1982; Khanna and Palepu, 1997; Leff, 1978; Yiu et al., 2007).

However, the persistence of affiliation benefits and growth of business groups in these economies despite widespread improvements in the institutional environment (Carney, 2008; Colpan, Hikino, and Lincoln, 2010; Khanna and Palepu, 1999; Kim, Kim, and Hoskisson, 2010; Ramaswamy, Li, and Petitt, 2012; Siegel and Choudhury, 2012), coupled with the presence of business groups in some of the advanced economies of the world with well-developed markets and institutions (Carney et al., 2011; Granovetter, 1995), suggests the need to go beyond the institutional voids hypothesis.

The current paper focuses on the value-adding potential of two of the characteristic features of business groups: (1) their diverse business portfolio, and (2) their multi-entity organizational form. Drawing upon Denrell, Fang, and Winter’s (2003) discussion on the incomplete nature of strategic factor markets, we maintain that membership places affiliate firms in a privileged position to access group-wide resources and hence identify

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strategic opportunities hidden by incomplete markets. Next, we build on Penrose’s (1959) observation that the opportunity set of a firm is a function of the set of possibilities that it can see and which it is willing and able to act on (cf. Ghoshal, Hahn, and Moran, 2000), and suggest that the organizational form of business group enables affiliate firms to both sense and seize these opportunities better than if the businesses were organized as divisions of a multibusiness firm under a single legal umbrella. We submit that the governance and management structure of the business group—each affiliate firm is legally separate and is responsible to its “own governance bodies including shareholders, directors, and auditors” (Mahmood, Zhu, and Zajac, 2011: 823)—helps overcome some of the challenges associated with managing diversified businesses, such as those associated with design of incentive systems and resource allocation. The mitigation of these challenges enables the affiliates to perceive, be motivated, and be able to capitalize on growth opportunities, including the privileged set of opportunities that the diversified resource and knowledge base of the business group puts within their reach. Further, we predict that these twin characteristics—portfolio diversity and multi-entity structure—enable business group affiliates to better sense and seize the expanded set of opportunities in the external environment that typically accompany pro-market institutional reforms in an emerging economy. We test our predictions on a panel of business group affiliate and nongroup firms from India for the time period 1994–2010.

This research study makes three important contributions to the business group literature. First, we draw attention to the two widely acknowledged yet underexplored characteristic features of business groups—their diverse portfolio and distinct organizational form—and examine their value-adding potential. Second, by focusing on the inherent incomplete nature of markets and the attendant strategic opportunities they afford, we further our current understanding of business groups that is largely anchored on underdeveloped markets and weak institutions. Third, we present business groups as an exciting research context for scholars interested in energizing the traditional debate around the linkage between strategy and structure.

The remainder of this paper is organized as follows: in the following section, we provide our theoretical arguments and develop hypotheses. We then describe the data, measures, and estimation methods. In the section that follows, we report our findings. We discuss our results and implications for theory in the penultimate section. The paper concludes by drawing attention to the limitations of the study and providing some directions for future research.

THEORY AND HYPOTHESES

In an early work on business groups, Leff describes them as “an institutional innovation for overcoming—and reaping the benefits from—imperfect markets in the less developed countries” (1978: 668, emphasis added). Khanna and Palepu (1997) extend the argument to include underdeveloped institutions, notably the regulatory and judicial institutions, which characterize emerging economies. Khanna and Palepu (1997) maintain that business groups are able to add value to the affiliate firms by creating an internal capital market (which substitutes for absent venture capital firms in such economies), an internal managerial talent pool (which substitutes for business schools), building a credible umbrella brand and group reputation (which substitutes for certification agencies and guarantees contractual enforcement), and expertise in dealing with regulatory bodies (which substitute for professional lobbyists) (Khanna and Palepu, 1997). The access to resources and capabilities of the collective enables affiliate firms to operate more efficiently, and to access and exploit opportunities that are not available to nongroup firms (Khanna and Palepu, 1997). The rare and inimitable ability of business groups to combine domestic and foreign resources in the presence of asymmetric trade policies enables them to “set up new business ventures across a variety of industries quickly and at low cost” (Guillen, 2000: 363). Further, it has been argued that the social ties that typify business groups enable affiliate firms to reduce uncertainty, enhance trust, and reduce transaction costs of accessing new business opportunities (Granovetter, 1995; Luo and Chung, 2005).

In sum, the extant literature highlights the value-adding potential of business groups in addressing new business opportunities in emerging economies characterized by institutional failures. However, benefits that accrue to member firms because of privileged access to “strategic opportunities” that
of connecting hitherto unrelated information and knowledge—and facilitates “perceiving or crafting new opportunities that others have not noticed, imagined, or enacted” (Foss et al., 2008: 81). The connectedness among member firms fostered by a host of formal and informal ties such as director interlocks, group management cadre, and group-wide platforms, etc., improves the effectiveness of information and resource transfer across affiliate firms (Reagans and McEvily, 2003; Szulanski, 1996) that is needed for novel recombination of resources to take place.

Internal director interlocks—or interlocks within business groups—occur when executives from group headquarters or other affiliate firms are deputed to represent the group in the boards of multiple affiliate firms (Maman, 1999). These internal interlocks act as bridging ties (McEvily and Zaheer, 1999) that serve to connect the affiliates operating in diverse businesses (Keister, 1998). An additional set of bridging ties is provided by the group management cadre, recruited and trained centrally and rotated across different affiliate firms over a period of time (Khanna and Palepu, 1997). These managers play a vital role in the generation and enhancement of group-specific, affiliate firm-specific, and team-specific associational experiences, which shape the opportunity set of the business group and influence its growth (Foss et al., 2008; Kor, Mahoney, and Michael, 2007). Job rotation across affiliate firms develops “knowledge of who knows what, who can help with what problem, or who can exploit new information” (Cohen and Levinthal, 1990: 45, emphasis added) that can be tapped into towards exploiting an opportunity. Such experiential and associational knowledge comes in handy in making timely entrepreneurial decisions, accelerating knowledge transfer, decision making, and execution (Kor et al., 2007). The presence of group-wide platforms and processes, including cross-company teams and interfaces, further enables exchange of information and expertise among member firms.

In addition to these sets of formal ties, business groups are also characterized by the “existence of social solidarity and social structure among component firms” (Granovetter, 1995: 108) and a strong logic of reciprocity (Smangs, 2006). A governance logic based on reciprocity, shared social context, and shared identity of the group (Granovetter, 1995; Khanna and Palepu, 1999;
Smangs, 2006) provides a context that is low on opportunism and one that is based on trust and cooperation. Such a context facilitates easy transfer and assimilation of knowledge among group firms (Jansen, Van den Bosch, Volberda, 2005; Reagans and McEvily, 2003; Uzzi, 1997) resulting in access to greater opportunities, especially those that require transfer of tacit knowledge (Grant, 1996; Kogut and Zander, 1996).

