Business Groups' Outward FDI:
A Managerial Resources Perspective

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ABSTRACT

Outward FDI strategies are driven by firms' resource endowments, which in turn are conditioned by their home environment. In emerging economies, thus, the pattern of outward FDI is shaped by local firms' idiosyncratic contexts and the resources that these firms developed to fit the contexts. This includes business groups, a dominant organizational form in many emerging economies, competing with context-bound resources. When they wish to transcend their home context, they need internationally valuable resources, especially managerial resources, which may be quite different than the resources that enable domestic growth.

This paper thus explores what resources drive this international growth in the case of Taiwanese business groups. Starting from Penrosian Theory, we focus on managerial resources that are shared across the member firms of a group, and thus shape the profile of the group. We find that international work experience favors internationalization while international education does not. Moreover, domestic institutional resources distract from internationalization, presumably because they are not transferable into other institutional contexts, and thus favor other types of growth.

Keywords: internationalization, business growth, resource-based view, institutional view, business groups.

INTRODUCTION

Foreign direct investment (FDI) originating from emerging economies raises new questions for international business research agendas (Luo and Tung, 2007; Gammeltoft, 2008; Athreye and Kapur 2009). In particular, these businesses appear to develop patterns of FDI that are different from multinationals from mature market economies (Matthew, 2006; Yiu, Lau and Bruton, 2007; Enright, 2007; Ramamurti and Singh, 2009; Yang et al., 2009.). This suggests reassessing the question of what determines the international scope of firms. In particular, how do resources available to businesses in emerging economies shape their path of internationalization?

Outward FDI is undertaken by firms aiming to exploit their resources and capabilities overseas (Dunning, 1993), or to acquire complementary resources (Lall 1983, Tolentino, 1993). The resources they can potentially exploit abroad depend on their own history of resource accumulation. Firms develop resources and capabilities in an evolutionary pattern conditioned by their context of operation (Nelson and Winter, 1992; Aldrich, 1999). Hence, the resources that firms can potentially exploit when investing abroad are an outcome of past interactions with their home context, especially in the case of firms originating from emerging economies (Yiu, Lau and Bruton, 2007; Elango and Pattnaik, 2007; Barnard, 2008). Hence, in this article, we argue that outward FDI from emerging economies ought to be explained by the resources of firms shaped by this environment.

In emerging economies, the home environment is typically characterized by comparatively weak human capital and by voids in the institutional environment (Khanna and Palepu, 2000; Peng, 2003; Gelbuda et al., 2007; Meyer et al., 2009a). These conditions shape not only domestic businesses, but also the pattern of outward FDI (Cuervo-Cazurra 2008; Yamakawa et al., 2008; Kumar and Chadha, 2009; Bhaumik et al., 2010). This has two consequences for this study. Firstly, home institutions shape the types of resources that firms develop, notably institutionally-bound resources such as local business networks (Peng et al., 2008). These types of resources may only be of limited use for business in other contexts, though they may facilitate operations in contexts sharing institutional similarities (Henisz, 2003; Cuervo-Cazurra and Genc, 2008).

Secondly, the institutional context of emerging economies induces business to develop organizational forms that facilitate the sharing of institutionally-bound resources and the internalization of inefficient markets. In consequence, business groups (BGs) have become the dominant organizational form in many emerging economies (Khanna and Palepu, 2000; Chung, 2001; Peng and Delios, 2006; Carney, 2008; Estrin et al., 2009). They share resources and thus are the relevant unit of analysis for this study. Earlier studies typically use firms as unit of analysis and use a dummy to control for group membership, or they test a direct effect of group membership on, e.g., performance (e.g. Khanna and Rivkin 2001; Khanna and Palepu, 2000; Nachum, 2004). This focus on member firms has advantages in terms of sample size and data availability, yet it limits generalizability and provides a very partial image of BGs (Khanna and Yafeh, 2007). We address this shortcoming in the literature by exploring the pattern of MNE from emerging economies from a group level perspective. Hence, we analyze, *what determines the international scope of business groups?*

We combine the institutional perspective with a resource-based perspective following a recent trend in emerging economy research (Filatotchev et al., 2003; Meyer et al., 2009a; Malik and Kotabe, 2009). The resource-based perspective suggests that unused firm-specific resources drive corporate growth (Penrose, 1959), and thus expansion into new product areas (Teece, 1982) and new countries (Johansen and Vahlne, 1977). Yet, businesses have to prioritize where they can grow most beneficially within their resource constraints, i.e. where their resources most likely generate new value for the firm. The redeployability of resources to other industries or countries thus influences whether a firm grows domestically or internationally (Meyer, 2006; 2009) as well as their mode of their growth (Anand and Delios 2002; Meyer et al., 2009b). Penrose directs attention in particular to managerial resources that can be shared across old and new activities, and thus become both a source of growth and a binding constraint on expansion (Kor and Mahoney, 2000; Rugman and Verbeke, 2002; Mahoney, 2005).

