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The International Growth of Emerging Market Firms: Evidence from a Natural Experiment

The recent international growth of some firms from emerging markets has attracted the attention of academics and managers alike. How do such emerging market firms achieve growth in international markets despite lacking foreign market knowledge and international competitiveness, and despite facing weak institutions in their home countries? The authors address this question by proposing a new concept—*global market capital*, the set of assets that prepare emerging market firms to compete globally. Global market capital consists of three elements: *leadership capital* (at the individual level), *foreign marketing and financial capital* (at the firm level), and *network capital* (at the inter-firm level). The authors argue that, taken together, these elements enable emerging market firms to overcome their weaknesses in foreign market knowledge, international competitiveness and home institutions. In particular, the authors highlight the prominent role that leadership capital, specifically CEOs' foreign market experience, plays in helping emerging market firms grow internationally. The authors test their thesis using uniquely compiled data on Indian firms from the Bombay Stock Exchange 500 index. The Indian context helps to set up a natural experiment in which the independent variables of interest are measured prior to a major sudden and unanticipated regulatory shift in India's outward investment policy and the dependent variable (international growth) is measured after this policy shift. Results from the paper highlight the crucial role of leadership capital in driving international growth both directly and through its synergistic interaction with the other elements of global market capital.

Keywords: International Growth, Emerging Markets, Global Market Capital, Natural Experiment

Consider the case of Ranbaxy Laboratories, an Indian pharmaceutical firm. Like many of its peers from emerging markets, Ranbaxy did not generate any revenue from foreign markets until 1989. By 2006, however, the firm earned 68% of its revenues from international operations and had completed thirteen cross border acquisitions. Ranbaxy's international growth—i.e., the change in scale of its market operations outside its home economy—is hardly an isolated case; rather, it is part of a more widespread phenomenon of international growth by firms from emerging markets. Between 1993 and 2000 the compounded growth in outward investment from emerging markets was 16.64%, while between 2001 and 2008 it was 17.08% (UNCTAD 2009). Taking note of the phenomenal international growth of emerging market firms *The Economist* (2010) has observed that “many of the developing world’s champions have risen from *zero to hero* in just a couple of decades”.

Only a few firms, however, account for a significant proportion of the international growth from emerging markets. For instance, in 2004, only 3.57% of publicly traded firms from emerging markets were involved in cross border acquisitions (UNCTAD 2009; World Bank 2005). The overall foreign revenues of emerging market firms are similarly lopsided, with only a few firms showing significant growth in international markets. This raises the following research question: Why do *some* emerging market firms achieve more international growth than others?

The question of how firms grow is arguably one of the most important facing the marketing discipline (Bahadir, Bharadwaj and Parzen 2009; Bharadwaj, Clark and Kulviwat 2005; Srivastava, Shervani and Fahey 1998; Bharadwaj, Varadarajan and Fahy 1993). With the globalization of markets, the international aspects of such growth are of increasing importance to academics and managers alike (Ter Hofstede, Wedel and Steenkamp 2002). While substantial work has examined the international growth of firms from developed countries into other markets, there is very little research on the international growth of firms from *emerging* countries into other markets (Gielens

and Dekimpe 2007; Burgess and Steenkamp 2006). The Marketing Science Institute observes this gap in the literature and, in setting out its research priorities for 2010-2012, stresses the need to understand the threat that the international growth of firms from Brazil, Russia, India and China poses to firms in developed markets. Indeed, this threat is significant as the rise of emerging market firms could fundamentally alter the dynamics of global competition. For instance, by 2006, the dynamics of the global market for generic drugs were fundamentally altered by the significant international growth of firms like Ranbaxy Laboratories, by then among the top 10 generic drug manufacturers in the world (KPMG 2006).

The existing literature on the international growth of firms from developed markets has identified several drivers of such growth (see Hitt et al. 2006). Three of these drivers have received particular emphasis: firms' foreign market knowledge (Johanson and Vahle 1977; Mitra and Golder 2002), their international competitiveness (Dunning 1981; Johnson and Tellis 2008; Dawar and Frost 1999), and the strength of their home country institutions (Wan and Hoskisson 2003; Tellis, Stremersch and Yin 2003). Although these drivers play a significant role in explaining the growth of developed market firms, they do not obviously explain the international growth of *emerging* market firms (Khanna, Palepu and Bullock 2010; Chittoor et al. 2009). Scholars overwhelmingly agree that emerging market firms lack foreign market knowledge (Wright et al. 2005), are internationally less competitive in comparison to their developed market counterparts (Hitt et al. 2000; Elango and Patnaik 2007), and operate out of weak institutional environments (Khanna and Palepu 1997). This raises the following puzzle: If foreign market knowledge, international competitiveness and strong home country institutions are such crucial drivers for international growth, how then do some firms from emerging markets, despite facing these weaknesses, manage dramatic international growth?

Further, these three drivers of international growth have largely been studied in isolation: prior research does not provide a comprehensive view that integrates these drivers into a coherent

theoretical framework. As Hitt et al. (2006) state: “there is need for a comprehensive model to integrate the insights from prior research and provide direction for future research.” We seek to address this gap in existing research by offering an initial attempt at an overarching theory of the drivers of international growth of firms from emerging markets.

We do so by arguing that emerging market firms that grow internationally overcome their weaknesses by developing what we call *global market capital*. In the context of emerging market firms, we define global market capital as the set of assets that prepare these firms to compete globally. This set of assets is manifested at the individual, firm and inter-firm levels. In this paper we focus on *leadership capital* at the individual level, *foreign marketing* and *financial capital* at the firm level, and *network capital* at the inter-firm level. Leadership capital, which refers to the foreign market experience that top managers possess, helps emerging market firms overcome their lack of foreign market knowledge. Foreign marketing and financial capital, which refer to the marketing and financial assets that firms access beyond the borders of their home country, help emerging market firms overcome their inferior international competitiveness. And network capital, which refers to firms’ association with other firms, helps them overcome weaknesses in their home country institutions.

By studying the international growth of emerging marketing firms, we seek to make three contributions. First, we respond to recent calls by eminent marketing scholars to do more research on emerging markets (Sheth 2011; Deshpande, Farley and Bowman 2004; Aulakh and Kotabe 2008; Gu, Hung and Tse 2008). As Sheth states: “Research on emerging markets is not just a ‘nice thing to do’; it is increasingly becoming a necessity” (2011, p.180). Within the context of emerging markets, we shed light on an understudied phenomenon that is important in scale and potential, namely the *international* growth of emerging market firms (Burgess and Steenkamp 2006; Johnson, Yin and Tsai 2009). Most research on the international growth of firms has so far only examined the

expansion of firms from developed economies (Tsai and Eisingerich 2010; Johnson, Yin and Tsai 2009). But theories based on the international expansion of firms from developed economies may not directly apply to firms from emerging markets, given the very different nature of emerging markets and the firms that come from them. As Burgess and Steenkamp (2006, p.338) state: “Emerging markets’ institutional contexts present significant socioeconomic, demographic, cultural, and regulative departures from the assumptions of theories developed in the Western world and challenge our conventional understanding of constructs and their relations.” Our paper is an early attempt to challenge such conventional understanding.

Second, by introducing the concept of global market capital we provide a more comprehensive explanation for international growth that includes drivers of growth at the individual manager, firm and inter-firm level. By doing so, we build on past research that tends to focus on institutional or firm level drivers of international growth and does not look across these drivers to offer an integrated view (e.g. Tellis, Stremersch and Yin 2003; Golder and Tellis 2004; Johnson and Tellis 2008). Further, through the concept of leadership capital we highlight the crucial role that leaders play in shaping the international profile of their firms. By doing so, we respond to calls to raise the profile of marketing within the upper echelons of the firm (Kumar 2004; Webster, Malter, and Ganesan 2005). Moreover, highlighting the role that key individuals play in driving a firm’s international growth helps us go beyond the somewhat mechanistic and disembodied organizational perspective that dominates theorizing in international business and strategy (Hitt et al. 2006).

Third, we use a natural experiment as our research setting, and thus seek to address the issue of endogeneity that dogs much of the existing research on the link between leadership and firm growth (see Herrmann and Datta 2005). Specifically, we test our hypotheses on a uniquely compiled database that covers 10 years (1999-2008) of data on 165 publicly traded, non-state owned Indian firms from the Bombay Stock Exchange 500 index. During this period, India experienced a

dramatic, sudden and unanticipated policy shift in outward foreign direct investment. This shift enables us to measure the independent variables of interest (leadership capital, foreign marketing and financial capital, and network capital) prior to the relevant policy shock, and the dependent variable (international growth) after the policy shock. Doing so allows us to alleviate the problem of endogeneity which characterizes much research in the field (Herrmann and Datta 2005).

Specifically, we are able to address potential selection problems that arise from studying firms that always had the opportunity to go global and might hence have chosen a particular type of leader (e.g., one with foreign market experience) in order to internationalize.

THEORY AND HYPOTHESES

Existing research suggests three major limitations that firms from emerging markets face in growing internationally: their lack of foreign market knowledge, their inferior international competitiveness, and the weaknesses in their home country institutions. Despite these limitations some emerging market firms nevertheless achieve international growth. How do they do so?

To address this question, we seek to integrate the vast literature on firm growth. This literature spans various fields including marketing, strategy and international business. The literature on firm growth suggests that drivers of growth exist at the individual, firm and inter-firm level. At the individual level, much research has explored the role that leaders play in driving the growth of firms (Chatterjee and Hambrick 2007; Bertrand and Schoar 2003; Datta and Rajagopalan 1998; Finkelstein and Hambrick 1996; Hambrick and Mason 1984). At the firm level, considerable research focuses on the role that firms' assets play in driving their growth (Bahadir, Bharadwaj and Parzen 2009; Bharadwaj, Clark and Kulviwat 2005; Srivastava, Shervani and Fahey 1998; Bharadwaj, Varadarajan and Fahy 1993; Barney 1991; Wernerfelt 1984). At the inter-firm level, much research highlights the role that firms' membership in networks plays in driving growth (Khanna and Palepu 2000b; Guillen 2000; Gu, Hung and Tse 2008; Uzzi 1997; Gulati, Nohria and Zaheer 1994).