In sum, business group affiliation provides member firms with distinctive vantage points and, as Denrell et al. note: “the more distinctive the view, the more likely that such a view can encompass valuable opportunities not similarly visible to other firms” (2003: 988). Therefore, business group affiliates are advantageously placed in accessing profitable opportunities hidden by incomplete markets. This logic leads us to our first hypothesis:

Hypothesis 1: Firms affiliated to business groups have greater growth opportunities than nongroup firms.

Business groups exhibit considerable heterogeneity (Khanna and Yafeh, 2007). Consequently, affiliate firms of different business groups will be differently privileged. Firms affiliated to business groups with a widely diversified portfolio will have access to a greater number and variety of resources than affiliates of business groups with a less diversified portfolio. As the access to resources grows in number and variety, the number of possibilities for growth expands at a combinatorial rate (Ghoshal et al., 2000; Weitzman, 1996). Hence, we hypothesize:

Hypothesis 2: The greater the access to diversity through the business group, the greater the growth opportunities for the affiliate firms.

Organizational form and growth opportunities

Arguably, divisions of a multibusiness firm would have access to opportunities akin to firms affiliated to a business group, if the multibusiness firm had similar diversity in its portfolio. However, the ability of divisions in a multibusiness firm to sense and seize opportunities would be different since they are organized differently. A critical factor that affects a firm’s motivation and ability to pursue growth opportunities is its organizational and governance framework (Chandler, 1962; Penrose, 1959; Sautet, 2000). As Denrell et al. point out, recognizing and seizing opportunities demands an “energetic quest”—“a quest in which lucky discoveries of unanticipated kind can be recognized through alertness and then flexibly exploited” (2003: 989). The quest is energized both by access to relevant resources and the presence of a robust incentive system. As Kuratko, Montagno, and Hornsby (1990) show, “resource and reward availability” is a key driver of entrepreneurial behavior within firms. Penrose makes a similar observation, noting that a firm’s growth opportunities (or a division’s as the case may be) are restricted to the extent it “is unwilling to act upon them, or is unable to respond to them” (1959: 32, emphasis added). We submit that the distinctive organizational arrangement of business groups enables their affiliates to sense and seize opportunities, both internally and in the external environment, better than nongroup diversified firms with equivalent diversity in the portfolio.

The multiple businesses in a firm’s portfolio could be organized under a single legal entity, as is the case with the multidivisional (M-form) firm, or as separate legal entities, as is typical of business groups (see Figure 1). The legal independent status of the affiliate firms endows them with “individual privilege (e.g., limited liability) and obligation (e.g., fiduciary obligation) under company laws” (Chung, 2001: 721). Each affiliate firm has a full-fledged top management team that is governed by its own board of directors and importantly publishes a separate annual financial statement of accounts. In sharp contrast, divisional managements in an M-form organization report to a firm-wide top management team (the firm’s corporate headquarters), which in turn is governed by the firm’s board of directors. The M-form firm publishes a single financial statement that discloses information on the performance of the diversified firm as a whole. The independent legal standing and reporting requirements affords managements of affiliate firms considerably greater “autonomy” than the divisional managements of businesses in a diversified M-form firm. These structural and governance characteristics enable affiliate firms to potentially avoid several of the motivational and resource allocation challenges that are typical of diversified M-form organizations identified in the research literature.
In a multidivisional firm, the corporate headquarters retains the ultimate decision rights to intervene in the affairs of the divisional units. The decision rights, where given, are only "loaned to" and "not owned by" the divisional management (Baker, Gibbons, and Murphy, 1999). The vesting of the overriding authority with the corporate headquarters has been found to strain the motivation of frontline managers in multidivisional firms (Campbell, Goold, and Alexander, 1995; Day and Wendler, 1998), since, as Williamson observes, the right to intervene "can be exercised both for good cause (to support expected net gains) and for bad (to support the sub-goals of intervenor)" (Williamson, 1996, q.v. Foss, 2003: 341). The support for "bad causes" is likely to be relatively high in the M-form organization because of the manipulation of the centralized resource allocation process by divisional managers and the vulnerability of the decision makers to the logic of the dominant business, thereby resulting in deserving opportunities being overlooked (Prahalad and Bettis, 1986; Rajan, Servaes, and Zingales, 2000; Scharfstein and Stein, 2000).

While not immune from the influences of the common dominant owner or the group headquarters, the presence of an external governance mechanism in the form of a separate board with a fiduciary responsibility to the affiliate firm (Lan and Heracleous, 2010) will potentially afford managements of affiliate firms in a business group a greater sense of "control" over resources. While intra-group cash transfers are common (Bertrand, Mehta, and Mullainathan, 2002; Chang and Hong, 2000; George and Kabir, 2008), the presence of outside directors in the independent legal entities and the oversight of regulatory and market forces gives affiliate firm managements an important and additional powerful check against opportunistic interventions, while still accommodating beneficial interventions (Foss, Foss, and Vazquez, 2006). The statutory reporting requirements of affiliate firms make the task of "diverting" surplus resources from one business to another, especially for "bad causes," harder and costlier (Almeida and Wolfenzon, 2006; Belenzon and Berkovitz, 2010). The consequent enhanced credibility of delegation (Foss et al., 2006) enables the affiliate management to proactively pursue new opportunities for growth.

Further, the sole reliance on accounting-based measures of divisional performance could lead to risk-averse behavior by divisional managers in M-form organizations (Hoskisson and Hitt, 1988; Hoskisson, Hitt, and Hill, 1993). While scholars have recommended the use of "value creation" oriented incentives aligned with stockholder interests (Hoskisson and Hitt, 1988), M-form organizations, however, lack a readily computable market-based measure to incentivize divisional managers.
The market valuation of a division’s business cannot be discerned independent of that of the other businesses in the M-form organization. On the other hand, the (possibility of) separate listing of individual affiliates in the business group organization offer stock options as a powerful market-based incentive for affiliate firms, in turn fostering entrepreneurialism. The motivation to pursue growth opportunities is further strengthened by the sense of empowerment that the affiliate management derives from being responsible to their own set of employees and accountable to their own set of shareholders (Conger and Kanungo, 1988).