The appropriate context for testing these arguments is an emerging economy where BGs are common, and where institutionally embedded resources are important. Taiwan provides such a context. BGs are an important organizational form in Taiwan as their sales have been generating in excess of half of GNP since 1998. The Taiwan government has also exerted substantial influence on the domestic institutional context (Amsden and Chu, 2003; Berger and Lester, 2005; Hung and Whittington, 1997; Brockfield, 2010). In addition, data on Taiwanese BG are available in rare detail allowing for group level analysis (Luo and Chung, 2005; Chung, 2009).

This paper offers multiple contributions to the international management literature. First, we add to the understanding to outward FDI from emerging economies, by relating the pattern of outward FDI to the organizational form dominating in many emerging economies, namely BGs. Second, we enhance the understanding of the growth of BGs by demonstrating empirically how the characteristics of group-level resources, especially managerial resources, influence their internationalization. Third, we integrate resource-based and institutional perspectives to explore the role of institution-bound resources, strategic resources that create little value in developed economies yet can be a valuable driver of growth where institutional frameworks are incomplete (Peng et al., 2008). Fourth, we offer empirical evidence from an unusually large *group*-level database, thus extending research that has used partial firm-level databases.

THEORETICAL PERSPECTIVES: INSTITUTIONS AND RESOURCES

Foreign direct investment is driven by business strategies aiming to exploit resources in international markets, or to extend their resource-based by acquiring complementary ones. These resources driving internationalization are known in the international business literature as “ownership advantages” (Dunning, 1988) or as “non-location-bound firm-specific advantages” (Rugman and Verbeke, 2002). Internationalization thus is facilitated by geographically fungible resources (Anand and Delios, 2002), but constrained by the location-boundedness of resources (Meyer, 2006).

The types of ownership advantage that firms may explore vary widely (Dunning, 1993; Dunning and Lundan, 2008). Research on traditional MNEs from developed countries has often focused on technology or brand-name based capabilities. Yet, this is an inappropriately narrow interpretation of the concept of ownership advantages when analyzing MNEs from emerging economies (Dunning, 2008). In emerging economies, firms are facing idiosyncratic institutional frameworks, and have scarce international experience. Thus, what are the resources that induce one firm in such contexts to expand abroad, while another grows domestically?

We maintain that outward FDI from emerging economies can be explained as a form of resource deployment (Figure 1). The forms of resource deployment depend on the nature of the resources of the organization, which in turn depend on the context in which it has been operating in the past. To keep the empirical part of this study manageable, we focus on managerial resources, which had been identified by Penrose (1959) as most crucial for explaining the growth of the firm.

*** *Figure 1 approximately here* ***

An Institutional Perspective

Institutions set the rules of the game for firms. Their variations across countries are thus pivotal for explaining how the behaviors of firms differ between countries and over times (North, 1990, Gelbuda et al., 2007; Peng et al., 2008). In particular, the institutional environment moderates the selection mechanisms through which competition selects firms (Aldrich, 1999). Thus, firms' resource endowments are an outcome of processes of resource accumulation and learning. This path-dependent process of resource accumulation is conditioned by the context in which the firm is operating.

In developed economies, institutional frameworks foster market-based competition based on impersonal exchange. Firms' primary strategic challenge is to develop competitive resources and capabilities to outperform competitors in the market place (Peng, 2003). In contrast, emerging economies often lack institutions that support arm's length impersonal exchange, such as reliable intermediaries and a transparent and effective legal framework (Khanna and Palepu, 2000; Khanna and Rivkin, 2001). The weak institutional frameworks have two major implications for businesses in emerging economies. First, firms often respond to this institutional challenge by developing 'institutionally embedded resources,' defined as 'the informal linkages with dominant institutions that confer resources and legitimacy' (Peng, et al., 2005:622). These institutional resources include for instance informal linkages with governmental institutions, which may take the form of managers' personal networks.

Second, BGs emerge to overcome market imperfections by internalizing the pertinent markets (Khanna and Palepu, 2000; Peng et al., 2005). As institutionally embedded resources may be exploited across a variety of activities, they facilitate product diversification in form of loosely associated firms. In consequence, BGs are a common organizational form across a wide range of emerging economies (Chung, 2001; Khanna and Palepu 2000; Peng and Delios, 2006, Khanna and Yefeh, 2007; Yiu et al., 2007; Bruton and Lau, 2008; Estrin et al., 2009). They have been defined as "sets of legally separate firms bound together in persistent formal and/or informal ways" (Granovetter, 1995), or as sets "of firms which, though legally independent, are bound together by a constellation of formal and informal ties and are accustomed to taking coordinated action" (Khanna and Rivkin, 2001). The prevalence of BGs in emerging economies contrasts with Anglo-American countries, where BGs are rare, presumably due to legal and informal pressures for firms to adopt transparent structures and to protect the interests of minority shareholders (Morck, 2005; Khanna and Yefeh, 2007).

