

**Emerging Market Companies Ascending
the Value Curve:
Rationale, Motivation & Strategies**

By

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Abstract

Based on a synthesis of ideas from international business and strategy, and drawing on the experiences of (1) Japanese, Korean and Taiwanese firms and (2) Indian software and pharmaceutical companies, we present a framework to understand the issues related to emerging market companies ascending the value curve in international markets. In this framework, the propensity of EMCs to ascend the value curve is dependent on their motivation and willingness to do so, their capabilities and the availability of suitable product-market opportunities. Implications are drawn for action by emerging market companies, and for further research in this area.

Emerging Market Companies Ascending the Value Curve: Rationale, Motivation and Strategies

The objective of this paper is to understand the issues involved in emerging market companies ascending the value curve in international markets. This is an important dimension of the process of emerging market companies becoming multinationals that can compete on comparable terms with established multinationals from developed markets. We focus on those companies based in emerging markets that already have a presence in external markets, either through exports or operations in those countries, but are seeking to compete more effectively and on comparable terms with multinationals from established markets. This is an important issue because unlike multinationals from developed countries that entered other markets primarily to exploit existing assets such as technologies and brand names (Vernon, 1966), multinationals from emerging markets are typically evolving from a state of relative resource scarcity, both within and in the immediate geographic environment.

Companies from emerging markets (henceforth referred to as EMCs) typically enter international markets by offering low prices, based on the low cost of inputs, principally labour (Erramilli, Agarwal and Kim, 1997; Pananond and Zeithaml, 1998). As labour costs increase, the competitiveness of EMCs¹ is liable to be eroded. To continue to compete effectively in international markets, they then need to be able to compete on additional dimensions, or to be able to build cost advantages that transcend factor cost advantages such as those based on scale, proprietary learning or proprietary product or process technologies. However, this is not an easy transition, and not all EMCs make a determined effort to go up the value curve. Of those that try, only some succeed.

What does ascending the value curve mean? Building a defensible competitive position involves identifying a position in the competitive space that provides the company protection against the drivers of the five competitive forces identified by Porter (1980). While identifying such a competitive position is a matter of creative strategy formulation, actually creating that position depends on the firm's ability to undertake the activities required in a better and more inimitable way than others. Such a position is related to both the sources of advantage (cost and differentiation) and the competitive scope of the firm. Though competitive scope is customarily thought of in terms of the range of markets served (narrow vs. broad), other dimensions of scope include the geographic locations in which the firm competes, degree of vertical integration and the degree of related businesses in which the firm has a linked strategy (Porter, 1994:434). Ascending the value curve refers to a firm moving to a new position where it creates more customer value and has stronger barriers to imitation. A producer of generic pharmaceuticals that creates a new and more effective patented drug through the work of a newly created research and development team is an example of a firm ascending the value curve. Note that the ability of the firm to appropriate the value created will depend on a number of factors including its ability to perform related activities like sales and marketing well.

In this paper, we seek to investigate the factors that influence the ability of EMCs to ascend the value curve in international markets. We have not come across any systematic attempt to examine this issue. Prior studies such as Mathews (2002) and Bartlett and Ghoshal (2000) do give insights into this issue but were not conceptualized in this way to look at the issue we have raised. Our attempt is to integrate and synthesize thinking on competitive advantage with that on internationalization to understand what we believe to be an important dimension in the evolution of multinationals from emerging markets.

According to Mathews (2002), EMCs (or what he calls "latecomer multinationals") were able to establish themselves globally by capitalizing on the opportunities offered by the disaggregation of the value chains of established multinationals. The ability of EMCs to capitalize on the opportunities offered by globalization has been enhanced by their willingness to experiment with a number of strategic and organizational innovations. EMCs are nimble and adaptable at making use of new opportunities, often arising from the incumbent multinationals. EMCs rapidly create a global presence and then use this presence to gain access to resources they would otherwise not have. While incumbents' advantage is built around inimitable resources, EMCs seek out, from the same incumbents, resources that are imitable, substitutable and transferable and use these to build their own resources and competencies. Thus Mathews attributes the emergence of EMCs to opportunism, adaptability and learning or what he calls "linkage, leverage and learning." Mathews implicitly assumes that industry structure and the competitive positions of incumbents do not constrain EMCs because, unlike established multinationals, EMCs do not subscribe to conventional notions of product-market competition and find innovative ways of entering and establishing themselves in external markets.