We integrate these streams of research to propose a comprehensive explanation for the *international growth of emerging market firms*. Specifically, we introduce the concept of global market capital to do so. Global market capital consists of three elements: leadership capital (at the individual level), foreign marketing and financial capital (at the firm level), and network capital (at the inter-firm level). We argue that each of these elements of global market capital has a direct effect on the international growth of emerging market firms. We also argue that, among these elements, leadership capital plays a particularly important role in driving the international growth of emerging market firms. Specifically, we argue that leadership capital has a direct effect on international growth as well as an indirect effect through its synergistic interaction with foreign marketing and financial capital and network capital.

Leadership capital—the foreign market experience of the top managers of a firm—helps emerging market firms overcome their limited foreign market knowledge (Hitt et al. 2000) and grow internationally in two ways. First, such experience on the part of the leaders of the firm makes opportunities and challenges beyond the home market more salient to decision makers within the firm. Second, such experience provides the firm first-hand awareness of the quality of products available on international markets and therefore of the improvements that the firm must make to match the expectations of international customers (Dawar and Frost 1999).

Foreign marketing and financial capital—the assets that firms acquire beyond the borders of the home country—also play a vital role in the international growth of emerging market firms. Emerging market firms are hindered in their international growth because, relative to developed market firms, they possess weaker brands, inferior or outdated technology, and lack access to the finance needed to grow internationally. One way they can overcome these drawbacks is by acquiring cutting edge brands and technologies on the international market and tapping into international financial markets for the capital needed to grow (Hitt et al. 2000; Elango and Patnaik

2007). Gaining access to greater foreign assets enables emerging market firms to match the competitiveness of their foreign rivals and grow internationally (Dunning 1981; Johnson and Tellis 2008; Dawar and Frost 1999).

Finally, network capital—emerging market firms’ membership in inter-firm networks—helps emerging market firms overcome the weakness of their home institutions and drive their international growth (Elango and Patnaik 2007) in two ways. First, through their membership in such networks, emerging market firms are able to leverage the economies of scale and scope of the network to overcome the high transaction costs that poorly functioning technological, financial and informational markets in emerging economies pose (Gulati, Nohria and Zaheer 1994; Khanna and Palepu 2000b; Wan and Hoskisson 2003; Tellis, Stremersch and Yin 2003). Second, through membership in such networks, emerging market firms are able to hedge the risks associated with internationalization by learning about foreign markets from the international activities of member firms (Kumar 2009).

We next develop hypotheses showing the direct effects of the three elements of global market capital on the international growth of firms from emerging markets. Further, we highlight the special role that leaders play in the international growth of emerging market firms. We do so by showing how, in addition to its direct effects on growth, leadership capital also indirectly influences international growth through its synergistic interaction with foreign marketing and financial capital and network capital respectively.

Leadership capital and international growth

Leaders play an important role in the international growth of firms (Herrmann and Datta 2005; Sambharya 1996). In the context of the international growth of *emerging market* firms, a key aspect of the capital that leaders possess is their foreign market experience. Recall that emerging market firms have limited foreign market knowledge compared to their developed market counterparts by

virtue of being in the early stages of internationalization and lacking extensive international experience (Elango and Patnaik 2007). Leaders' foreign market experience helps overcome this limitation and enables international growth in two ways. First, leaders with foreign market experience are able to correctly estimate the risks and returns associated with investments in international opportunities. Such estimation helps the firms they lead to identify viable opportunities in international markets and commit appropriate resources to pursue those opportunities (Tihanyi et al. 2000).

Second, leaders' foreign market experience makes them aware of the demanding nature of international markets in terms of product quality. In order to match the highest global standards in product quality, these top managers are more likely to emphasize the adoption of world-class technologies and processes within the firm. Adoption of world-class technologies and processes narrows the gap between the quality of products produced by emerging market firms and those produced by competing firms in international markets (Hitt et al. 2000). In light of these arguments, we hypothesize that:

H₁: Emerging market firms with greater leadership capital experience greater international growth than other emerging market firms.

Foreign marketing and financial capital and international growth

Prior research shows that emerging market firms lack international competitiveness because they lack the marketing capabilities and the financial resources of developed market firms (Chittoor et al. 2009; Khanna and Palepu 2000a; Dawar and Frost 1999; Elango and Patnaik 2007). It is widely argued that, on average, emerging market firms are younger, smaller and have a lower resource base compared to their developed market counterparts (Hitt et al. 2000). This results in emerging market firms having relatively weak new product development capabilities, brands, technologies and financial resources (Hitt et al. 2000; Elango and Patnaik 2007).

Emerging market firms can, however, potentially overcome their inferior international competitiveness by accessing marketing and financial assets beyond the borders of their home country. They can access superior marketing assets through the purchase of international brands and foreign proprietary technologies for new product development and differentiation. And they can access greater financial assets by raising funds from international stock markets, banks and financial institutions.

Some research suggests that emerging market firms' attempts to access foreign assets in marketing and finance has its downsides. First, purchasing international brands might hurt emerging market firms if these brands do not integrate well with the firm's existing brand portfolio (Dawar and Frost 1999). Second, emerging market firms have historically been unable to accurately gauge the technological cycles of international markets and have often purchased foreign technologies in the declining stage of their life cycles (Dawar and Frost 1999). This, in turn, has forced such firms to make further subsequent investments in technical upgrades, thus lowering the rewards from their initial investment (Dawar and Frost 1999). Third, accessing foreign financial capital can result in significant costs since international financial markets require adherence to rigorous disclosure standards (Khanna, Palepu and Bullock 2010). Adherence to such standards requires the adoption of internationally accepted organizational processes (Khanna and Palepu 2004) like accounting standards that comply with Generally Accepted Accounting Principles (GAAP). This in turn requires time and effort on the part of emerging market firms, and is costly.

Nevertheless, foreign marketing and financial capital can drive international growth in two ways. First, accessing foreign marketing and financial capital involves the purchase of international brands and proprietary technologies for new product development and differentiation, and the listing of the firm on international stock markets. Such activities can help emerging market firms, when they decide to internationalize, to introduce competitive products in international markets that

attract foreign customers and finance. Specifically, the purchase of international brands provides emerging market firms the means to introduce products of a quality at par with competitors in global markets (Chittoor et al. 2009). The use of foreign proprietary technologies for new product development and differentiation increases the firm's chances of attracting customers for its products on international markets. And listing on international stock exchanges can help the firm raise finance from foreign investors (Chittoor et al. 2009).

Second, accessing foreign marketing and financial capital can help the emerging market firm gain legitimacy in international markets when the firm decides to internationalize (Hitt et al. 2000; Rao, Chandy and Prabhu 2008). Such legitimacy can help the firm overcome the skepticism of key international stakeholders such as investors, customers, suppliers, employees and business partners. Overcoming such stakeholder skepticism makes it easier for emerging market firms to gain access to resources in international markets, which in turn facilitates new product introductions and growth (Hannan and Freeman 1984; Rao, Chandy and Prabhu 2008).

In sum, therefore, we argue that the benefits of accessing foreign marketing and financial capital outweigh the downsides. Hence we hypothesize that:

H_{2a}: Emerging market firms with greater foreign marketing capital experience greater international growth than other emerging market firms.

H_{2b}: Emerging market firms with greater foreign financial capital experience greater international growth than other emerging market firms.

Network capital and international growth

Emerging market firms have long operated in protected economies that were insulated from international market pressures and possessed weak home institutions (Hitt et al. 2000; Elango and Patnaik 2007). To overcome the drawbacks of weak home institutions, emerging market firms frequently belong to networks in which member firms are bound together by inter-firm financial

transactions, technological support for each other's products, and the sharing of market information (Kumar, Mohapatra and Chandrasekhar 2009; Gu, Hung and Tse 2008; Khanna and Palepu 2000b).

Some researchers argue that belonging to such a network of tightly knit firms can actually impede the international growth of emerging market firms (Chittoor et al. 2009; Gu, Hung and Tse 2008). Belonging to such networks can overload a stronger member firm with obligations to support weaker network members at a rate that outpaces the stronger member firm's capacity to rejuvenate its own resources (Gu, Hung and Tse 2008; Uzzi 1997). This, in turn, could lead to suboptimal resource utilization for stronger member firms resulting in their inferior performance in international markets. Further, belonging to such networks could make a firm over-dependent on member firms, resulting in its non-receptivity to external market intelligence. This could, in turn, reduce the firm's links to potential partners outside the network, thus limiting its openness to new markets, especially international ones (see Uzzi 1997; Gu, Hung and Tse 2008).

In contrast to this view, we argue that belonging to inter-firm networks aids the international growth of emerging market firms in two ways (also see Gaur and Kumar 2009; Elango and Patnaik 2007). First, emerging economies are characterized by weak institutions, resulting in poorly functioning technological, financial and informational markets (Khanna and Palepu 2000b). Specifically, weak home country institutions increase the transaction costs for emerging market firms in technological, financial and information markets, making the products of these firms potentially more costly in international markets (Wan and Hoskisson 2003). We argue that emerging market firms with network capital are, however, able to overcome weak home country institutions through the sharing of technology, finance and information between member firms, thus lowering the transaction costs to member firms (Khanna and Palepu 2000b; Uzzi 1997). These lower transaction costs help such emerging market firm offer price competitive products in international markets and achieve greater international growth.

Second, emerging market firms with network capital can learn about international business from the international activities of other firms in the network (Kumar 2009; Elango and Patnaik 2007). For instance, emerging market firms with network capital can leverage the existing relationships of network members to learn about international customers and suppliers. Such learning can help the focal firm to identify and engage ideal international customers and suppliers thereby facilitating international growth.

In sum, the benefits of network capital, such as lower transaction costs and increased learning about international markets, are likely to outweigh the negative effects, namely obligations to weaker member firms and overdependence on the network. Thus, we propose that:

H₃: Emerging market firms with greater network capital experience greater international growth than other emerging market firms.

The direct effects alone do not tell the full story

Hypotheses H₁-H₃ suggest that each of the three elements of global market capital—leadership capital, foreign marketing and financial capital, and network capital—have a direct effect on the international growth of emerging market firms. We now argue that of these three elements, leadership capital has a particularly important role to play by also indirectly driving international growth through its interactions with the other two elements of global market capital.

As we point out above, foreign marketing and financial capital and network capital have potential negative effects on international growth. For instance, purchasing international brands might hurt emerging market firms if these brands have a negative reputation (Dawar and Frost 1999) and belonging to firm networks may overload stronger member firms with obligations to support weaker network members. We now argue that leadership capital plays a crucial interactive role in driving international growth by mitigating the potential negative effects of foreign marketing and financial capital and network capital on such growth.