BGs growth may thus be driven by member firms sharing resources especially intangibles like reputation, knowledge and networks (Khanna and Rivkin, 2001, Luo and Chung, 2005). Many of the resources driving domestic diversification in BGs are bound to the local context (Peng et al., 2005; Meyer, 2006), but normally not valuable when deployed in other contexts. However, if internalization of imperfect domestic markets is the prime rationale behind the formation of BGs, this raises the question why do *some of them expand internationally: What distinguishes them from those that are not?*

A Penrosian Perspective

Edith Penrose (1959) analyzes firms as economic entities consisting of collections of productive resources. Planning rather than market forces are used to allocate resources, and business units are coordinated by some form of administrative framework, though not necessarily by centralized control. BGs share resources and this resource sharing is governed by mechanisms other than markets. Thus, Penrose (1959) provides an appropriate perspective to analyze the internationalization of BGs.

Penrose's work has been influential in the strategic management literature as an inspiration of the resource-based view (RBV) (Barney, 1991). The RBV focuses on how resources help firms attain competitive advantages, and thus enhance their profitability. While this is an important line of work, our research question is concerned with the scope of the firm, i.e. how do resources determine which activities a firm expands into. We maintain that this type of research be better explained by drawing directly on Penrose's original work (Rugman and Verbeke, 2002; Meyer, 2006), which has also inspired other dynamic perspectives in international management such as the internationalization process model (Johansen and Vahlne, 1977; 2009).

Penrose (1959) explains firm growth as arising from the internal processes of resource accumulation and redeployment, with managerial resources being particularly eminent. She suggests that as long as firms have resources that are yet to be fully utilized, they will have incentives to utilize these resources more fully (Mahoney, 2005). There are at least two reasons why not-fully-utilized resources exist within firms. First, new knowledge and skills are continuously developed. They are often firm-specific, and will thus be retained within firms where they drive internal growth. Second, some resources, such reputation or networks, can be used simultaneously for different activities. Their use is non-rivalrous – the application on one activity does not diminish their availability for other activities (Adler and Kwon, 2002) – such that there would often be opportunities for firms to utilize them more. The deployment of these resources to new uses can increase the scope of a firm in terms of industries (product diversification) and countries (international expansion) (Teece, 1982). The nature of these productive resources shapes the search for entrepreneurial opportunities (Penrose, 1959), and thus influences the direction in which businesses expand their scope.

Resources can be of different kinds. For Penrose, firms' most important type is managerial resources. On the one hand, any expansion of a firm requires internally experienced managers to plan and to execute, because a firm is essentially an administrative organization. Thus, the capacities of existing managers set a limit to the scope of a firm's expansion (Tan and Mahoney, 2005). On the other hand, managers accumulate capabilities over time by learning on-the-job. These continuously increasing managerial capabilities induce firm growth and shape the direction of the growth.

The international business literature theorizes similar to Penrose's line of thought. The internationalization process model, an early application of Penrose's ideas, analyzes international growth as a result of an interactive process of incrementally increasing commitments to foreign markets and of building capabilities for these markets (Johanson and Vahlne, 1977; 2009). This process does not require centralized decision making, as long as the organization shares resources across units and has some form of internal coordination. Penrose's (1959) theory thus provides a suitable framework for the analysis of the international scope of BGs.

Since both domestic and international expansion require internally experienced managers to plan and to execute, the limited capacities of these managers force BGs to set priorities for their growth strategy. While resources typically have multiple potential uses, their productivity in different applications is likely to vary. Thus, BGs would invest first where they expect the greatest benefits from redeploying their resources. The diversity of resource endowments thus explains the heterogeneity of firms (Barney, 1991; Eisenhardt and Martin, 2000), and creates a theoretical linkage between a BG's resources and its direction of growth.

HYPOTHESIS DEVELOPMENT

Internationally-transferable Managerial Resources

The original motivation for the formation of BGs in emerging economies may often relate to the sharing of knowledge and relationships in their domestic environments. Yet, they may also develop capabilities whose values transcend national borders and hence motivate international expansion. This includes notably technological capabilities that traditionally have been considered as the primary *raison d'être* of multinational enterprises (Buckley and Casson 1976, Hennart 1982, Tseng et al., 2007). In addition, we argue that managerial capabilities may be crucial in facilitating internationalization.