In sum, the organization of businesses as separate legal entities, with a separate governance structure for each affiliate firm, mitigates the internal governance problems associated with incentive alignment and resource allocation in multidivisional firms. Consequently, the higher the number of legal entities a business group has, for a given level of diversification, the greater the ability of its affiliate firm to sense and seize opportunities. This logic leads us to hypothesize:

**Hypothesis 3:** The greater the multi-entity character of the business group, the greater the growth opportunities for the affiliate firms.

The set of opportunities available to a firm is also shaped by the external environment in which it is embedded (Ghoshal et al., 2000; Penrose, 1959; Teece, 2007). As Denrell et al. note, “in a changing environment, there is a continuing renewal of each firm’s view of opportunities” (2003: 978). To the extent the external environment is characterized by rich opportunity, the opportunity set of firms embedded in it would be greater. In the next section, we focus on the role of external environment and specifically examine the impact of the institutional reforms.

**Growth opportunities and institutional reforms**

Emerging economies around the world are characterized by wide-ranging market-oriented reforms that reduce government intervention in an economy and improve the functioning of product and factor markets through changes in laws and regulations (Chari and David, 2012; Cuervo-Cazurra and Dau, 2009a). The unfolding of pro-market reforms in emerging economies is accompanied by a burst of growth opportunities in the external environment (Cuervo-Cazurra and Dau, 2009a; Hoskisson et al., 2004). The dismantling of state controls—deregulation and privatization—removes constraints on entry into product markets and opens up opportunities that were hitherto not available (Haveman, Russo, and Meyer, 2001; Ramamurti, 2000). The deepening of domestic capital markets, liberalization of laws enabling access to foreign capital, and the strengthening of the regulatory framework that safeguards the rights of capital providers enhance easy access to capital to pursue greater opportunities.

While there is an increase in growth opportunities in general, it has been acknowledged in the research literature that not all firms benefit equally from the reform process (Cuervo-Cazurra and Dau, 2009a; Ramamurti, 2000). The privileged access to group-wide resources highlighted earlier, coupled with the attendant increase in combinatorial possibilities, and the organizational arrangements in business groups that enable member firms to not only sense but also seize the expanded set of opportunities leads to the following hypothesis:

**Hypothesis 4:** As pro-market reforms get strengthened in an economy, business group affiliates will have greater growth opportunities than nongroup firms.

**DATA AND METHODS**

**Data**

We test our hypotheses on a data set of group-affiliated and nongroup firms from India. The prominence of the business groups in the Indian competitive landscape, the clear identification of group affiliation of firms, and the availability of widely validated databases of financial measures and capital market information on Indian firms make India a popular context for research on business groups (cf. Chari and David, 2012; Douma, George, and Kabir, 2006; Elango and Pattnaik, 2007; Khanna and Palepu, 2000a; Vissa, Greve, and Chen, 2010). Moreover, given our argument that business groups would continue to add value to their affiliate firms even as the institutional environment gets strengthened in an economy, we believe our choice of India, an
economy that has undergone a widespread and persistent market-oriented reform process over the last two decades (Ahluwalia, 2002, 2011; Chari and David, 2012; Panagariya, 2008), is appropriate to test our hypotheses.

Our data are drawn from PROWESS, a widely used and well-validated database for research on Indian companies (cf. Elango and Pattnaik, 2007; Khanna and Palepu, 2000a; Khanna and Rivkin, 2001; Vissa et al., 2010), which provides detailed financial measures and capital market information of large and medium Indian firms. The data correspond to the time period 1994–2010 and comprise all firms listed at the Bombay Stock Exchange, the oldest and one of the two significant stock exchanges in India. In line with prior works, firms operating in the financial services industry, firms with multinational parents, and firms that were owned partly or fully by the government were excluded from our sample (Chacar and Vissa, 2005; Chari and David, 2012; Douma et al., 2006; Elango and Pattnaik, 2007; Khanna and Palepu, 2000a; Vissa et al., 2010). We also dropped observations that we suspected to be database errors or unusual outliers using the guidelines followed by prior works (Vissa et al., 2010). Further, in line with previous research studies, we cap the dependent variable at their 1st and 99th percentile values (Douma et al., 2006). Our final sample comprised 13,765 firm-year observations, which included both group-affiliated and nongroup firms. The sample used to examine hypotheses involving only group-affiliated firms comprised 4,379 firm-year observations.

Measures

Dependent variable

Since growth opportunities are typically unobservable (Adam and Goyal, 2008), we follow prior academic research in finance (Erickson and Whited, 2000) and management (Billet, King, and Mauer, 2007; David et al., 2006; Wright et al., 1996) by using the Q ratio as a proxy variable to measure them. The Q ratio—computed as the sum of market value of equity and book value of debt divided by the book value of assets—is the commonly used proxy for growth opportunities as it has the “highest information content of all proxies with respect to investment opportunities” (Adam and Goyal, 2008: 55). Anchored on Keynes’ (1936) insight that a firm would invest only if the additional market value created from such investments is likely to exceed their cost, a high Q ratio indicates high growth opportunities (David et al., 2006; Erickson and Whited, 2000). Despite its simple structure, the Q ratio has proved to be a robust proxy for growth opportunities and has, notably, better explanatory power than a firm’s cash flows (Erickson and Whited, 2000). Given that our conceptual arguments focus on growth opportunities afforded by incomplete markets and organizational form, the use of Q ratio as a proxy is particularly appropriate as it estimates the growth opportunities of the firm after taking into account its internal capabilities to exploit them (David et al., 2006). Critically, the observed noise in the measurement of Q ratio does not bias the inferences when it is used as a dependent variable in the regression (Erickson and Whited, 2006).

Independent variables

We identify group affiliation through PROWESS’s classification of firms into groups (cf. Chari and David, 2012; Khanna and Palepu, 2000a; Khanna and Rivkin, 2001; Vissa et al., 2010). The variable of interest in our second hypotheses is the affiliate firm’s access to diversity through the network of other affiliate firms in the business group. We define this variable as group product access. For each affiliate firm, group product access is calculated as the number of product markets that the business group operates in, apart from the focal affiliate firm. For example, if there are three firms A, B, and C in a business group, operating in two, three, and five product markets, respectively, then the group product access for firms A, B, and C are calculated as eight (=3+5) for firm A, seven (=2+5) for firm B, and five (=2+3) for firm C. Given our theoretical reasoning of an increase in growth opportunities flowing from access to a diverse resource and knowledge base, group product access which captures the breadth of access to different product markets is an appropriate choice. Further, it has been shown that a simple count measure of diversity corresponds closely with other categorical and detailed weighted measures (Lubatkin, Merchant, and Srinivasan, 1993). Prior works on Indian business groups have also found strong correlation with count and weighted measures of diversity (cf. Khanna and Palepu, 2000a).
The variable is computed from the firm-product data that are available in the PROWESS database. We dropped firms whose sum of product sales were less than 90 percent of reported total firm sales. We also ensured that insignificant items do not bias our sample by considering only products that contributed at least 10 percent of the reported firm sales. We then calculated firm level product count for every firm. Group product access of an affiliate firm—measured as sum of the firm product count of all other affiliate firms in the group—was then computed. The natural logarithm of group product access and firm product count variables were used for the analyses.