Leadership capital, foreign marketing and financial capital and international growth

Accessing foreign marketing and financial capital could hinder the international growth of emerging market firms because: 1) the international brands they purchase may not integrate well with existing brands, 2) the foreign technologies they purchase may be in the decline stage of their life cycle, and 3) the cost of adhering to the rigorous disclosure standards of international financial markets may prove high.

We argue that emerging market firms with leadership capital are able to overcome these problems in three ways. First, leaders with foreign market experience can ensure that their firms extract greater value from the international brands they invest in. Specifically, such leaders are in a better position to identify the synergies between the firm's existing domestic brands and the international brands acquired (Javidan, Teagarden and Bowen 2010; Tihanyi et al. 2000) and ensure better integration between these sets of brands. This is possible because such leaders are aware of the strengths of the international brands acquired and utilize these strengths to overcome the weaknesses of their existing domestic brands.

Second, leaders with foreign market experience are more aware of technological developments in international markets and are able to provide better guidance to their firms in terms of investments in foreign technologies (Tihanyi et al. 2000). Such leaders are therefore more likely to ensure that firms that have purchased outdated technologies do not compound these errors by making further investments in such technologies; such leaders can instead ensure that their firms invest in newer technologies that are at earlier stages of their life cycles.

Third, leaders with foreign market experience can help emerging market firms that have adopted international disclosure standards extract benefits that outweigh the costs associated with such adoption. Specifically, leaders with foreign market experience are more likely to be aware of the high value attributed to international disclosure standards by foreign investors. The adoption of

international disclosure standards along with the leaders' understanding of foreign investors is more likely to attract funds from foreign investors (Halsall 2009; Javidan, Teagarden and Bowen 2010). These funds are in turn likely to be greater than the costs associated with the adoption of international disclosure standards and will thus help drive international growth (Khanna and Palepu 2004).

Taken together, these arguments suggest that firms with leadership capital are able to extract greater benefits from foreign marketing and financial capital resulting in greater international growth. Thus:

H_{4a}: The positive effects on international growth of foreign marketing capital are greater for emerging market firms with greater leadership capital.

H_{4b}: The positive effects on international growth of foreign financial capital are greater for emerging market firms with greater leadership capital.

Leadership capital, network capital and international growth

As we note above, network capital can hinder the international growth of emerging market firms because: 1) belonging to a network may overload a stronger member firm with obligations to support weaker network members, resulting in the stronger firm making suboptimal use of its resources and 2) belonging to a network can make a firm over-dependent on its network resulting in the firm becoming non-receptive to external market opportunities.

We argue that emerging market firms with leadership capital can overcome these negative effects of network capital in two ways. First, leaders with foreign market experience are more likely to ensure that their firms are not obliged to support weaker network members, thus avoiding the suboptimal utilization of the firm's resources. Specifically, leaders with foreign market experience are more likely to be exposed to the ethos of transparency and the primacy of obligations to shareholders of the firm (Khanna and Palepu 2004). Such leaders are therefore more likely to override their obligation to support weaker network members, especially when such obligations lead to suboptimal resource utilization (Gu, Hung and Tse 2008; Halsall 2009; Javidan, Teagarden and

Bowen 2010; Tihanyi et al. 2000). For these reasons, such firms are likely to have more resources available for the pursuit of international growth.

Second, leaders with foreign market experience are more likely to ensure that their firms do not become over-dependent on their network but rather remain receptive to external market opportunities. Such leaders understand that to compete in foreign markets, emerging market firms need to develop products that match international standards. Developing such products requires firms to adopt world-class technologies. More often than not, such world-class technologies are unavailable among firms in the network (Hitt et al. 2000). Under such circumstances, leaders with foreign market experience can help their firms seek world-class technologies from international markets that lie beyond the firms in the network (Gu, Hung and Tse 2008). Consequently such firms are more likely to override their dependence on the network, making them more receptive to external market opportunities.

In sum, because of their pursuit of optimal resource utilization and greater product quality, leaders with foreign market experience help increase the international growth of emerging market firms with network capital. Thus, we hypothesize that:

H₅: The positive effects on international growth of network capital are greater for emerging market firms with greater leadership capital.

Taken together, our hypotheses suggest that global market capital—leadership capital, foreign marketing and financial capital, and network capital—helps emerging market firms overcome the limitations they face in growing internationally. Our hypotheses particularly emphasize the role that leaders play in driving the international growth of emerging market firms. Most past research that has attempted to empirically test the impact of leaders' characteristics on international growth is unable to draw strong causal inferences about this impact (Herrmann and Datta, 2005). Specifically, research in the area is prone to endogeneity because firms that intend to internationalize may choose leaders who possess leadership capital. Thus, an unobserved variable (intention to go global) could

influence both the independent variable (leadership capital) as well as the dependent variable (international growth). This makes it hard to draw causal inferences about the relationship between leaders' characteristics and international growth. We now turn to an empirical test of our hypotheses in the context of a natural experiment that helps overcome the problems posed by such endogeneity.

METHOD

Empirical Context

We choose firms from India as the empirical context in which to test our hypotheses. India provides an excellent context for three reasons. First, it has in recent years been one of the fastest growing emerging economies in the world, with many firms that are making their presence felt globally (Johnson and Tellis 2008). For instance, the Boston Consulting Group's Global Challengers report of 2011 places 20 firms from India in the top 100 firms from emerging markets with significant international growth.

Second, in the Indian context, international growth has largely been driven by non-state owned firms, making our data and findings more representative of firm-based drivers of growth (as opposed to growth due to state patronage). For instance, all 20 Indian firms in the BCG Global Challengers report of 2011 are publicly traded, non-state owned firms. The context of non-state owned, publicly traded firms ensures that the international growth of firms in our sample is more likely to be driven by a profit maximization motive. International growth by state owned enterprises, in contrast, might be driven by other, more nationalistic motives like fortifying economic influence regionally and globally (Luo, Xue and Han, 2009), thereby representing a different phenomenon from the one we wish to study.

Finally, the Indian context provides an institutional setting where restrictions on the international growth of domestic firms were lifted fairly recently. Specifically, India experienced a well-documented, sudden and unanticipated policy shift in May 1999 when Indian firms were first allowed to internationalize *without consent* from the Indian government, *without repatriation* of the

amount invested abroad, and with a *rise in upper limit* for foreign investment from \$2 million to \$15 million (Government of India 1999; Reserve Bank of India 1999; Pradhan 2007; Khan 2012). This policy shift led to a manifold increase in Indian outward foreign investment in the years following 1999-2000 (Khan 2012; Pradhan 2007). This well-documented, sudden and unanticipated policy shift acts as an exogenous shock that allows us to set up a natural experiment in which the drivers of international growth can be measured prior to the policy shift and international growth measured after the shift (Donohue III and Levitt 2001). It would be difficult to set up such a natural experiment in countries which did not have such a clear and significant shift in outward investment policies.

The 1999 policy shift in the Indian context provides two specific advantages. First, since the shift happened in the recent past, it presents an opportunity to study the international growth of emerging market firms practically from birth, i.e., from the moment that internationalization first became possible (Khan 2012; Pradhan 2007). Second, the policy shift allows us to alleviate concerns due to endogeneity. Despite other liberalizing reforms that had been put in place since 1991 (when India's economy began to open up), stringent restrictions on outward foreign direct investments remained an article of faith within Indian policy circles throughout the 1990s. Specifically, these restrictions on outward foreign direct investments were put in place to ensure that India did not face a balance of payments crisis similar to the one that occurred in 1991 (see Ahluwalia 2002; Hattari and Rajan 2010). Moreover, the Asian economic crisis of 1997 provided further credence to these restrictive policies, making the removal of restrictions in 1999 a truly surprising event for Indian firms (Ahluwalia 2002). The presence of these restrictive policies on Indian firms until the late 1990s enables us to ensure against an unobserved variable (such as the firm's intention to go global) influencing both the independent variable (e.g., choosing leaders with foreign market experience) and the dependent variable of interest (i.e., international growth).

Specifically, the sudden and unanticipated removal of restrictions in 1999 significantly reduces the likelihood of firms having an intention to grow internationally prior to 1999 and thus choosing leaders with foreign market experience (i.e., leadership capital) in order to grow internationally¹. Further, the policy shift allows us to separate in time the independent variables (leadership capital, foreign marketing and financial capital, and network capital) from the dependent variable (international growth) (see Figure 1). Thus, in comparison to prior studies that use time series, cross-section data, our method of using an exogenous change in policy allows us to conduct a stronger test of the causality implied by our hypotheses (see Yadav, Prabhu and Chandy 2007; Lazear 1990; Donohue III and Levitt 2001).

Data and Sample

We compile an archival database spanning 10 years (1999-2008) from multiple sources (see Table 1A). We use the BSE 500 index of the Bombay Stock Exchange as the population from which we draw our sample. The BSE 500 index lists the top 500 firms by market capitalisation on the Bombay Stock Exchange. The index comprises 93% of the market capitalisation of the exchange (Bombay Stock Exchange 2008) thereby capturing almost the full value of the stock market. For the firms on the BSE 500, data on all the variables for the 10 year period (1999-2008) were available for 438 (86.4%) firms. We apply four filters to arrive at our final sample. First, since the focus of our study is the international growth of *emerging* market firms, we follow previous studies (e.g., Chittoor et al. 2009) and remove firms that are subsidiaries of foreign multinationals. Second, we omit state owned firms since such firms do not always pursue a profit maximization objective and are therefore not representative of the phenomenon we wish to study (Dewenter and Malatesta 2001). Third, we drop firms classified as financial institutions. Such firms are regulated by central banks, making them unique and non-representative of the phenomenon we wish to study (Rajan and

¹ We examine this issue further in the robustness check section of this paper.

Zingales 1995). Fourth, we eliminate firms which were established after the year 1992. 1992 was a watershed year in Indian macro-economic policy; specifically, major changes were implemented in that year geared towards reduced state intervention and greater private enterprise. Thus firms established after 1992 operated in a liberal, highly competitive economic environment from inception, whereas firms established before 1992 operated in a protected environment. Including firms established after 1992 with those established before 1992 would introduce confounds in our data.

Applying these filters results in a final sample of 165² firms (see Table 1B). We track these firms over a period of 10 years from 1999 until 2008, and collect data on 15 variables from 5 different sources. Table 1A lists the conceptual variables, the measured variables and the data sources we use. We provide detailed information on each of these measures next.