One type of such capabilities stems from the international experience that managers accumulate during overseas education or work assignments. Their international experience can facilitate international expansion in two ways. First, it cultivates managers' global mind-sets, broadens their cognitive horizon, and thus strengthens their ability to recognize and assess new business opportunities abroad (Carpenter and Fredrickson, 2001; Sambharya, 1996). Second, managers with international experience, within the same company or elsewhere, have developed capabilities and personal networks that support their ability to manage international operations (Athanassiou and Nigh, 1999; Holm, Eriksson and Johanson, 1996). Similar benefits can be expected for managers who had spent part of their education abroad, though the network effect is probably somewhat weaker. Education abroad provides not just better understanding of practices of international business, but it provides network resources that extend internationally (e.g. Alumni networks) and, possibly most importantly, expands cognitive horizons.

In contrast, managers who have been educated or worked only in domestic contexts are likely to have developed capabilities that are useful mostly in the local business environment. This is particularly relevant in emerging economies where networks and relationships often compensate gaps in the institutional frameworks (Peng, 2003; Peng and Luo, 2000). Managers learn how to deal with local institutions and develop their own personal networks when working in local businesses. Yet, these skills and networks are specific to the context and thus would not motivate international expansion. Hence, we expect that:

Hypothesis 1a: Business groups whose managers have international education are likely to have a higher level of internationalization than business groups whose managers do not have international education.

Hypothesis 1b: Business groups whose managers have international work experience are likely to have a higher level of internationalization than business groups whose managers do not have international work experience.

Institutionally-bound Managerial Resources

In emerging economies, some capabilities that managers develop may be location-bound and thus difficult to apply abroad. In particular, managers in emerging economies need to cope with various institutional deficiencies. Through working in the idiosyncratic institutional contexts, managers develop capabilities that are institutionally bound, for instance personal relationships with local business associations (Luo, 2003). Such business networks can reduce transactional hazards under weak contract enforcement because they provide information on reliable trading partners (Burt, 1992), and facilitate access to intermediate inputs for which markets are under-developed (Guillén, 2000).

Managerial networks with local actors work only in the presence of these actors. Given that institutionally embedded resources are useful for dealing with idiosyncratic institutional voids (Khanna and Palepu, 2000) and they are embedded within the institutional context, they rarely support international expansion. Knowledge useful to deal with institutional peculiarities cannot typically be applied under other institutional frameworks. Thus institutionally embedded resources are normally location-specific and not helpful in building international operations. If business, however, invest in building resources that are specific to the institutional framework of the home country, and thus location bound, then this distracts efforts from building internationally transferable resources such as new technologies. Thus we predict that,

Hypothesis 2: Business groups whose managers have close ties with the local business community are likely to have a lower level of internationalization than business groups whose managers do not have such ties.

Incidence versus Strength of Resources

Certain resources, once present in an organization, can be shared across the organization at little or no additional costs. Such resources with 'public good' properties have been attributed the binding link between units of horizontal MNEs (Caves, 1982) and they equally link member firms of a BG. Hence, the quality rather than the quantity of such resources matters for business performance and growth. Most notably, in the case of network capabilities, the incidence of a network may be more important than the number of contacts.

This suggests that both the existence and the quantity of such resources matter, and push firms in the same direction. However, with managerial resources being shared across member firms, we expect the existence of various types of managerial resources to be more important than their quantity. In other words, having a larger share of managers with the pertinent resources is unlikely to add much compared to having a single manager contributing this capability. Hence, we expect the incidence of resources to provide a better explanation of BGs' internationalization than their intensity.

Hypothesis 3: The internationalization of business groups is shaped in equal directions by the incidence and the intensity of managerial resources, with the incidence being a more significant driving force.

METHODOLOGY

Context and Data

BGs play an important role, especially in fast growing emerging economies with an institutional framework inhibiting efficient market exchange (Khanna and Palepu, 2000; Peng and Delios, 2006). This applies for example in Taiwan, where BGs are major players in the economy and a major contributor to outward FDI, and where their exposure to institutions is likely to vary across firms (Chung, 2001; 2009). Thus, Taiwan provides a suitable setting for research on BGs (Mahmood and Mitchell, 2004; Filatotchev et al., 2005; Luo and Chung, 2005; Chung, 2006).

Our dataset provides rare group-level data of the population of BGs, using substantially the same methodology as Chung and Mahmood (2009), but on the basis of a larger sample in a crosssection setting. This is a distinct advantage over earlier studies and enables us to study BGs as the unit of analysis. In particular the database includes listed and unlisted member firms, in contrast to for example Khanna and Rivkin (2001). Our initial sample consists of all 231 Taiwanese BG featured in the 2004 edition of the directory *Business Groups in Taiwan* (BGT) published by China Credit Information Service. Missing values reduce our final sample to 182 BGs with on average 28 member firms. We follow earlier research on BGs in Taiwan (e.g., Chung, 2001; Khanna and Rivkin, 2001; Luo and Chung, 2005; Mahmood and Mitchell, 2004), and adopt the BGT operationalization using multiple criteria to identify firms forming part of a BG.