However, a close study of the case of Acer, one of the most prominent EMCs and the anchor of Mathews' argument, shows that ascending the value curve, particularly in developed markets, is far from simple. Acer founder Stan Shih was determined that Acer would be more than just a manufacturer of products to the specifications of others, and that he would build the Acer brand in the most advanced markets (Bartlett and St. George, 1998:4). However, this determination could not prevent the company from losing tens of millions of dollars in the 1990s in trying to build an Acer brand in the US personal computer market. Acer ultimately pulled out of the market two years ago (Lee, 2002). Shih (2002) attributes Acer's failure in the US market to the lack of (1) anything unique to offer that market, (2) a strong enough brand to pull in the customers and (3) the supply chain, delivery and service capability required to compete with well-entrenched competitors with deep pockets.

Thus, the actual experience of EMCs shows that the competitive dynamics of the industry in which they compete does matter. The motivations of individual firms and the national environments from which they emerge also influence the ability of EMCs to ascend the value curve. Our contribution is the integration of these perspectives to create a framework to understand the phenomenon of EMCs ascending the value curve. This framework is proposed in

the spirit of Porter (1994:428-429) as an identification of the relevant variables and their interconnections so as to capture the complexity of the phenomenon and inform theory and practice.

Our framework² is built from (1) the published accounts of Japanese, Korean and Taiwanese firms that have been at the forefront of building multinationals from emerging economies³ and (2) our own research into the evolution of Indian multinationals, particularly in the two knowledge-intensive domains of software and pharmaceuticals (see Appendix 1 for a note on the evolution of the Indian software industry and Appendix 2 for a note on the evolution of the Indian pharmaceutical industry).

The rationale for ascending the value curve comes mainly from the industrial organization literature and the first section of this paper identifies this rationale. In subsequent sections, we look at the motivation, capabilities and opportunities of EMCs ascending the value curve in their international business activities. The paper concludes by drawing implications for action by firms and identifying further areas for research.

Economic Rationale for Ascending the Value Curve

The rationale for ascending the value curve centres on the loss of cost advantages and the consequent pressure on EMCs to find other relatively sustainable forms of competitive advantage. Specifically, increased factor costs, poor bargaining power, the threat of backward integration by their customers, and the threat of new entrants from other geographies competing on the same cost dimension are the major drivers to ascend the value curve.

Increased factor costs leading to lack of competitiveness: The competitiveness of most EMCs is based on the low prices they can offer due to their low factor costs (Erramilli, Agarwal and Kim, 1997; Pananond and Zeithaml, 1998). However as the economies in which they are based grow and wage levels rise, this competitiveness of these EMCs is liable to be eroded unless they find sources of competitive advantage to overcome the loss of country comparative advantage.

Cost disadvantages accentuated by absence of bargaining power: Many EMCs compete in international markets as suppliers of "Original Equipment" or components to large multinational corporations. The OEM market is particularly price-sensitive as the buyers enjoy high bargaining power due to their own oligopolistic positions. Hence a loss of comparative advantage due to increase in factor costs (such as labour, material or currency rates) can seriously undermine competitiveness (Lee and Son, 1993).

Threat of backward integration: The bargaining power of buyers is strengthened by a credible threat of backward integration. An illustration of this phenomenon can be found in the Indian software industry. Many large customers of Indian software companies have set up their own subsidiaries in India to do their software work. The Indian software industry has seen an increase

in the quantum of business done by these "captive shops." Further, traditionally, many software contracts came to Indian software companies through consulting firms (typically, the "Big Five") with the consulting firm undertaking the business problem solving and system design work and the Indian company doing the computer programming and implementation. Now, leading information technology consultants like EDS and Accenture are setting up their own programming and delivery centres in India to take advantage of the lower costs here. Further, they are offering their services at lower margins than those expected by Indian software companies. To respond to this development, Indian software companies may now have no alternative but to offer a "vertical" range of services, i.e. including higher value-added services such as consulting and system design as part of their service portfolio.

Low Barriers to Imitation resulting in new entrants who follow the same route: As more countries integrate with the global economy, new EMCs enter international markets. These EMCs almost always compete on the basis of price based on factor cost advantages (e.g. Chinese companies in engineering products and toys). This puts additional pressure on margins.