Dependent Measures

International growth: We measure the international growth of firms by measuring their foreign revenues. Foreign revenues are the most commonly used measure of international growth (Ramaswamy, Kroeck and Renforth 1996). We record foreign revenues annually for the years 2000 to 2008. We obtain this data (from the Prowess database) in Indian rupees and convert it to US dollars using the exchange rate (Onada 2008) between the two currencies. We adjust for inflation by dividing the foreign revenues by the consumer price index with the base year as 1998 (India Budget 2010).

We compute the dependent variable of international growth using a two-step process that results in a single value for each firm. First, we calculate the mean of foreign revenues between 2000 and 2008 for each firm so that we have one observation per firm. Second, we standardize the

² There was no attrition in our sample during this 10 year period, e.g., none of the firms in our sample was acquired by a foreign multinational in this period.

mean value of foreign revenues to reduce the difference between extreme values (such as very high and very low mean foreign revenues).

In addition to foreign revenues, we also record the annual value of cross-border mergers and acquisitions for the years 2000-2008 for all firms in our sample. Recent literature on international growth advocates the inclusion of cross-border mergers and acquisitions as a measure of international growth (Gubbi et al. 2009). We test the robustness of our results by using the value of cross-border mergers and acquisitions as an alternative measure of international growth.

Independent Measures

Leadership capital: Of the firm's leaders, the CEO has a disproportionately large influence on strategic decision making within the firm (Chatterjee and Hambrick 2007; Datta and Rajagopalan 1998; Finkelstein and Hambrick 1996; Hambrick and Mason 1984). International growth is a major strategic issue, and is likely to involve the CEO in a very significant way (Carpenter and Wade 2002; Jaw and Lin 2009). Moreover, CEOs' "managerial discretion," i.e., their ability to make unilateral decisions (Boyd, Chandy and Cunha Jr. 2010), is particularly high in emerging markets (Nadkarni and Herrmann 2010; Khanna and Palepu 2004; Guillen 2000). For these reasons, we measure leadership capital by focussing on the background of the CEO.

In the context of the international growth of emerging markets firms, a key aspect of leadership capital is the foreign market experience of leaders. Following extensive past research, we operationalize foreign market experience by measuring CEOs' international educational and work experience (Hambrick and Mason 1984; Sanders and Carpenter 1998; Herrmann and Datta, 2005; Sambharya 1996).

CEOs' international educational and work experience are appropriate measures of foreign market experience for at least three reasons. First, international educational and work experience broaden the cognitive horizon of CEOs and make them aware of customers, competitors and

regulations in international markets (Tan and Meyer 2010; Carpenter and Fredrickson 2001; Sambharya 1996). Second, international educational and work experience provide CEOs first-hand awareness of the high standards of product quality in international markets. Such awareness makes them more likely to adopt world-class technologies in the firms they lead (Tihanyi et al. 2000; Javidan, Teagarden and Bowen 2010). Finally, demographic measures like educational experience and work experience provide objectivity, parsimony, comprehensiveness, predictive power and testability (Hambrick and Mason 1984).

From Prowess, we collect the names of all CEOs in the year 1999 for all firms in our sample. We then collect data on international educational or work experience for each CEO from their biographies on the Directors Database and Factiva. For each firm we record a dummy coded as 1 if the CEO has either foreign educational experience or foreign work experience and 0 if the CEO has neither.

Foreign marketing and financial capital: To measure foreign marketing capital in 1999 we use: (1) the value of foreign capital goods purchased for new product development in 1999 and (2) the value of the purchase of foreign proprietary technologies and brands in 1999. Following prior research (see Chittoor et al 2009), we sum the value of foreign capital goods and the value of foreign proprietary technologies and brands. We compute the z scores of this summation across the 165 firms in the sample to construct the measure of foreign marketing capital³.

Foreign financial capital refers to the raising of foreign currency equity and foreign currency debt from outside the home country (Chittoor et al 2009; Oviatt and McDougall 2005a; Oviatt and McDougall 2005b). For Indian firms, although the policies for outward foreign investment were restrictive, the policies for borrowing from foreign markets were liberal (Reserve Bank of India

³ It might seem that due to the restrictive policies of India prior to 1999 only a few firms in our sample would have accessed foreign marketing capital thus resulting in sparse data. However, foreign marketing capital was viewed by a number of Indian firms as a means of better tapping the domestic market. Perhaps for this reason, 81% of the firms in our sample had accessed at least some foreign marketing capital in 1999.

2000). Indian firms could borrow upto \$10 million annually without the consent of the Indian Government (Reserve Bank of India 2000). Indian firms could utilize these liberal policies to access foreign financial capital in two broad ways. First, they could issue equity shares on international stock exchanges (Chittoor et al 2009), for instance by issuing American Depository Receipts (ADRs) and Global Depository Receipts (GDRs) which could be traded on international stock exchanges. Second, they could raise foreign exchange debt through the issue of debt securities (Chittoor et al 2009), for instance by issuing debt instruments like Euro convertible bonds and secured foreign loans. We add the value of foreign finance that firms raise through equity and debt. We convert this sum from Indian rupees to US dollars and then adjust for inflation with 1998 as the base year. We then calculate z scores across all the 165 firms in the year 1999 to construct the measure of foreign financial capital.

Network capital: Business groups are the most common form of inter-firm networks in emerging markets (Khanna and Palepu 2000a; Khanna and Rivkin 2001; Bertrand, Mehta and Mullainathan 2002; Elango and Patnaik 2007). A business group is defined as a network of firms that, though legally independent, are bound together by a constellation of formal and informal ties, and share one another's technological, financial and informational assets (Khanna and Rivkin 2001). Our measure of network capital captures both the scale and scope of assets in a business group.

We construct such a measure of network capital by multiplying the total assets of a business group (scale) with the most commonly used measure of scope, i.e., entropy (see Sorescu, Chandy and Prabhu 2003)⁴. For each business group affiliated firm we calculate the network capital in 1999 in the following manner:

$$\text{Network Capital} = A * E = A * \left[\sum_{j=1}^n \frac{A_j}{A} \ln \frac{A}{A_j} \right] = \sum_{j=1}^n A_j \ln \frac{A}{A_j} \dots \dots \dots (1)$$

⁴ We use this multiplicative measure because the entropy measure by itself does not help differentiate between the scale of different business groups. For instance, the entropy measure by itself would be identical for a business group with substantial assets whose assets are spread equally across 5 member firms relative to a business group with much smaller assets whose assets are also spread equally across 5 member firms.

where

A=the business group's total assets in 1999

A_j =assets of the j^{th} member firm within the business group in 1999

E=entropy measure of the business group

Following past research (see Khanna and Palepu 2000a; Bertrand, Mehta and Mullainathan 2002), we use the Prowess classification of firms to identify a firm's business group affiliation. We also record the assets of member firms of a business group from Prowess. According to equation (1), for firms unaffiliated to a business group, network capital takes a value of 0. A high value of network capital according to equation (1) shows greater scale and scope of the business group. Business groups with high network capital are able to substitute for the lack of market intermediaries in technological, financial and informational markets in emerging economies (Yiu, Lu, Bruton and Hoskisson 2007). This in turn helps emerging market firms with high network capital to overcome weak home country institutions and achieve international growth.

Control Variables

Age: Prior research suggests that the age of a firm negatively influences its international growth (Elango and Patnaik 2007). We calculate the age of the firm by subtracting the year the firm was established from the year 1999.

Size: Prior research suggests that the size of a firm influences its international growth (Johnson and Tellis 2008). We control for the size of the firm by converting its revenues in 1999 from Indian rupees to millions of US dollars and then adjusting this number for inflation with the base year as 1982. We then compute the natural logarithm of revenue. Our use of revenue as a measure of firm size is consistent with prior research on international growth (Sambharya 1996).

Industry: Our data includes firms from ten industries: pharmaceuticals; mining and quarrying; automotives and auto components; manufacturing; steel and steel products; textile and textile

products; chemicals, fertilizers and cement; industrial machinery and equipment; information technology and healthcare. We control for industry effects by using the single digit National Industrial Classification of India (Central Statistical Organisation 2008) to classify firms in the sample and develop a set of dummy variables, one for each industry in the sample.

Extent of home market competition: The international marketing literature argues that home market competition forces firms to expand across borders (Stremersch and Lemmens 2009; Gielens and Dekimpe 2007; Gielens and Dekimpe 2001) thus influencing international growth. Since we do not have information on *all* competitors of a focal firm in 1999, we control for home market competition by calculating the sum of the revenues in 1999 of the *top three* competitors of the focal firm (Gielens and Dekimpe 2007; Gielens and Dekimpe 2001).

Foreign competition: Past research shows that firms are forced to internationalize when foreign competitors enter their home markets (Gielens and Dekimpe 2007; Hollensen 2003; Gielens and Dekimpe 2001). We control for foreign competition using a dummy coded as 1 if one of the top three competitors of the focal firm is a foreign multinational and 0 otherwise.

Domestic competitors going abroad: Existing literature suggests that firms internationalize as their domestic competitors start internationalizing (Hollensen 2003). We use the sum of foreign revenues earned by a firm's top three domestic competitors to measure and control for the extent of a firm's domestic competitors' international activity.

CEO as founder: The literature on corporate governance emphasizes that the decision making of the CEO is influenced by whether the CEO is a founder of the firm (Villalonga and Amit 2006). We control for this effect by using a dummy that we code as 1 if the CEO is a founder and 0 otherwise.

Model

Our setting of a natural experiment requires us to specify a model that captures the causal relationship between the elements of global market capital before the exogenous shock and the resulting international growth after the shock. To tease out this causal relationship, we separate the dependent variable (2000-2008) from the independent variable (1999) on a timeline. Our decision to separate the dependent and independent variables is similar to that of prior studies in marketing and economics that employ data from natural experiments (e.g., Grinstein and Nisan 2009; Jensen 2007) and where the change in the behavior of economic actors is modelled following an exogenous shock.