The BGT directories report data of two previous years. We use data for the year 2002 from the 2004 BGT directory to measure our dependent variables, and one year lagged values (i.e. 2001 data) for all explanatory and control variables. This approach reduces possible biases arising from reverse causality.

Dependent Variables

Internationalization. We follow Sullivan (1994) to construct the *degree of internationalization* (DOI) by taking the linear combination of the foreign-over-total ratios for four items: [1] sales, employment, assets, and subsidiaries. These items are measured as ratios at the *group* level (i.e., by dividing the sales/employment/assets/number of all foreign member firms by total group sales/employment/assets/subsidiaries). This multi-item scale has advantages over conventional single-item measure in that it reduces measurement error (Sullivan, 1994). (Data source: the BGT directory). Table 1 shows the inter-item correlations of this construct; its Cronbach's alpha is 0.85. In a robustness test, we alternatively measure internationalization by a more traditional measure, the ratio of foreign over total sales.

Explanatory Variables

[1] 'Foreign' here refers to any activity outside the economic entity of Taiwan, independent of its legal status.

Our explanatory variables concern managerial resources hypothesized to drive the growth of the *overall* BG. Following similar studies on Taiwan (e.g., Luo and Chung, 2005), we followed a two step process. First, we created a list of managers with key roles affecting the entire business group based on information in the BGT directory on decision makers who have influence over each member firm within their group. In the second step, we collect data on these individuals to construct for our explanatory variables regarding managerial resources.

International Capabilities. *Managerial foreign education* takes the value of one if at least one key manager in the business group received overseas education, and zero otherwise. *Managerial foreign experience* takes the value of one if at least one key manager had foreign work experience, and zero otherwise. Alternatively, we measure these two variables by the percentage ('ratio') of the key managers meeting the criterion.

Institutional Capabilities. We identify managerial local network capabilities by tracking the organizations that a manager has been associated with as of 2001 from a variety of sources, including the *BGT* directory, two different versions of *Who Is Who in Taiwan*,[2] and *Manager Directory in Taiwan.* Membership in clubs and societies, helps establishing personal networks because it 'allows managers to get to know others with similar social interests, political affiliations, educational backgrounds, and professional work experiences' (Carroll and Teo, 1996: 425). However, such networks are unlikely to generate substantive benefit if they are based on passive membership only. Thus, we focus on "strong ties" (Moran, 2005), and hence aim to capture degrees of involvement that are stronger than membership alone. Thus, we construct our measure based on individuals acting as leader or a manager in the pertinent organization.

To capture both the incidence and the intensity of managerial resources, we employ three alternative measures. First, *managerial business/other association* is a dummy variable equal to one if at least one key manager in a group has served as a leader or manager in a local business

[2] One is published by the Central News Agency in Taiwan, the other by Fenyunluntan Ltd.

association/local private association, such as a golf club or a charity, and zero otherwise. This measure captures the *existence* of strong local ties that could provide information and resources to enter a new local business. Second, *managerial association - breadth* is the number of different local business/private associations that the key managers have been involved in as leaders or managers. This measure captures the *breadth* of strong local ties. Third, we measure *managerial association – ratio* by the percentage of key managers within a business group who meet the criterion.

Control Variables. We control for the *size* and *age* of the BG. Larger groups may have more resources to support domestic product diversification or internationalization, while older groups may have developed more extensive managerial networks that facilitate growth. We measure *group size* by the logarithm of total sales of the business group, and *group age* as the age of the oldest member firm established in the business group. A group's *R&D intensity* was measured by the sales-weighted average of R&D expenditures as percentage of sales of the member firms. We coded *government ownership* as one if at least one of the member firms in the BG was partially owned by the government, government-related agencies, or state-owned enterprises. Such ownership stakes create a channel for interaction between the group and government authorities. The R&D and shareholder information was obtained from the *Taiwan Economic Journal* database.

We include two industry-level control variables in the analysis. *Core industry growth* is the sales growth of the core industry of a business group. BGs in fast-growing domestic markets may have low incentives to expand into new markets. Finally, *service oriented* groups is a dummy equal to one if the main industry of a business group belongs to a service industry. Some service sectors, such as banking and telecommunication, are subject to greater government scrutiny and have greater barriers in pursuing international expansion.

Table 2 reports summary statistics and correlations for the variables. Although some of the variables were subject to transformation in the estimation, we report means and standard deviations based on raw data in the table to simplify interpretation. The largest variance inflation factors of our empirical models are between 1.57 and 1.58, suggesting that multicollinearity does not threaten the validity of our coefficient estimates (Neter et al. 1999).

RESULTS AND INTERPRETATION

Table 3 presents the results of the determinants of internationalization: Model 1 reports the main results using the incidence measure of various managerial capabilities, model 2 replaces these measures by the measure of breadth where appropriate, and model 3 replaces these variables with the respective ratios.