Our third hypothesis relates to the multi-entity characteristic of the business group. We maintain that, for a given level of portfolio diversity, organizing the diverse businesses as separate legal entities, with a separate governance structure for each affiliate firm, mitigates the internal governance problems associated with incentive alignment and resource allocation vis-à-vis organizing the businesses as divisions of a single multidivisional firm. We capture this construct through the variable, MEC (multi-entity character) ratio. This measure helps parse the benefits arising from the organizational arrangement (specifically the multi-entity characteristic) from the benefits of participating in multiple businesses (or what can be termed as multibusiness characteristic). We measure MEC ratio as a ratio of the number of companies in the business group to the number of product markets that a business group is present in. This measure helps us examine the impact of organizational arrangement for a given level of diversity. Consider two groups A and B, each having presence in 10 product markets. Group A is organized as five companies and Group B as two companies. Thus, Group A displays greater multi-entity character than Group B. This is captured in the MEC ratios of Group A and Group B, which are 0.5 and 0.2, respectively; the higher the MEC ratio, the greater the multi-entity character of the business group.

While estimating both group product access and MEC ratio, we included all group firms—all listed and nonlisted nonfinancial firms—including those firms that were not part of our final sample. The affiliate firm in our final sample would have linkages to these other group firms even if they do not feature in our final sample and thus needed to be included while calculating group product access and MEC ratio.

The extent of pro-market reforms is captured using the reform index measure provided by Chari and David (2012). The index tracks the pro-market changes in the factor markets through an aggregate measure of foreign direct investment openness, tariff reductions, strengthening of intellectual property laws, strengthening of creditor and shareholder protection, and liberalization of labor laws and restrictions (Chari and David, 2012). Further details regarding the measure are provided in the online supporting information.

Control variables

We controlled for the following variables in our analyses: firm age, size, leverage, marketing intensity, research and development (R&D) intensity, firm profitability, industry, and year. Older and larger firms would have accumulated sufficient resources and capabilities over time that could positively influence a firm’s growth opportunities (Penrose, 1959). However, these firms could also suffer from organizational inertia, which makes them less nimble in pursuing new opportunities. Firm age is measured as the natural logarithm of number of years since the incorporation of the firm (Chakrabarti, Singh, and Mahmood, 2007; Khanna and Palepu, 2000a). Firm size is operationalized as the natural logarithm of firm sales (Douma et al., 2006; Khanna and Palepu, 2000a). Given the proclivity for group firms to be more leveraged than nongroups (Carney et al., 2011), we employed leverage—calculated as the ratio of debt to equity—as an additional control variable. R&D and marketing capabilities reflect a firm’s ability to explore new technology and product domains, respectively (Danneels, 2008). R&D intensity is measured as the ratio of total R&D expenses to sales. Marketing intensity is calculated as the ratio of the total of marketing, advertising, and distribution expenses to firm sales. Since the Q ratio reflects both the firm’s current profitability and its future potential, we employ firm profitability—measured as return of assets (ROA), i.e., ratio of operating profit to total assets—as an additional control variable, and it is taken into account. We also control for industry-specific and year-specific effects using indicator variables.
**Statistical method**

Given the cross-sectional time-series nature of our data (firm-year observations), panel data regression is used to test our hypotheses. A fixed effects or random effects model could be used to account for firm-level effects. We report here results of random effects specification for our analyses for two reasons. First, the average number of time period observations per panel in our sample ($T = 8.1$ for the sample of affiliate firms and 6.4 for the overall sample of both group and nongroup firms) is much smaller than the number of panels ($m = 543$ firms and 2,151 firms, respectively). The fixed effects estimators in such cases may be inconsistent (Hsiao, 1986, cf. Leiblein and Madsen, 2009), whereas the random effects estimators are not. Second, one of our variables of interest, group affiliation, and one of our critical control variables, industry dummies, are time invariant and could not be accommodated in a fixed effects specification. The fixed effects specification would also soak up most of the explanatory power of slowly changing variables (Beck, 2001; Zhou, 2001), a condition that some of our variables display with very little within-panel variation when compared to across-panel variation. Under these conditions, prior works (cf. Barnett and Salomon, 2006; Leiblein and Madsen, 2009; Yin and Zajac, 2004) have recommended the use of random effects specification over a fixed effects model. We nevertheless tested our hypotheses using a fixed effects model and report the results as part of our additional tests.

**RESULTS**

Table 1 presents the means, standard deviations, and correlation matrix of the variables. The correlation matrix of the sample, comprising both group and nongroup firms used for testing Hypotheses 1 and 4, are reported in Panel A. The correlation matrix of affiliate firms’ sample, used for testing Hypotheses 2 and 3, are reported in Panel B. The analysis of the correlation indices and the variance inflation factors suggest that our analyses are not affected by multicollinearity. The regression results are presented in Table 2. We report standard errors that are robust to heteroskedasticity. We control for industry-specific and year-specific effects in all our analyses. All our model specifications are statistically significant. Models 1–4 present our analyses of Hypotheses 1 and 4. The sample for these analyses comprises both group and nongroup firms. Model 1 reports the results of the baseline model with all the control variables. Model 2 includes the indicator variable for group affiliation. The empirical results indicate that group affiliation has a significant positive effect on a firm’s growth opportunities ($b = 0.044, p < 0.039$). Hence, Hypothesis 1 is supported.