In our sample, 12 out of the 165 firms did not go international between 2000 and 2008. This makes our data right censored, indicating that the decision to go international is self-selected. An appropriate model would account for this self-selection. Therefore, to test our hypotheses we use regression with Heckman’s (1979) correction. Accordingly, equations (2) and (3) below present the substantive and selection models for the analysis respectively:

$$International\ Growth_{it} = \alpha_0 + \alpha_1 Leadership\ capital_{i,t-1} + \alpha_2 Foreign\ marketing\ capital_{i,t-1} + \alpha_3 Foreign\ financial\ capital_{i,t-1} + \alpha_4 Network\ capital_{i,t-1} + \alpha_5 Leadership\ capital_{i,t-1} * Foreign\ marketing\ capital_{i,t-1} + \alpha_6 Leadership\ capital_{i,t-1} * Foreign\ financial\ capital_{i,t-1} + \alpha_7 Leadership\ capital_{i,t-1} * Network\ capital_{i,t-1} + \alpha_8 Mills\ Lambda_i + \sum \alpha_j Controls_{i,t-1} + \epsilon_{i,t-1} \dots\dots\dots(2)$$

$$Dummy\ for\ Internationalization_i = \beta_0 + \beta_1 Leadership\ capital_i + \beta_2 Foreign\ marketing\ capital_i + \beta_3 Foreign\ financial\ capital_i + \beta_4 Network\ capital_i + \sum \beta_j Controls_i + \eta_i \dots\dots\dots(3)$$

where *i* is the subscript for a firm, *t* is the time period 2000-2008 and *t-1* is the year 1999.

We set up the natural experiment in such a way that we measure the dependent variable after the policy shift and the independent variables before the shift. The policy shift for outward foreign direct investment happened in the year 1999. Most policy changes have a time lag between when they are implemented and when they become effective (Khanna and Palepu 1999). This was true for the Indian case too; only from 2000 onwards do we observe a rise in outward forward direct

investment from India (UNCTAD 2004). Therefore, we measure the dependent variable international growth from 2000 until 2008. And we measure the independent variables in 1999, capturing the effect of the drivers of international growth prior to the policy shift (see Figure 1). Finally, consistent with previous research in a natural experiment setting (see Grinstein and Nisan 2009; Jensen 2007), we rule out alternative sources of variance by including several control variables in our substantive and selection models. Each of these controls is measured in the same year as the independent variables, i.e., 1999. By doing so, we attempt to account for all possible factors in 1999 that could influence the international growth of the firms in the sample following the policy shift of 1999.

An alternative approach to test our hypotheses would be to use longitudinal data from 1999 onwards and employ a panel specification (it would be meaningless to predict international growth prior to 1999 and the regulatory shock that made such growth feasible). However, as we note later, a panel specification would not be able to assess whether the elements of global market capital we propose are the causes of international growth or its consequences. The model specified in equations 2 & 3, on the other hand, permits such an assessment. Nevertheless, we assess the robustness of our results using a panel specification, and report these results in the additional analyses section below.

RESULTS

Table 2 presents the mean, standard deviation, minimum and maximum values of the measures used in the study and the correlation between them. The table shows a strong correlation between the independent and dependent variables, suggesting univariate support for our hypotheses. The table also shows that all correlation values between the independent variables are lower than the threshold value of 0.6. In addition to the correlation matrix we perform collinearity diagnostics by computing the variance inflation factors (VIFs) for all independent variables. The VIF values range from 1.16 to 3.64 with a mean VIF of 2.01. The correlation matrix and the VIFs indicate the likely absence of multicollinearity in our data.

Tests of Hypotheses

Table 3 presents the results of the substantive and selection models used to test our hypotheses. Model 1 presents the results with control variables only; Models 2, 3, 4 and 5 present the main effects separately; Model 6 tests the main effects together; and Model 7 presents the full model with the three interaction effects. We run these seven models to show the importance of each of the main hypothesized effects separately and the interaction effects together in the full model. All the models satisfy White's (1980) test of heteroscedasticity.

Leadership capital and international growth: H₁ predicts that emerging market firms with leadership capital experience greater international growth than other emerging market firms. In support of H₁, Model 7 of Table 3 shows that the coefficient of leadership capital is positive and significant ($\beta_1=0.16, p<0.05$). Figure 2, a bivariate representation of this data, illustrates this result. As the figure shows, firms with high leadership capital have significantly greater international growth ($p<0.05$) than firms with low leadership capital.

Foreign marketing and financial capital and international growth: H_{2a} states that emerging market firms with greater foreign marketing capital internationalize more. Model 7 in Table 3 supports H_{2a} ($\beta_2=0.11, p<0.10$). Figure 2 depicts the mean international growth for emerging market firms that have high versus low foreign marketing capital. This figure shows that on average, higher foreign marketing capital results in significantly greater international growth ($p<0.001$).

H_{2b} suggests that emerging market firms which have greater foreign financial capital will experience greater international growth. The coefficient of β_3 (0.03, $p>0.10$; see Model 7 in Table 3) is positive but not significantly different from zero. Thus, while the bivariate representation of the data (see Figure 2) shows that firms with higher foreign financial capital have significantly greater international growth than firms with lower foreign financial capital ($p<0.05$), the multivariate results

do not support the hypothesis that foreign financial capital helps emerging market firms overcome inferior international competitiveness to grow internationally.

Network capital and international growth: H₃ predicts that network capital has a positive impact on the international growth of emerging market firms. The coefficient of network capital is positive and significant in Model 7 ($\beta_4=1.03 \times 10^{-4}$, $p<0.01$). Further, Figure 2 shows that emerging market firms with higher network capital have significantly greater international growth than firms with lower network capital ($p<0.01$). These results support H₃ and suggest that emerging market firms that wish to grow internationally are able to overcome their home country institutional weaknesses through network capital.

Leadership capital, foreign marketing and financial capital and international growth: H_{4a} states that emerging market firms with leadership capital and foreign marketing capital experience greater international growth. Model 7 shows a positive and significant coefficient for the interaction of leadership capital and foreign marketing capital ($\beta_5=0.59$, $p<0.001$). Thus, H_{4a} is supported. This result is corroborated by Figure 3. Using median splits, Figure 3 shows that emerging market firms with leadership capital and foreign marketing capital experience higher international growth ($p<0.05$) than other firms do.

H_{4b} states that emerging market firms with leadership capital and foreign financial capital will internationalize more. Model 7 provides support for H_{4b} ($\beta_6=0.19$, $p<0.05$). Further Figure 4 shows that firms which possess leadership capital and have access to foreign financial assets experience higher international growth than other firms do ($p<0.05$).

Leadership capital, network capital and international growth: H₅ predicts that emerging market firms with leadership capital and network capital experience greater international growth. The coefficient of the interaction between leadership capital and network capital is positive and significantly different from zero in Model 7 ($\beta_7 = 9.18 \times 10^{-5}$, $p<0.001$). Thus, H₅ is supported in

our data. The bivariate analysis on Figure 5 corroborates this result. Figure 5 shows that firms which possess leadership capital and network capital do have significantly higher international growth than other firms ($p < 0.10$).

Additional Analyses and Robustness Checks

Can we further rule out endogeneity? It is possible that the Indian firms which pursued international expansion after 1999 somehow anticipated the policy shift in outward foreign direct investment in 1999. Could these firms have, prior to 1999, accordingly appointed a CEO with foreign market experience to drive international growth as soon as the regulations changed? We attempt to rule out the possibility of such endogeneity by doing the following. We develop an alternative measure of leadership capital based on the international educational and work experience of CEOs in 1992. We then use this new measure to re-estimate Model 7 in Table 3. The results of this re-estimation are consistent with those in Model 7, confirming that our findings hold even after we account for this possible source of endogeneity.

Do changes in leadership capital matter? An additional test of the importance of leadership capital would be to examine changes in leadership capital caused by CEO transitions. Specifically, during the period before the regulatory shock we examine, some firms in our sample experienced a switch from CEOs who *did not* have international market experience to those who *did*. Conversely, some firms experienced a switch from CEOs who *did* have international market experience to those who *did not*. If leadership capital—as manifested in CEOs' international market experience—has an impact on international growth, then the former firms should have witnessed greater international growth than the latter.

We perform paired comparison t-tests of firms' foreign revenues in 1999 and their mean foreign revenues between 2000 and 2008. We perform this test for those firms that experienced a switch from a CEO *without* foreign market experience in 1992 to a CEO *with* foreign market

experience in 1999 (the last year before the regulatory shock). For these firms the t-test results show a significant increase of 117 % in foreign revenues from 1999 relative to the 2000-2008 period ($p < 0.05$). We also perform the identical analysis for firms that experienced a switch from a CEO *with* foreign market experience in 1992 to a CEO *without* foreign market experience in 1999. In such firms we find a non-significant decrease of 8% in foreign revenues from 1999 relative to the 2000-2008 period ($p > 0.1$). These results offer further evidence of the importance of leadership capital on international growth.

Are our results robust for alternate measures of international growth? Table 3 reports results using foreign revenues as a measure of international growth. To test for robustness, we re-estimate equations 2 and 3 using the value of cross-border acquisitions as the dependent variable. We find that our results hold for each of the main and interaction effects. We also re-estimate equations 2 and 3 using an index of foreign revenues and the value of cross-border acquisitions as the dependent variable. Again we find that our results hold. This gives us confidence that our results are robust to the use of alternate measures of international growth.

Do our results hold for panel estimation? A possible criticism of our results in Table 3 is that our model does not account for changes in leadership capital, foreign marketing and financial capital, and network capital between 2000 and 2008, all of which could influence firms' international growth between 2000 and 2008. To allay these concerns, we conduct a random effects panel estimation between 2000 and 2008 and find that our results hold for each of the main and interaction effects. We note, however, that the results of such a panel estimation are subject to concerns about endogeneity. Specifically, the panel estimation does not allow for the neat separation in time between the independent measures (measured prior to the policy shift in 1999) and the dependent measure (measured after the policy shift in 1999) that equations 2 and 3 allow.

Nevertheless, the consistency in directional results from the panel estimation offers further evidence for the robustness of the results we report in this paper.

Does international growth improve firm performance? We measure the international growth of firms between 2000 and 2008. A reasonable question is whether or not such growth is actually good for firm performance. Although this question has been studied elsewhere (for a review see Contractor, Kundu and Hsu 2003), and is somewhat beyond the scope of this paper, we take an initial stab at the question by conducting a simple face validity check. Specifically, using return on assets (ROA) as a measure of firm performance (Chittoor et al. 2009; Khanna and Palepu 2000a) we estimate the relationship between international growth and firm performance as follows:

$$Firm\ Performance_{i,t} = \alpha + \gamma_1 Firm\ Performance_{i,t-1} + \gamma_2 International\ Growth_{i,t} + \varepsilon_t \dots (4)$$

We estimate the model using ROA in 2007 and 2006 and international growth in 2007. The lagged dependent variable in the model controls for unobserved heterogeneity due to past actions (see Jacobson 1990). The results of this estimation show that international growth has a positive and significant effect ($\gamma_2=1.62$, $p<0.1$) on the overall performance of the firm. Although far from definitive, these results offer some evidence in support of the existing literature that finds that international growth positively influences the performance of firms from emerging markets.