Managerial foreign education and work experience are expected to encourage internationalization. As expected, we find *managerial foreign experience* to be positively related to internationalization, which supports the argument that international experience is an important resource supporting internationalization of business groups (H1a). Surprisingly, we find *managerial foreign education* to be negatively associated with internationalization, which is contrary to hypothesis H1b. This result is corroborated by our robustness test using foreign sales ratio as a dependent variable (Table 4). The correlation matrix in Table 2 indicates that business groups whose key managers had the opportunities of receiving foreign education tend to be older and have government ties. We conjecture that the foreign educated managers are second-generation leaders of the older family businesses. They may have been sent abroad by their parents to be trained to take over the business (Greenhalgh, 1988). Upon return, they would continue to lead the business in the spirit of the founder, rather than breaking with tradition and restructuring the organization. One such example is Chinatrust Financial Holding (CFH), one of the largest business groups in Taiwan. CFH is controlled by the Ku family and all of its second-generation members were graduated from Wharton, where the family contributed a considerable amount of donation. A recent political bribery scandal involving a second-generation family member suggests that these foreign educated young leaders may follow the managerial practices that their elders have been adopting. In other words, the negative association of *managerial foreign* *education* with *Internationalization* may be caused by a pattern of BG founders sending their children abroad for education and later appointing them to leadership roles in the firm. In this role, they do not – or only very gradually – shape the path of growth of the firm, but rather pursue the founder's original vision that may be focused on the domestic market. The changes they introduce may thus relate more to substantive matters, such as governance mechanisms (Chung and Luo, 2008) rather than the scope of the firm. The result may however also be interpreted as an indication that educational institutions – in this case primarily US-based business schools – do not deliver one this particular expected benefit of international experience, namely international business competence and alumni networks that facilitate business.

With respect to the institutionally-embedded resources, we find that networks with local business associations are negatively related with internationalization in any of the three specifications, though only two of them are significant (Table 3). Thus, H2 is supported with respect to existence and intensity of managerial business association. Network relationships with other local associations do not appear to have a significant effect on international expansion.

Hypothesis 3 pertains to the relative explanatory power of the incidence, breadth and intensity of the pertinent resources. To assess this proposition, we turn to the F-statistic and the R^2-statistic. The F-statistics are highly significant in all models, yet they are substantially higher in model 1 (10.38) and model 2 (10.05) than in model 3 (7.76), suggesting that the incidence and breadth measures have higher explanatory power than the ratio measures. The same inference is suggested by the pattern of R^2-statistics. In other words, *it is more important to have network capabilities, and to have multiple network capabilities than to have a high proportion of managers with such capabilities*. The pattern of significance across models suggests that this applies in particular to *managerial business association*, but less so to the experiential resources. This results supports the view that managerial networks have public good properties, such that they benefits can be shared across an organization such as a BG.

An interesting result arising from our control variables is that government ownership in any of the group member firms discourages internationalization. It appears that government-ownership provides resources that cannot be transferred across national borders, which limits the opportunities of these firms in international markets. Ties to government may also provide firms with better access to domestic opportunities so that the relative attractiveness of internationalization is lower. This supports our broader line of argument that institutional embeddedness shapes firms' path of internationalization.

DISCUSSION

We have argued that explanations of outward FDI from emerging economies have to start out from understanding the nature of the resources (or ownership advantages) of firms undertaking these investments. These resources have been shaped by the specific domestic context, which in the case of emerging economies implies an idiosyncratic institutional framework and gaps in knowledge of international markets. Thus, outward FDI from emerging economies is a function of the context in which these firms originate, mediated by the firms resource endowment (Figure 1). Moreover, we have argued that from the institutional perspective, BGs are the relevant unit of analysis for explaining outward FDI from emerging economies. BGs are crucial to the understanding of FDI because they are pivotal actors in many emerging economies, and the operation of the group influences the path of growth that any member firm may pursue.

We found empirical support for this line of argument by establishing an empirical relationship between managerial resources – notably their embeddedness in the local context and their international experience – and the patterns of outward FDI by Taiwanese BGs. More specifically, we have argued that some types of managerial resources foster international growth, while others may inhibit it by being bound to the specific domestic context from which the BG originates. Our empirical results show that BGs expand internationally if their managerial work experience transcends national boundaries, thus providing critical support for the notion of international business experience being important to international growth (Li and Meyer, 2009). Moreover, this result supports the career advice giving to aspiring business leaders to seek international work experience (Adler and Gunderson, 2008).

More generally, this study contributes to our understanding of internationalization by combining institutional and Penrosean perspectives. We argue that the growth of BGs is driven by institutionally embedded resources, but that such resources may distract from international growth because they are of little value in other contexts. We have shown empirically that this applies in particular to business networks within a local business community, and to ownership ties to governmental entities.