Our test of Hypothesis 1 is arguably not affected by endogeneity issues. There is a broad consensus in extant research that business group formation is an exogenous process (cf. Khanna and Yafeh, 2005). Affiliate firms cannot decide to join a business group (cf. Chang, Chung, and Mahmood, 2006; Khanna and Palepu, 2000a); typically, affiliate firms are promoted by the common dominant owner of the business group. Acquisitions constitute a very small part of the business group portfolio (cf. Khanna and Palepu, 2000a: 888). However, following the onset of economic liberalization in the early nineties, several large business groups restructured their portfolios to adapt to the changed competitive context and also take advantage of the growth opportunities afforded by liberalization. Business groups restructured their portfolio by consolidating similar businesses that were distributed among affiliate firms into a single entity (for example, Aditya Birla Group brought all its cement businesses under one affiliate, Grasim Industries); pursued acquisitions to strengthen their competitive position (for example, TAFE of Amalgamations Group acquired its major competitor Eicher Tractors); and sold businesses in which they had no meaningful competitive position (for example, the Tata Group sold its soaps and toiletries business to Hindustan Unilever Limited). Hence, as a matter of additional caution, we repeated our analysis on a restricted sample of firms that were not part of any domestic mergers and acquisition activity during our sample period (cf. Khanna and Palepu, 2000b: 275, for a similar approach). The results remained robust and are available from the authors. We thank an anonymous reviewer for suggesting this additional analysis.
Table 1. Means, standard deviations, and correlations

Panel A: Group and nongroup firms sample (Hypotheses 1 and 4)

<table>
<thead>
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<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
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<th>10</th>
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<tr>
<td>1 Q ratio</td>
<td>13765</td>
<td>1.05</td>
<td>0.63</td>
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<td>2 Ln (firm age)</td>
<td>13765</td>
<td>2.95</td>
<td>0.73</td>
<td>0.01</td>
<td>1</td>
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<td>3 Ln (sales)</td>
<td>13765</td>
<td>4.44</td>
<td>1.87</td>
<td>0.12***</td>
<td>0.43***</td>
<td>1</td>
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<td>4 Debt to equity</td>
<td>13765</td>
<td>1.20</td>
<td>2.33</td>
<td>0.02***</td>
<td>−0.001</td>
<td>0.05***</td>
<td>1</td>
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<tr>
<td>5 Marketing intensity</td>
<td>13765</td>
<td>0.02</td>
<td>0.04</td>
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<td>0.05***</td>
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<td>−0.02**</td>
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</tr>
<tr>
<td>6 R&amp;D intensity</td>
<td>13765</td>
<td>0.00</td>
<td>0.02</td>
<td>0.08***</td>
<td>0.003</td>
<td>0.05***</td>
<td>−0.04***</td>
<td>0.07***</td>
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<td>7 ROA</td>
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<td>0.12</td>
<td>0.11</td>
<td>0.16***</td>
<td>0.05***</td>
<td>0.23***</td>
<td>−0.08***</td>
<td>−0.01</td>
<td>0.03***</td>
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<tr>
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<td>0.47</td>
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<td>0.16***</td>
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<td>9 Group dummy</td>
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<td>0.29***</td>
<td>0.46***</td>
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<td>0.04***</td>
<td>0.07***</td>
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<td>0.11***</td>
<td>0.29***</td>
<td>0.23***</td>
<td>−0.01</td>
<td>0.03***</td>
<td>0.04***</td>
<td>−0.06***</td>
<td>−0.001</td>
<td>−0.11***</td>
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Panel B: Only group affiliate firms sample (Hypotheses 2 and 3)

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<th>Variable</th>
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<th>Mean</th>
<th>S.D.</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<th>8</th>
<th>9</th>
<th>10</th>
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<tbody>
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<td>1.08</td>
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<td>2 Ln (firm age)</td>
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<td>0.74</td>
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<td>3 Ln (sales)</td>
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<td>5.45</td>
<td>1.57</td>
<td>0.18***</td>
<td>0.32***</td>
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<tr>
<td>4 Debt to equity</td>
<td>4379</td>
<td>1.30</td>
<td>2.35</td>
<td>0.01</td>
<td>−0.07***</td>
<td>−0.07***</td>
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</tr>
<tr>
<td>5 Marketing intensity</td>
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<td>0.03</td>
<td>0.03</td>
<td>0.15***</td>
<td>0.07***</td>
<td>0.03</td>
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<tr>
<td>6 R&amp;D intensity</td>
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<td>0.01</td>
<td>0.04***</td>
<td>−0.04***</td>
<td>0.02</td>
<td>−0.03**</td>
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<td>7 ROA</td>
<td>4379</td>
<td>0.13</td>
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<td>0.001</td>
<td>0.17***</td>
<td>−0.14***</td>
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<td>−0.07***</td>
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<td>0.16***</td>
<td>0.30***</td>
<td>−0.05***</td>
<td>0.03**</td>
<td>−0.001</td>
<td>0.07***</td>
<td>0.03***</td>
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<td>10 MEC ratio</td>
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<td>0.17</td>
<td>0.08***</td>
<td>−0.06***</td>
<td>−0.08***</td>
<td>0.03*</td>
<td>−0.02</td>
<td>−0.03**</td>
<td>0.02</td>
<td>−0.56***</td>
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<td>11 Reform index</td>
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<td>4.74</td>
<td>2.65</td>
<td>0.16***</td>
<td>0.23***</td>
<td>0.26***</td>
<td>−0.01</td>
<td>0.05***</td>
<td>0.04***</td>
<td>−0.08***</td>
<td>−0.02</td>
<td>0.06***</td>
<td>0.07***</td>
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*p < 0.1; **p < 0.05; ***p < 0.01, double-tailed tests.
Table 2. Hypotheses test results

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<tr>
<th>Hypotheses</th>
<th>Baseline model</th>
<th>H1</th>
<th>H4</th>
<th>Baseline model</th>
<th>H2</th>
<th>H3</th>
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<td>Dependent variable: Q ratio</td>
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<td></td>
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<tr>
<td>Ln (age)</td>
<td>−0.116***</td>
<td>(0.013)</td>
<td>−0.120***</td>
<td>(0.013)</td>
<td>−0.107***</td>
<td>(0.014)</td>
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<td>Ln (sales)</td>
<td>0.068***</td>
<td>(0.006)</td>
<td>0.065***</td>
<td>(0.007)</td>
<td>0.055***</td>
<td>(0.007)</td>
</tr>
<tr>
<td>Debt-to-equity ratio</td>
<td>0.011***</td>
<td>(0.002)</td>
<td>0.011***</td>
<td>(0.002)</td>
<td>0.009***</td>
<td>(0.002)</td>
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<tr>
<td>Marketing intensity</td>
<td>0.896***</td>
<td>(0.248)</td>
<td>0.879***</td>
<td>(0.248)</td>
<td>0.719***</td>
<td>(0.257)</td>
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<tr>
<td>R&amp;D intensity</td>
<td>1.475***</td>
<td>(0.501)</td>
<td>1.466***</td>
<td>(0.502)</td>
<td>1.723***</td>
<td>(0.552)</td>
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<td>ROA</td>
<td>0.554***</td>
<td>(0.104)</td>
<td>0.558***</td>
<td>(0.104)</td>
<td>0.745***</td>
<td>(0.128)</td>
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<tr>
<td>Ln (firm product access)</td>
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<td>(0.013)</td>
<td>−0.026*</td>
<td>(0.013)</td>
<td>−0.025*</td>
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<tr>
<td>Group dummy</td>
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<td>0.037*</td>
<td>(0.021)</td>
<td>0.022***</td>
<td>(0.022)</td>
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<tr>
<td>Ln (group product access)</td>
<td>0.048***</td>
<td>(0.014)</td>
<td>0.063***</td>
<td>(0.015)</td>
<td>0.250***</td>
<td>(0.068)</td>
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<td>MEC ratio</td>
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<tr>
<td>Reform index</td>
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<td>0.011***</td>
<td>(0.003)</td>
<td>0.021***</td>
<td>(0.004)</td>
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<td>Group dummy × reform index</td>
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<td>1.206***</td>
<td>(0.087)</td>
<td>0.843***</td>
<td>(0.082)</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year dummies</td>
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<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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<td>2,151</td>
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<td>Wald chi-square</td>
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<td>5192.77</td>
<td>436.07</td>
<td>453.39</td>
<td>1324.06</td>
<td>1328.58</td>
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<tr>
<td>R square</td>
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<td>0.09</td>
<td>0.09</td>
<td>0.30</td>
<td>0.31</td>
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</table>