SUMMARY AND DISCUSSION

Our study contributes to the international marketing literature by proposing and testing a comprehensive explanation for international growth that includes drivers of growth at the individual manager, firm and inter-firm level. Past research has typically examined these elements in isolation and has not applied them to the context of the international growth of *emerging* market firms. We capture individual, firm and inter-firm elements of growth by developing the concept of global market capital. This concept, and its constituent elements of leadership capital, foreign marketing and financial capital and network capital, highlights the role that leaders' foreign market experience,

foreign marketing and financial assets and inter-firm networks play in driving the international growth of firms from emerging markets.

Existing theories of the importance of foreign market experience for international growth propose that firms gain familiarity with international markets in an incremental manner (Johanson and Vahle 1977; Eriksson et al. 1997). These theories tend to overlook the importance of leaders with foreign market experience in jump-starting the international growth of the firms they lead. In contrast, we argue and show that emerging market firms can overcome their lack of foreign market knowledge through a leader, specifically a CEO, who possesses foreign market experience. Similarly, the resource based view of the firm would suggest that emerging market firms lack resources and are therefore less competitive than their developed market counterparts (Dunning 1981; Johnson and Tellis 2008; Dawar and Frost 1999). In contrast to this view, we show that emerging market firms can overcome their inferior international competitiveness by accessing foreign marketing and financial capital. Finally, the institutional economics view of the firm argues that firms from countries with weak institutions have higher transactions costs and are therefore less competitive in international markets (Wan and Hoskisson 2003; Tellis, Stremersch and Yin 2003). In contrast to this view, we argue and show that firms in countries with weak institutional environments can reduce transaction costs through their membership in a network such as a business group. Finally, we argue and show that leadership capital plays a central role in the international growth of emerging market firms. Specifically, we show how CEOs' foreign market experience, in addition to its direct positive effect on international growth, also helps firms overcome the potentially negative consequences of foreign marketing and financial capital and network capital in going global. We now discuss the implications of these findings for research and practice.

Implications for Practice

The Economist (2010) has noted that “emerging markets are developing their own distinctive management ideas and Western companies will increasingly find themselves learning from their rivals.” Our findings illustrate the distinctive management ideas that some emerging firms develop and use at the individual, firm and inter-firm levels to overcome shortcomings in foreign market knowledge, inferior international competitiveness and weaknesses in the home institutional environment. These findings have important implications both for emerging market firms wishing to pursue international growth as well as for developed market firms threatened by the international growth of emerging market firms.

Implications for emerging market firms: Our findings provide fresh insights into how emerging market firms can overcome their shortcomings to grow internationally. One of the shortcomings of emerging market firms is their unfamiliarity with foreign markets. This unfamiliarity is further aggravated by the limited foreign market knowledge of their leaders. Our analysis shows that emerging market firms wishing to grow internationally can overcome their unfamiliarity with foreign markets by recruiting leaders, especially CEOs, with international educational or work experience. In addition, such firms can employ human resource policies that groom top managers with foreign market experience for the job of CEO. Such policies can create an internal pool of leaders with foreign market experience who could eventually become the CEOs of these firms.

Another shortcoming of emerging market firms is their inferior international competitiveness. This shortcoming is not easily mitigated because emerging market firms tend not to invest much in accessing superior marketing and financial assets from international markets. Our findings show that emerging market firms that aspire to grow internationally should seek to increase their access to foreign marketing and financial capital. Such increased access to foreign marketing

and financial capital can help emerging market firms to better match the marketing and financial capabilities of their counterparts in international markets.

Finally, emerging market firms have higher transaction costs due to the weaknesses they face in home country institutions. Our research suggests that one of the ways in which these costs can be lowered is by increased inter-firm transactions. Firms affiliated to business groups can increase their inter-firm transactions by sharing resources with other firms affiliated with the business group. Firms not affiliated with business groups can increase their inter-firm transactions by becoming members of industry consortia which will enable them to share technological, financial and organizational resources. Whereas others (e.g., Khanna and Palepu 2000a; 2000b) have noted the role of business groups within domestic contexts in emerging markets, this paper underlines their importance in driving the international growth of emerging market firms.

Implications for developed market firms: Our study offers developed market firms three ways to identify emerging market firms that might pose a threat to them. First, developed market firms should identify those emerging market firms which have leadership capital, e.g., a CEO with international educational or work experience. These emerging market firms will have greater familiarity with international markets than other emerging market firms. Second, emerging market firms that access foreign marketing assets and list on developed market stock exchanges will be better able to overcome their inferior international competitiveness. As such, these firms too might pose a greater threat to developed market firms than other firms. Third, emerging market firms that belong to a business group are more likely to market products that will be competitive in international markets. Finally, our research implies that not all emerging market firms might pose a threat to developed market firms; rather, those emerging market firms that pose a threat tend to have one or more of the three aspects of global market capital, with leadership capital being especially noteworthy.

Implications for Research

This research also has several implications for research. First, to the best of our knowledge, this paper is the first in the marketing literature to systematically study the international growth of emerging market firms. In doing so, this research also offers a glimpse of the opportunities that exist in the study of emerging markets more generally. Despite calls to study the international growth of emerging market firms from a wide array of sources—scholars and editors of scholarly journals, research organizations such as the Marketing Science Institute, business journals such as *The Economist* and *Business Week*, and management consultancies like Boston Consulting Group—such studies have been fairly rare in the marketing literature. Further research on emerging markets can better direct us toward these dynamic and exciting but also poorly understood areas. By offering new, empirically-based insights on well-studied topics such as market growth, as well as on understudied topics in marketing such as the role of business groups, this paper might (we hope) serve as an initial pointer in that direction.

Second, this research highlights the fact that theories from developed market contexts do not easily transfer across the boundaries from developed to emerging markets. This is because the stage and pattern of business evolution can be different in emerging markets, as are the institutional contexts that pervade such markets. For example, as we noted earlier, emerging market firms often lack foreign market knowledge, international competitiveness, and strong home country institutions. We show in this paper that emerging market firms that successfully expand outside their home markets tend to employ alternate mechanisms that are perhaps more suited to their specific contexts than those highlighted in the existing literature on international growth. Insights such as these suggest that researchers should use an abundance of caution when seeking to apply existing (developed market) frameworks to emerging market contexts. In making this suggestion, we echo the voices of editors of marketing journals who have also urged scholars to study the international

aspects of marketing topics (Bolton 2003; Steenkamp 2005; Dekimpe and Lehmann 2004) and to use emerging markets as natural laboratories in which to test assumptions and theories developed in the Western world (Burgess and Steenkamp 2006).

Third, this research highlights opportunities for progress in assessing causal relationships among key marketing constructs. The remarkable pace of change that emerging markets have experienced recently offers many possibilities for causal testing. For example, future researchers could—as we do in this paper—make use of the regulatory changes that have occurred across emerging markets over the last two decades as exogenous shocks to set up cleaner tests of causality.

Finally, this research highlights the important role that marketing plays in international growth. Our findings suggest that firms that develop foreign marketing capital—by purchasing foreign capital goods for new product development and by using foreign proprietary technologies and brands—experience greater international growth than other firms do. We develop novel proxies for these constructs in the Indian context, and explore relatively new sources of data. Future scholars can similarly explore novel measures that help clarify the importance of marketing in the international growth of firms.

Limitations and Further Research

This paper has a number of limitations, some of which offer opportunities for further research. First, although our theorizing is general in scope over emerging markets, our empirical context is restricted to a single country, India. Focusing on one country helps rule out country-level sources of heterogeneity and thus enhances the internal validity of our study. Moreover, focusing on an economically important country where international growth was led by non-state owned firms after a dramatic shift in outward investment policies provides us access to unusually rich data that is unavailable in other contexts. Nevertheless, we acknowledge that India may be unique in some respects, and that our findings should be generalized to firms from other countries with caution.

Additional research using data from other emerging economies will be valuable in exploring the generalizability of our arguments and results.

Second, we use two measures of international growth: foreign revenues and cross border mergers and acquisitions. No doubt, these measures pick up important aspects of firms' international growth. For instance, the value of cross border merger and acquisitions is a good proxy for other measures of international growth like foreign assets and the number of foreign employees (Gubbi et al 2010). Nevertheless, to gain a more complete empirical picture, future researchers may wish to employ more explicit and fine grained measures of international growth such as the value of exports, sales from joint ventures and wholly owned subsidiaries, the value of foreign assets and the number of foreign employees.

Third, we examine only some, albeit important, measures of global market capital. These measures, though broad, explain a great deal of the international growth of emerging market firms. More fine-grained measures of these three drivers may, however, provide greater insights. Future research could therefore examine the effects of, among others, the field of the CEO's international education (e.g., engineering, law, business, etc.), the functional area of the CEO's international work experience (e.g., manufacturing, marketing, R&D, finance, etc.), the length of the CEO's international educational or work experience, the recency of CEO's international educational or work experience, different dimensions of cross-border marketing assets (e.g., the number of international sales personnel or sales offices in international locations), the amount of foreign finance raised by emerging market firms in different stock markets (e.g., the London Stock Exchange, the New York Stock Exchange, etc.) and the value of inter-firm financial transactions within business groups.

Finally, since this article is one of the first in marketing to examine the international growth of emerging market firms, it studies only a sample of non-state owned, publicly traded firms. By

doing so, we are able to focus on the behavior of profit maximizing emerging market firms in international markets. As this research stream gains in importance, future research could profitably extend the analysis to firms with different types of ownership or provenance such as state-owned firms, privately held firms, and firms that are born global.