While our study is grounded in Penrose's (1959) work, our focus on internationalization is extending her argument as she did not explicitly incorporate international business in her reasoning (Pitelis, 2002; Rugman & Verbeke, 2002). Separate streams of research have investigated alternative paths of growth, but it is not clear what makes firms choose one path over the other. Our Penrosean perspective, inspired by Meyer (2006), relates the types of managerial resources with growth paths. We demonstrate empirically that geographically transferable resources facilitate international expansion, while location-bound resources such as institutionally embedded resources do not. This evidence suggests that the Penrosean approach is a useful tool to explain the scope of firms and BGs, and their variation across different contexts.

This study, as any other, has limitations. First, some empirical results may be partly endogenous. For instance, BGs with ambitious targets of international expansion may recruit top managers with international experience. Thus resources are intentionally built with sights set on aspired growth targets, rather than resources driving the process. Secondly, any research generates insight most relevant to the specific context; in fact the institutional view implies that all strategizing is subject to context specific influences. We believe that our basic arguments would apply primarily to emerging economies, or wherever institutions and networks are especially important. Future research may test similar arguments in other emerging economies to confirm this contention. We expect that multi-context comparative research on BGs would push forward our understanding of their dynamics. Finally, our findings suggest that institutionally embedded resources are location specific and lead to lower levels of internationalization. However, the ability to deal with institutional deficiency might also be useful in other similar institutional environments (Henisz, 2003). Future studies may thus investigate the location choice of international expansion by BGs.

CONCLUSIONS

Outward FDI from emerging economies has become a major field of study in international business. Many early studies have focused on national characteristics and macro perspectives, and only recently scholars have started to explore the more micro-foundations of this phenomenon (Yiu et al., 2007; Elango and Pattnaik, 2007; Cuervo-Cazurra and Genc, 2008). Our conceptual framework provides a general framework that may further advance this research agenda by creating macro-micro linkages. In particular, firms' resources are a crucial mediating variable when explaining the linkages between the business environment in countries of origin and the pattern of outward of FDI.

One implication of this perspective is that BGs are pivotal players in emerging economies whose contribution to outward FDI has rarely been explored. We thus have examined the determinants of the scope of BGs in terms of internationalization with a special focus on managerial resources. Future research may investigate more fine-grained the nature of the resources, and explore the interdependence of internationalization and domestic diversification of BGs.

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Figure 1: Conceptual Model

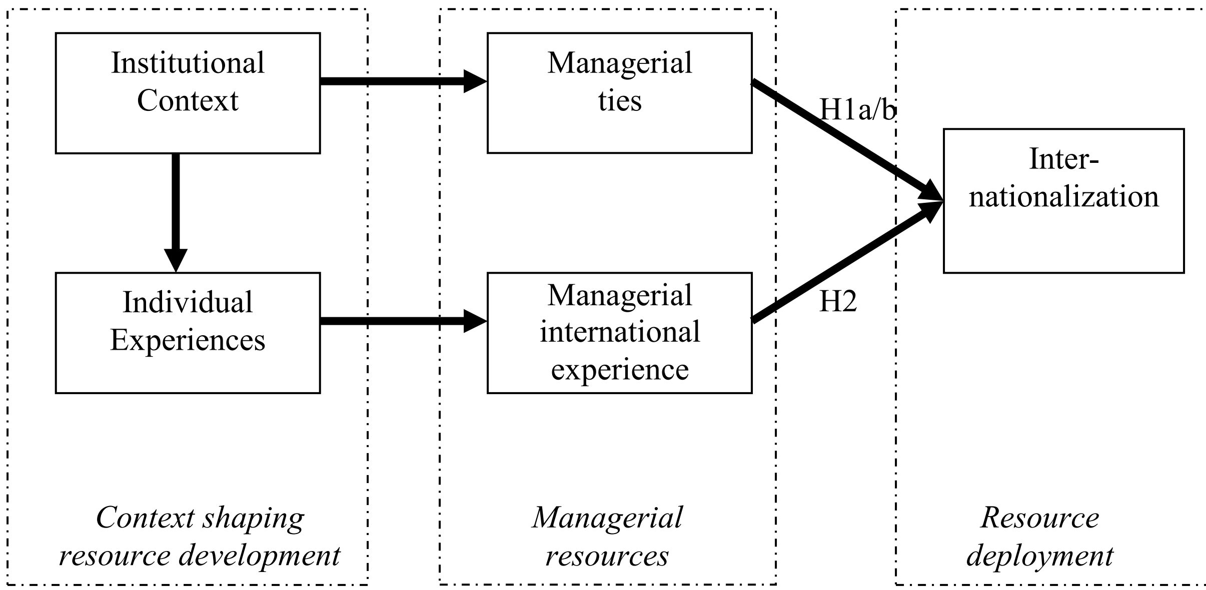

Table 1
The Internationalization Construct

	Mean	Std Dev.	2	3	4	5
1 Degree of Internationalization	0.93	0.77				
2 Foreign sales ratio	0.24	0.23	0.90*			
3. Foreign employment ratio	0.13	0.25	0.73*	0.50*		
4. Foreign assets ratio	0.22	0.20	0.92*	0.89*	0.53*	
5. Foreign subsidiary ratio	0.35	0.24	0.81*	0.65*	0.38*	0.69*