Standard errors corrected for heteroskedasticity in parentheses.
*p < 0.1; **p < 0.05; ***p < 0.01

Hypothesis 4 further predicts that the positive association between the extent of pro-market reforms and growth opportunities for firms is positively moderated by group affiliation. The reform index variable is introduced in Model 3 to test this prediction, and the variable is found to be positive and significant ($b=0.022$, $p<0.000$). The year dummies are not included for models incorporating the reform index variable as there is a high degree of collinearity between year dummies and the year-specific reform index variable. Model 4 includes the interaction term between reform index and group affiliation variable. The variables, except for group dummy, are mean centered for the estimation of the interaction model. The interaction variable is found to be positive and significant ($b=0.021$, $p<0.000$). The interaction effect is plotted in Figure 2 to facilitate interpretation. All the variables except group dummy and reform index were constrained to their mean values. Reform index took the values of one standard deviation above and below its mean value while the group dummy took the value of 0 and 1, denoting nongroup and group firms, respectively. As the plot illustrates, reform index has a stronger positive influence on growth opportunities for group-affiliated firms than nongroup firms, thus providing support for Hypothesis 4.

Models 5–7 present our analyses of Hypotheses 2 and 3. The sample for these analyses includes only group-affiliated firms. Model 5 presents a baseline model with all the control variables for the sample of group-affiliated firms. Our second hypothesis predicts that the growth opportunities
of a group affiliate firm are positively influenced by the access to diversity within the business group. To test this hypothesis, we add the group product access variable in Model 6. The variable is positive and significant \( (b = 0.048, p < 0.001) \), thus providing support for Hypothesis 2. We add the MEC ratio variable in Model 7. The variable is found to have a positive influence on the growth opportunities of an affiliate firm \( (b = 0.250, p < 0.000) \). Thus, our Hypothesis 3, which predicts a positive relationship between the multi-entity character of business group and an affiliate’s growth opportunities, is supported. The group product access variable continues to remain significant \( (b = 0.063, p < 0.000) \).

**Additional tests**

We performed a series of additional analyses to verify the robustness of our results. The results of the additional tests are presented in Tables 3 and 4. First, we examined the robustness of our findings under different specifications. We repeated all our analyses on group firms, i.e., Hypotheses 2 and 3, using a multilevel specification. Models 6 and 7 presented in Table 2 assume that the errors are not correlated across firms in a business group. However, affiliate firms belonging to the same business group may share certain common characteristics and group-level influences. The estimation model should accommodate independence of observations across business groups and relax that assumption within business groups (cf. Khanna and Palepu, 2000a). A multilevel model achieves this by explicitly modeling the nested nature of affiliate firms. In the multilevel model, observations across time are nested within affiliate firms, which in turn are hierarchically nested within business groups (cf. Hough, 2006; Misangyi et al., 2006). The multilevel model results are presented in Model 1 of Table 3. The group product access (Hypothesis 2) and MEC ratio (Hypothesis 3) variables remain positive and significant.

Further, we repeated all our analyses of Hypotheses 2 and 3 on a specification using lagged values of the independent variable and control variables. The empirical results remained consistent (Table 3: Model 2) with our previous analysis of both Hypotheses 2 and 3. The analyses of Hypotheses 1 and 4 were not performed using a lagged specification model as group affiliation remains unchanged over time.

Next, we repeated our analyses using alternate specifications of dependent variable. We defined our dependent variable as a binary variable. Following prior works (cf. David et al., 2006), we coded growth opportunities as an indicator variable with value 1 when Q exceeds 1, and 0 otherwise. The findings remained robust (Table 3: Models 3–6). The group indicator variable was positive and significant, as was the interaction variable lending support for Hypotheses 1 and 4. The group product access variable was significant at 1 percent \( (b = 0.264, p < 0.001) \), and the MEC ratio variable was supported at a 10 percent significant level, under a one-tailed test specification \( (b = 0.679, p < 0.129) \).

Additionally, as an extension of our Hypothesis 4, we examined individually the moderating effect of group product access and MEC ratio on the relationship between reform index and growth opportunities. The results were consistent with our results for Hypothesis 4, and are reported in the supporting information.

As an additional robustness test of Hypothesis 3, we used group product count (measured as natural logarithm of number of product markets that the group is operating in) and group company count (measured as natural logarithm of the number of companies in the group) as separate variables in the place of MEC ratio (cf. Klein and Saidenberg, 2010). The empirical results are presented in Table 4. Both group product count and group company count variables were positive and significant when included in separate models (Table 4: Models 1 and 2).
### Table 3. Additional tests results