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Table 1A: Summary of Measures and Sources

Conceptual Variable	Measured Variable	Data Source
Dependent Variable		
International Growth	Foreign revenues (2000-2008)	Prowess Database
Independent Variables:		
Leadership Capital	CEO with foreign educational experience or foreign work experience (1999)	Prowess, Factiva & Directors Database
Foreign Marketing and Financial Capital	Foreign Marketing Capital: Purchase of foreign capital goods for new product development and purchase of foreign proprietary technologies or brands (1999)	Prowess
	Foreign Financial Capital: ADRs, GDRs, Euro convertible bonds, and secured foreign loans (1999)	Prowess
Network Capital	Business group membership and scale and scope of business group	Prowess
Controls:		
Age	Age of the firm in 1999	Prowess Database
Size	Revenue of the firm in 1999	Osiris, Prowess Database
Industry	Industry	National Industrial Classification
Extent of Home Market Competition	Revenues of domestic competitors in 1999	Prowess
Foreign Competition	Dummy for foreign multinational competitor	Prowess
Domestic Competitors Going Abroad	Foreign revenues of domestic competitors in 1999	Prowess
CEO as a founder	Dummy for CEO is a founder	Prowess
Profits in 1999	Operating Profit in 1999	Prowess

Table 1B: Classification of Firms

	No. Firms	% of Firms
Final Sample	165	38.2
Foreign Multinationals	82	18.9
State Owned Firms	49	11.3
Financial Institutions	38	8.8
Firms established after 1992	98	22.7
Total	432	100.0

Table 2: Descriptive Statistics and Correlation Matrix

	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9	10	11
1. Foreign revenues (2000-2008) (mn USD)	18.37	39.59	0	358.09	1.00										
2. Leadership capital in 1999	0.31	0.47	0	1	0.14	1.00									
3. Foreign marketing capital in 1999 (mn USD)	10.31	28.18	0	302.71	0.35*	0.11	1.00								
4. Foreign financial capital in 1999 (mn USD)	5.38	24.44	0	196.60	0.10	0.02	0.11	1.00							
5. Network capital in 1999	415.40	1611.64	0	9432.36	0.46*	0.12	0.24*	0.07	1.00						
6. Age in 1999 (years)	30.30	25.33	7	128	0.21*	0.21*	0.08	0.02	0.24*	1.00					
7. Size in 1999 (mn USD)	123.75	228.31	4.45 X 10 ⁻³	1690.83	0.35*	0.23*	0.32*	0.24*	0.25*	0.45*	1.00				
8. Extent of home market competition in 1999 (mn USD)	678.63	2231.98	13.34 X 10 ⁻³	20703.32	0.02	0.04	0.50*	-0.03	8.00 X 10 ⁻⁴	-0.05	-0.08	1.00			
9. Foreign competition in 1999	0.30	0.47	0	1	0.16*	-0.13	-0.03	-0.03	0.02	0.04	0.10	0.03	1.00		
10. Domestic competitors going abroad (mn USD)	42.03	74.19	0	526.72	0.07	-0.04	0.40*	-0.09	0.09	-0.03	-0.03	0.71*	0.03	1.00	
11. CEO as a founder	0.54	0.50	0	1	-0.17*	-0.24*	-0.20*	-0.18*	-0.27*	-0.40*	-0.50*	-0.08	-0.08	0.21*	1.00

*p<0.05 Number of observations=165

Table 3: Effect of leadership capital, foreign marketing and financial capital and network capital on international growth

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Substantive Model							
Leadership capital (H1)		0.30 ⁺ (0.13)				0.23 ^{**} (0.10)	0.16 ⁺ (0.09)
Foreign marketing capital (H2a)			0.57 ^{***} (0.07)			0.38 ^{***} (0.07)	0.11 ⁺ (0.07)
Foreign financial capital (H2b)				0.07 ⁺ (0.06)		0.06 ⁺ (0.04)	0.03 (0.04)
Network capital (H3)					2.59 X 10 ^{-4***} (3.03 X 10 ⁻⁵)	2.03 X 10 ^{-4***} (2.86 X 10 ⁻⁵)	1.03 X 10 ^{-4**} (3.54 X 10 ⁻⁵)
Leadership capital X Foreign marketing capital(H4a)							0.59 ^{***} (0.12)
Leadership capital X Foreign financial capital (H4b)							0.19 [*] (0.09)
Leadership capital X Network Capital (H5)							9.18 X 10 ^{-5***} (5.15 X 10 ⁻⁵)
Age in 1999	4.01 X 10 ⁻³⁺ (2.61 X 10 ⁻³)	3.43 X 10 ⁻³⁺ (2.59 X 10 ⁻³)	4.23 X 10 ^{-3*} (2.22 X 10 ⁻³)	4.47 X 10 ^{-3*} (2.62 X 10 ⁻³)	-5.01 X 10 ⁻⁴ (2.12 X 10 ⁻³)	1.93 X 10 ⁻³ (1.95 X 10 ⁻³)	-4.09 X 10 ⁻⁴ (1.71 X 10 ⁻³)
Size in 1999	0.15 ^{***} (0.04)	0.14 ^{***} (0.04)	0.05 (0.04)	0.13 ⁺ (0.04)	0.09 [*] (0.04)	0.02 (0.03)	0.03 (0.03)
Extent of home market competition in 1999	-7.32 X 10 ⁻⁶ (5.41 X 10 ⁻⁵)	7.45 X 10 ⁻⁷ (5.29 X 10 ⁻⁵)	-3.13 X 10 ^{-4***} (6.17 X 10 ⁻⁵)	8.14 X 10 ⁻⁶ (5.38 X 10 ⁻⁵)	5.06 X 10 ⁻⁵ (4.44 X 10 ⁻⁵)	1.68 X 10 ^{-4**} (5.64 X 10 ⁻⁵)	-4.42 X 10 ⁻⁵ (5.20 X 10 ⁻⁵)
Foreign competition in 1999	0.07 (0.13)	0.11 (0.13)	0.20 [*] (0.1)	0.07 (0.13)	-8.42 X 10 ⁻³ (0.11)	0.17 [*] (0.09)	0.01 (0.09)
Domestic competitors going abroad in 1999	1.14 X 10 ⁻³ (1.30 X 10 ⁻³)	1.03 X 10 ⁻³ (1.27 X 10 ⁻³)	2.50 X 10 ^{-3*} (1.14 X 10 ⁻³)	1.32 X 10 ⁻³ (1.31 X 10 ⁻³)	4.21 X 10 ⁻⁴ (1.09 X 10 ⁻³)	-0.04 (0.05)	9.99 X 10 ⁻⁴ (8.78 X 10 ⁻⁴)
CEO as a founder	-8.64 X 10 ⁻³ (0.14)	0.03 (0.14)	-0.07 (0.12)	0.02 (0.14)	0.17 ⁺ (0.12)	1.16 X 10 ⁻³ (1.00 X 10 ⁻³)	0.09 (0.09)
Intercept	-1.01 ^{***} (0.26)	-1.02 ^{***} (0.26)	-0.47 [*] (0.23)	1.12 ^{***} (0.31)	-0.82 ^{***} (0.21)	-0.62 ^{**} (0.20)	-0.52 ^{**} (0.18)
Mills lambda	0.69 (0.04)	0.68 (0.04)	0.59 (0.03)	0.68 (0.04)	0.57 (0.03)	0.50 (0.03)	0.44 (0.03)
Selection Model							
Leadership capital	-0.25 (0.50)	0.11 (0.53)	0.31 (0.67)	-0.18 (0.49)	0.91 ⁺ (0.59)	0.22 (0.75)	0.98 (1.09)
Foreign marketing capital	0.41 ^{**} (0.17)	0.41 (0.36)	0.37 ⁺ (0.18)	0.40 ^{**} (0.17)	0.59 ^{***} (0.14)	0.21 (0.42)	0.67 ^{***} (0.14)
Foreign financial capital	-0.02 [*] (9.62 X 10 ⁻³)	-0.01 (0.02)	3.09 X 10 ⁻³ (4.37 X 10 ⁻³)	-0.01 (0.01)	-0.02 (0.06)	-3.79 X 10 ⁻⁴ (0.02)	2.76 X 10 ⁻³ (3.05 X 10 ⁻³)
Network capital	3.68 X 10 ^{-3***} (1.06 X 10 ⁻³)	3.48 X 10 ^{-3**} (1.35 X 10 ⁻³)	4.46 X 10 ^{-3*} (2.02 X 10 ⁻³)	4.42 X 10 ^{-3***} (1.12 X 10 ⁻³)	-5.37 X 10 ⁻³ (0.02)	4.43 X 10 ⁻³ (6.00 X 10 ⁻³)	0.01 (0.02)
Age in 1999	0.06 ^{**} (0.02)	0.06 ⁺ (0.04)	0.05 (0.04)	0.06 ^{**} (0.02)	0.05 (0.04)	0.04 (0.07)	0.05 ⁺ (0.04)
Size in 1999	0.05 (0.09)	0.03 (0.14)	-0.05 (0.09)	0.03 (0.09)	-0.23 ⁺ (0.11)	-0.05 (0.15)	-0.16 ⁺ (0.12)
Extent of home market competition in 1999	-1.88 X 10 ^{-4*} (1.13 X 10 ⁻⁴)	1.82 X 10 ⁻⁴ (2.44 X 10 ⁻⁴)	-5.64 X 10 ^{-4***} (1.49 X 10 ⁻⁴)	-1.76 X 10 ⁻⁴⁺ (1.10 X 10 ⁻⁴)	2.94 X 10 ⁻⁴⁺ (1.95 X 10 ⁻⁴)	-3.28 X 10 ⁻⁴ (2.66 X 10 ⁻⁴)	-2.77 X 10 ^{-4*} (1.56 X 10 ⁻⁴)
Prior Performance	-0.02 ^{***} (7.29 X 10 ⁻³)	-0.02 [*] (0.01)	-0.03 [*] (0.02)	-0.02 ^{***} (7.17 X 10 ⁻³)	-0.04 [*] (0.02)	-0.24 (0.25)	-0.05 ^{**} (0.02)
Foreign competition in 1999	0.30 ⁺ (0.20)	0.36 [*] (0.21)	0.90 (1.05)	0.30 ⁺ (0.20)	-0.93 (0.73)	0.68(1.52)	0.89 (1.11)
Founder	1.05 ^{**} (0.35)	1.08 ^{**} (0.37)	1.40 [*] (0.65)	1.05 ^{**} (0.36)	0.85 ⁺ (0.62)	1.41 (1.85)	1.02 (0.79)
Intercept	-0.89 ⁺ (0.43)	-0.92 [*] (0.50)	-0.26 (0.69)	-0.84 ⁺ (0.42)	0.62 ⁺ (0.43)	-0.36 (1.83)	0.81 ⁺ (0.52)
N: Total	165	165	165	165	165	165	165
N: Uncensored	153	153	153	153	153	153	153
Wald χ^2	52.51 ^{***}	58.23 ^{***}	127.40 ^{***}	54.92 ^{***}	132.27 ^{***}	225.76 ^{***}	315.34 ^{***}
Log likelihood	-166.09	-163.55	-140.99	-165.27	-136.91	-177.58	-97.29

⁺p<0.10 ^{*}p<0.05 ^{**}p<0.01 ^{***}p<0.001 Notes: Standard errors are in parentheses. In the interest of space the industry dummies have not been presented.