Note: Four item Crombach's alpha: 0.85

TABLE 2
Mean, Standard Deviation, and Correlation Matrix

	Mean	Std Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Degree of Internationalization	0.93	0.77	1												
2. Group size	46367.7	72414.2	0.11	1											
3. Group age	30.05	15.26	0.13	-0.04	1										
4. Service oriented group	0.20	0.40	-0.31*	-0.09	-0.24*	1									
5. Core industry growth	19.41	46.15	-0.25*	-0.06*	-0.08	0.32*	1								
6. Managerial business association	0.07	0.26	-0.17*	0.15*	-0.04	-0.03	0.14*	1							
7. Managerial business association – breadth	0.56	1.79	-0.06	0.14	0.06	-0.02	-0.06	0.45*	1						
8. Managerial other association	0.18	0.38	-0.11	0.27*	0.09	0.15*	0.13	0.15*	0.50*	1					
9. Managerial other association – breadth	0.33	0.88	-0.14	0.33*	0.03	0.05	0.06	0.21*	0.40*	0.80*	1				
10. Government Ownership	0.46	0.50	-0.09	0.20*	-0.04	0.11	0.04	-0.04	0.09	0.11	0.07	1			
11. Managerial foreign education	0.44	0.50	-0.10	0.22*	0.15*	-0.01	-0.02	0.05	0.08	0.07	0.12	0.21*	1		
12. Managerial foreign experience	0.56	0.50	0.53*	0.45*	-0.08	-0.02	-0.27*	-0.10	0.09	-0.07	-0.10	0.19*	0.10	1	
13. R&D intensity	2.10	3.59	0.18*	0.05	-0.10	-0.23*	0.02	-0.10	-0.11	-0.09	-0.11	0.14	0.08	0.22	1

* $p<0.05$

TABLE 3
Determinants of Internationalization (DOI)

		Model 1		Model 2		Model 3	
Control Variables:							
Constant		-0.02	(0.48)	-0.05	(0.48)	-0.28	(0.50)
Group size		0.06	(0.04) *	0.06	(0.04) *	0.08	(0.04) **
Group age		0.05	(0.07)	0.06	(0.07)	0.11	(0.07) *
Core industry growth		0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Service oriented groups		-0.22	(0.14) *	-0.21	(0.14) *	-0.28	(0.15) **
R&D intensity		0.01	(0.01)	0.01	(0.01)	0.01	(0.02)
Government ownership		-0.25	(0.10) ***	-0.23	(0.10) **	-0.14	(0.11) *
Non-location bound resources:							
Managerial foreign education – incidence	H1a	-0.20	(0.10) **	-0.21	(0.10) **		
Managerial foreign education – ratio	H1a					-0.27	(0.14) **
Managerial foreign experience – incidence	H1b	0.75	(0.10) ***	0.77	(0.11) ***		
Managerial foreign experience - ratio	H1b					0.76	(0.14) ***
Institutionally embedded resources:							
Managerial business association - incidence	H2	-0.40	(0.19) **				
Managerial business association – breadth	H2			-0.03	(0.03)		
Managerial business association – ratio	H2					-0.50	(0.29) **
Managerial other association – incidence	H2	-0.06	(0.13)				
Managerial other association – breadeth	H2			-0.04	(0.06)		
Managerial other association – ratio	H2					-0.17	(0.23)
F	H3	10.38 ***		10.05 ***		7.76 ***	
Adj R-squared		0.34		0.33		0.27	

N=182. *p<0.1 **p<0.05 ***p<0.01. Numbers in parentheses are standard errors

TABLE 4

Determinants of Internationalization (Foreign Sales Ratio)

	Model		
Control variables:			
Constant	-0.14	(0.15)	
Group size	0.04	(0.01)	***
Group age	0.01	(0.02)	
Core industry growth	0.00	(0.00)	
Service oriented groups	-0.09	(0.04)	**
R&D intensity	0.01	(0.00)	
Government ownership	-0.09	(0.03)	***
Non location bound resources:			
Managerial foreign education	-0.06	(0.03)	**
Managerial foreign experience	0.14	(0.03)	***
Institutionally embedded resources:			
Managerial business association	-0.12	(0.06)	**
Managerial other association	-0.05	(0.04)	*
N	184		
F	7.78	***	
Adjusted R^2	0.27		

*p<0.1 ** p<0.05 ***p<0.01 (one tailed test). Numbers in parentheses are standard errors.