<table>
<thead>
<tr>
<th>Model</th>
<th>Dependent variable: Q ratio</th>
<th>(1) Multilevel model H2 and H3</th>
<th>(2) Lagged independent variables - RE model H2 and H3</th>
<th>(3) Dependent variable - Q ratio as categorical variable - logistic regression H1</th>
<th>(4) H4</th>
<th>(5) H2 and H3</th>
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</thead>
<tbody>
<tr>
<td>Hypothesis</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ln (age)</td>
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<td>$-0.120^{***}$</td>
<td>$-0.600^{***}$</td>
<td>$-0.356^{***}$</td>
<td>$-0.352^{***}$</td>
<td>$-0.498^{***}$</td>
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<tr>
<td></td>
<td>(0.021)</td>
<td>(0.026)</td>
<td>(0.068)</td>
<td>(0.051)</td>
<td>(0.051)</td>
<td>(0.119)</td>
</tr>
<tr>
<td>Ln (sales)</td>
<td>$0.079^{***}$</td>
<td>$0.088^{***}$</td>
<td>$0.207^{***}$</td>
<td>$0.108^{***}$</td>
<td>$0.092^{***}$</td>
<td>$0.298^{***}$</td>
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<td>(0.016)</td>
<td>(0.027)</td>
<td>(0.020)</td>
<td>(0.021)</td>
<td>(0.057)</td>
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<tr>
<td>Debt-to-equity ratio</td>
<td>$0.012^{***}$</td>
<td>$0.004$</td>
<td>$0.302^{***}$</td>
<td>$0.226^{***}$</td>
<td>$0.228^{***}$</td>
<td>$0.328^{***}$</td>
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<td></td>
<td>(0.003)</td>
<td>(0.004)</td>
<td>(0.022)</td>
<td>(0.018)</td>
<td>(0.018)</td>
<td>(0.039)</td>
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<td>(0.675)</td>
<td>(0.943)</td>
<td>(0.743)</td>
<td>(0.743)</td>
<td>(2.219)</td>
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<tr>
<td>R&amp;D intensity</td>
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<td>$-1.016$</td>
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<td>$7.546^{***}$</td>
<td>$7.464^{***}$</td>
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<td>(1.890)</td>
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<td>(1.531)</td>
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<td>$4.506^{***}$</td>
<td>$4.584^{***}$</td>
<td>$7.722^{***}$</td>
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<td>(0.345)</td>
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<td>(0.304)</td>
<td>(0.775)</td>
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<tr>
<td>Ln (firm product access)</td>
<td>$0.035$</td>
<td>$0.074^{**}$</td>
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<td>$-0.092$</td>
<td>$-0.088$</td>
<td>$-0.212$</td>
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<td>(0.120)</td>
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<tr>
<td>Ln (group product access)</td>
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<td>$0.078^{***}$</td>
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<td>$0.264^{***}$</td>
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<td>(0.015)</td>
<td>(0.018)</td>
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<td></td>
<td></td>
<td>(0.079)</td>
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<tr>
<td>MEC ratio</td>
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<td>$0.323^{***}$</td>
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<td>$0.679$</td>
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<td>(0.084)</td>
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<td>(0.447)</td>
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<tr>
<td>Reform index</td>
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<td>$0.099^{***}$</td>
<td>$0.069^{***}$</td>
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<td></td>
<td>(0.010)</td>
<td>(0.014)</td>
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<tr>
<td>Group dummy $\times$ reform index</td>
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<td></td>
<td></td>
<td>$0.070^{***}$</td>
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<td>(0.018)</td>
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<tr>
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<td>$0.117$</td>
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<td>$-1.675^{***}$</td>
<td>$-24.525$</td>
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<td>(0.299)</td>
<td>(0.248)</td>
<td>(0.403)</td>
<td>(0.297)</td>
<td>(0.299)</td>
<td>(22225.27)</td>
</tr>
<tr>
<td>Industry dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>4,379</td>
<td>3,042</td>
<td>13,765</td>
<td>13,765</td>
<td>13,765</td>
<td>4,379</td>
</tr>
<tr>
<td>Number of panels</td>
<td>446</td>
<td>2,151</td>
<td>2,151</td>
<td>2,151</td>
<td>543</td>
<td></td>
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<tr>
<td>Wald chi-square</td>
<td>1662.36</td>
<td>928.02</td>
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</tr>
<tr>
<td>R square</td>
<td>0.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>$-6460.49$</td>
<td>$-8045.68$</td>
<td>$-8034.48$</td>
<td>$-1874.41$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard errors corrected for heteroskedasticity in parentheses.
For multilevel model: $SD$ (group) = 0.117; $SD$ (firm) = 0.325; $SD$ (residual) = 0.427.

*p < 0.1; **p < 0.05; ***p < 0.01

When both the variables were included in a single model, the group company count variable continued to remain positive and significant at the 1 percent level ($b = 0.171$, $p < 0.000$) providing support to our arguments relating to organizational form (Table 4: Model 3). Interestingly, the group product count variable turned negative and was significant at 5 percent significance level ($b = -0.079$, $p < 0.041$). This empirical finding suggests that it matters how the diverse businesses are organized. The results indicate that, while group diversity by itself may have a negative effect, the organizational form of business groups mitigates this effect. Thus, Hypothesis 3 finds support from this set of additional analyses.

Additionally, we repeated all our analyses using a fixed effects specification. To test Hypotheses 1 and 4, which involved a time-invariant variable—group affiliation, we employed the two-stage approach suggested by Krishnakumar (2006; see also Chari, 2013). All our hypotheses found

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2 We thank an anonymous reviewer for suggesting this analysis.
robust support under the fixed effects specification. The detailed description of these tests and the results are available in the supporting information.

Finally, as an additional robustness test of Hypothesis 1, we analyzed the performance of business groups relative to a comparable set of unaffiliated firms operating the same industries as the affiliates of the business group. The sample for this exercise corresponded to year 2010 and comprised all firms listed on the Bombay Stock Exchange. We computed the industry-adjusted Q ratio of a business group (cf. Khanna and Palepu, 2000a). We found that nearly 60 percent of the business groups outperformed the comparable set of unaffiliated firms (i.e., their industry-adjusted Q ratio was positive). The empirical results are presented in the supporting information.

**DISCUSSION**

Over the years, a growing body of research has established business groups as a phenomenon of “great theoretical and practical import” (Carney et al., 2011: 438). Our extant understanding of business groups is largely based on their institutional advantage. In this paper, we focus on their organizational advantage by examining the value-adding potential of two characteristics of business groups, viz., portfolio diversity and the multi-entity organizational form, in providing affiliate firms with greater growth opportunities. Our empirical analyses on a sample of Indian group and non-group firms for the period 1994–2010 lend support to our hypotheses.