Figure 1: Data Collection – Setting for Natural Experiment

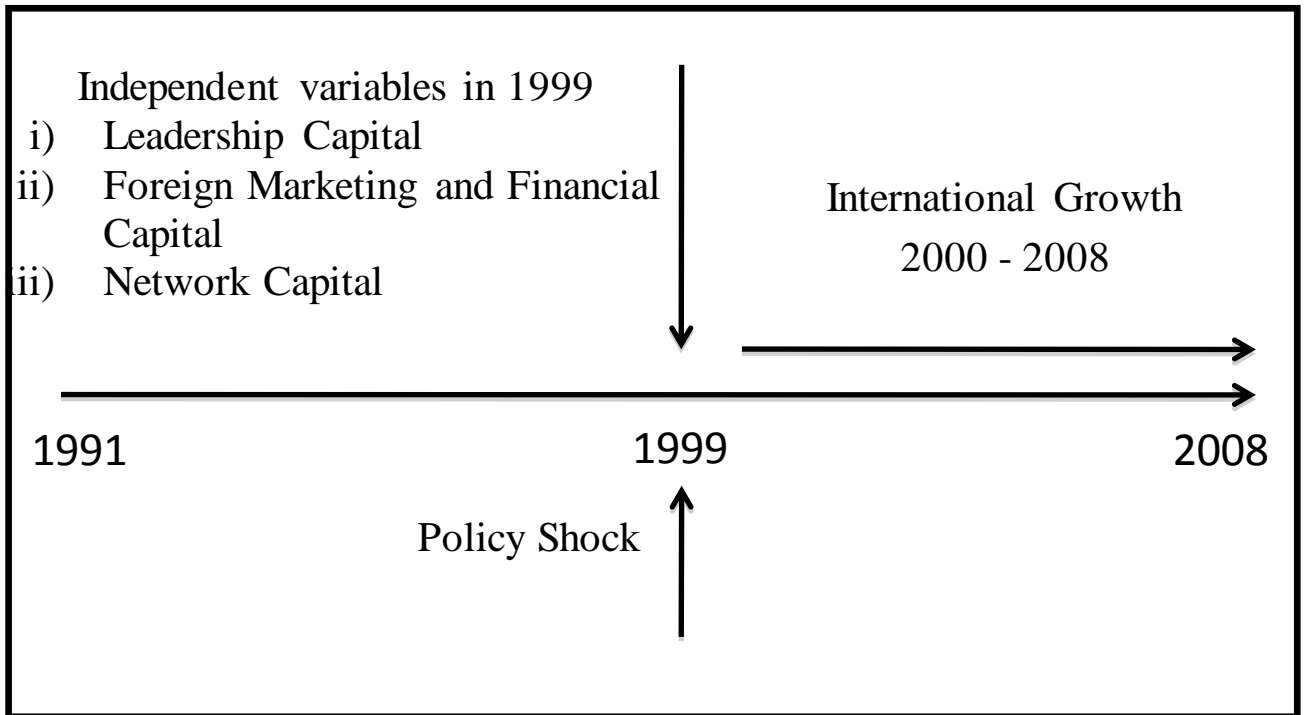


Figure 2: Leadership capital, Foreign Marketing Capital, Foreign Financial Capital, Network Capital and International Growth

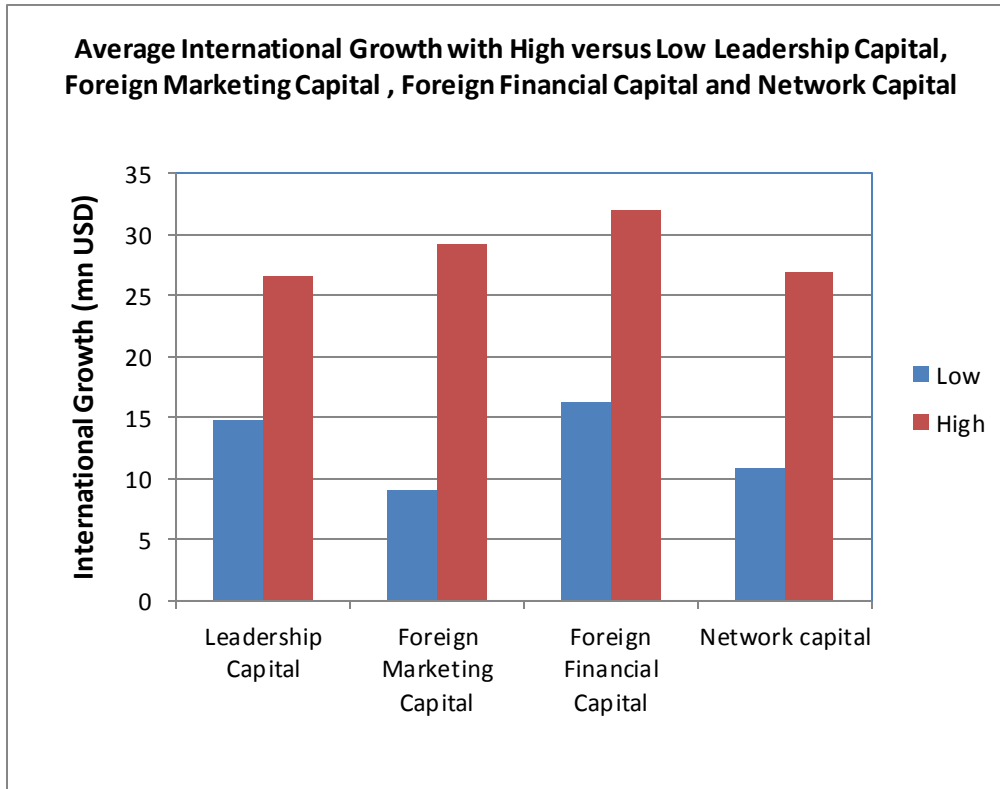


Figure 3: Leadership capital, Foreign Marketing Capital and International Growth

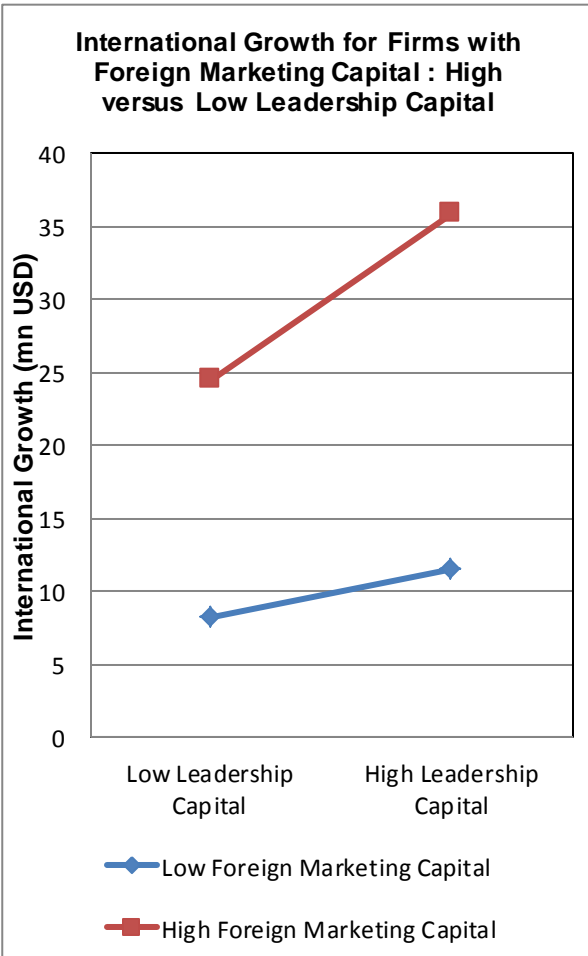


Figure 4: Leadership Capital, Foreign Financial Capital and International Growth

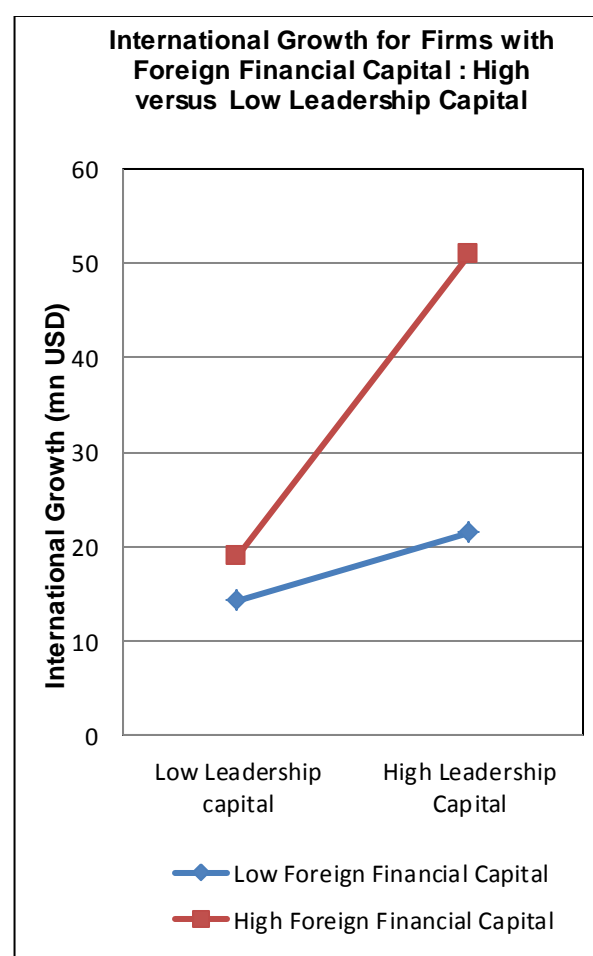


Figure 5: Leadership capital, Network Capital and International Growth