A key contribution of this paper is to highlight the advantages that the diverse business portfolio of a business group and the attendant resource and knowledge base could offer affiliates in identifying unique opportunities hidden by incomplete markets. The diversity in business groups is often seen as a consequence of the need to tap into the scale and scope of advantages arising out of institutional voids (Carney et al., 2011); the value-adding potential of diversity per se has not been engaged with. The current paper suggests that business group affiliates may fundamentally differ from nongroup firms in their ability to create value out of a specific resource or resource bundle. Given the access to a variety of complementary resources through the business group network, an affiliate firm could value (or create more value out of) a specific resource differently even if the initial resource endowments of the affiliate and nongroup firms are similar (Adegbesan, 2009; Dierickx and Cool, 1989). Further, while we identify with the agency that Kock and Guillen (2001) attribute to business groups in learning and developing capabilities over time, we find it difficult to agree with their prediction that the business group portfolio would tend to become related over time. Our emphasis on the opportunities found in interstices of incomplete markets suggests that the growth need not be restricted to related opportunities (Ng, 2007).
Our empirical findings that business group affiliates have greater access to growth opportunities also provide a potential answer to the interesting empirical observation in the business group literature that business group affiliates are more diversified than nongroup firms across many countries (Claessens et al., 1999; George and Kabir, 2012; Lins and Servaes, 2002). Our conceptualization also adds to the discussion on internal capital markets in business groups by suggesting that business groups may also enjoy “expectational advantages” (Barney, 1986) over external capital markets in financing unique opportunities that are hidden by incomplete markets (Ng, 2007). Finally, arguments presented in the current paper highlight the potential of business groups to enhance “evolutionary fitness”—“how well a dynamic capability enables an organization to make a living by creating, extending, or modifying its resources” (Helfat et al., 2007: 7, q.v. Leiblein, 2011: 912). The notion of evolutionary fitness takes on additional relevance in light of the observed longevity of business groups across the world (Granovetter, 1995; Khanna and Yafeh, 2007).

Another contribution of this paper is to engage with the distinctive organizational form of business groups. Despite a “consensus” in the research literature that business groups are “structurally different from conglomerate organizations” (Carney et al., 2011: 437), and the observations in diversification literature that the legal form of organization significantly influences firm value (Bethel and Liebeskind, 1998; Klein and Saidenberg, 2010), scholarly attention on the distinctive multi-entity organizational form of business groups has been noticeably limited. A vast majority of the empirical literature is limited to comparing business group affiliates with independent nongroup firms. Such a research design fails to isolate membership benefits such as economies of scale and scope from those flowing from the organizational form per se. By explicitly examining the implications of the organizational form on the growth opportunities of an affiliate, we address this concern. In doing so, we also offer a potential answer to Markides’ question on the continuing diversification and profitability of Asian business groups: “What might explain the continuing prosperity of the Asian conglomerates? Are they not subject to the same limits to size as Western conglomerates or have they discovered a much better way of managing diversity in Asia?” (2002: 107). Our arguments in the current paper suggest that it may indeed be so. The organizational form of business groups enables what Ghoshal et al. refer to as greater “carrying capacity for complexity”—“the extent to which an organization can accommodate the exercise of entrepreneurial judgment by its members, given the size and diversity of the accumulated stock of resources” (2000:163).

More generally, we believe that our work could renew interest in the enduring strategy-structure nexus in the strategic management literature. While the M-form organization, which emerged as a response to the growing need for decentralization following the spurt of growth firms witnessed at the turn of the last century (Chandler, 1962), has become the most widely used model of managing diverse businesses (Strikwerda and Stoelhorst, 2009), its limitations have been highlighted by various scholars (Bartlett and Ghoshal, 1993; Day and Wendler, 1998; Halal, 1994; Zenger and Hesterly, 1997). Bartlett and Ghoshal advocate an organizational design based on extensive decentralization of responsibility and devolution of authority comprising “self-contained and manageable units with overview” (1993: 28). We suggest that the business group organization in which businesses are organized as multiple legal entities with their own management and governance structure, and yet maintained under a coherent administrative context through a host of formal and informal ties (Khanna and Yafeh, 2007; Yiu et al., 2007), exemplifies such an organizational design.

Finally, the central aspiration and contribution of the current paper is to move beyond the extant conversation that views business groups largely as organizational anomalies. Colpan et al. (2010) report that there is growing evidence that business groups across the world have survived and thrived despite improvements in the institutional environment, and observe that business groups cannot be reduced to a transient or second-best organizational alternative to the traditional multidivisional organizations. The current paper supports their observation. It complements the “institution-based” conceptualizations of business groups by focusing on the advantages inherent in the diversified business portfolio and multi-entity organizational form of business groups. Interestingly, business group affiliates are found to perform well relative to unaffiliated firms in contexts with well-functioning institutions such as Singapore and Sweden, thereby

posing “some enigmatic questions for institutional theorists” (Carney et al., 2011: 453). We submit that the current paper provides potential answers to such questions.

Limitations and further research

As with any other research, our work has its limitations. A potential limitation of our study is its single-country empirical context. Our conceptual arguments in this paper are rooted in the inherent incomplete nature of markets and the multi-entity organizational form of business groups. We believe that these arguments are broadly applicable to all empirical contexts. Replication studies in other countries would confirm our expectations of generalizability. Further, a multicountry study spanning across heterogeneous institutional environments including developed and developing economies could serve to enhance the robustness of our theoretical arguments. A second limitation of our work is that, while we do discuss some of the benefits of the multi-entity organizational form relative to the M-form, our empirical analysis did not involve a direct comparison of M-form and business group organizational form, as business groups as a collective are not listed in India; only the affiliates are listed. Future work that explores novel research designs to address this limitation would be a valuable extension.

Measures akin to MEC ratio such as count of companies, segments, etc., have been used in prior literature studying internal organization of firms. While such measures have an advantage of facilitating empirical study of large sample firms, they have their shortcomings as well (Klein and Lien, 2009). An in-depth longitudinal study based on archival data on the evolution of specific business groups (cf. Bhardwaj, Camillus, and Hounshell, 2006, for such a study of the evolution of productive possibilities at DuPont Company) would significantly enhance our understanding of their growth and sustenance. Finally, the organizational advantage of business groups highlighted in the current paper is best leveraged in the presence of a coherent administrative context. This raises some questions of interest: What structures and systems do business groups put in place to leverage their superior opportunity access? How does one incentivize the affiliate firms to exchange information on business opportunities? What role does the group headquarters play? Future researchers could explore these questions.

CONCLUSION

Business groups occupy a prominent place in the competitive landscape of most economies across the world. The current paper advances our understanding of this important organizational form by highlighting the potential ability of business groups in uncovering unique opportunities hidden by incomplete markets. More critically, we show that the organizational arrangements in a business group deserve independent scholarly attention. The unique organizational form comprising independent legal entities tied together under a shared administrative context presents a stable and effective alternative form of organizing diverse businesses. They may, in fact, not be the widely believed organizational anomalies that have emerged as an imperfect resolution of institutional deficiencies in emerging economies.

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REFERENCES


SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article:

Appendix S1. Additional details on independent variable and robustness tests.