In short, lack of sustainability of margins and difficulties in value appropriation are the significant threats to a low cost strategy that is based on factor cost advantages and these can be potentially overcome by ascending the value curve.

Factors influencing EMCs attempts to ascend the value curve

While most EMCs face the pressures described above at some time during their evolution, in practice, the propensity of EMCs to ascend the value curve is dependent on their motivation and willingness, the availability of suitable opportunities and their capability to do so (see Figure 1). These factors are in turn related to diverse dimensions both within and outside the firm.

Willingness and motivation to ascend the value curve

Attempting to ascend the value curve in international markets involves considerable risks. The likelihood that the top management team or dominant coalition that takes strategic decisions for a company will go in that direction depends on their appetite for risk and a number of external factors. The willingness of an EMC to attempt this transition is enhanced if establishing a higher value position in external markets would help its domestic business, such a high value position is closely identified with national pride and prestige, role models for the creation of such a position exist and if there is a trigger such as a sudden decline in financial performance in global markets. The willingness would be constrained by the extent to which a mindset of resource scarcity exists, the extent to which top management perceive they are unfamiliar with external markets and by the existence of lower risk options.

Extent to which higher value position in external markets will influence competitive position in domestic market: An EMC is more likely to be willing to take the risk if its reputation in the

global market helps its reputation in the domestic market. However, this relationship could be quite complex. Consider the case of Goldstar (Aguilar and Cho, 1985). When Goldstar (now LG) entered the U.S. market for televisions, it first competed in the lower end of the market through discount channels and OEM sales. As time progressed, its management in the U.S. wanted to ascend the value curve and sell more TVs with the latest features under its own brand name. However, this latter approach was likely to lead to a reduction in volumes and the necessity to shift production to the U.S. to be closer to the market, more responsive, and overcome anti-dumping levies. This would in turn reduce the volume of exports from Korea and could possibly allow competitor Samsung to take a lead in the high stake contest for "leadership" in the domestic market. This issue is not as important for "born global" companies (Oviatt and McDougall, 1994; Knight and Cavusgil, 1996) or companies that compete principally in external markets such as Indian software companies though even for these companies the ability to project a better brand image could help in recruitment and resource generation.

Identification of high value position with national pride and reputation: National pride and the quest to recover lost glory acted as a pressure to rapidly ascend the value curve for many Japanese companies when Japan was still an emerging market economy. This can be seen explicitly in Sony's mission statement ("dynamic activities in technology and production for the reconstruction of Japan and the elevation of the nation's culture" (p. 740)) and their decision not to sell transistor radios on an OEM basis but under their own brand name in the American market (Quinn, 1988). This could be a powerful force to enhance the willingness of companies to take on the risks of building their brands in global markets.

Existence of role models: Companies would be more willing to take on these risks if they are able to see a role model based in their domestic geography whom they can follow (DiMaggio and Powell, 1983). In the Indian pharmaceutical industry, early movers such as Dr. Reddy's Laboratories and Ranbaxy entered into the discovery of new drugs and new drug delivery modes ahead of others and their success in licensing molecules and controlled release drugs acted as a spur for many other pharmaceutical companies to take a similar approach to address international markets. If such early movers gain in prestige due to their efforts, this can be a powerful driving force for other companies.

Sudden decline in performance as trigger: Though a decline in margins is inevitable in most industries as new entrants come in, and this decline can be quite rapid in many of the businesses in which EMCs compete globally (as discussed above), the rate of change in margins can vary depending on other market-related conditions. For example, in the Indian software industry, till the year 2001-02 many large companies enjoyed margins in excess of 30% due to excess demand coupled with sustained demand growth, economies of scale, and some delays in the backward integration of consultants and system integrators. In this scenario, the willingness of software company managements to take on a higher degree of risk was low. This is natural as organizations that have been successful with a particular strategy experience inertia that makes it difficult for them to change their strategies (Hannan and Freeman, 1984). Successful routines

tend to get embedded in the organization and change happens only when a crisis happens (Hill & Jones, 1997: 122). The results of the latest year, 2002-03, and the guidance to investors given by the large companies indicate a sharp fall in expected margins. This could trigger a greater interest in steps to arrest the fall of margins. The performance expectations of the capital markets and the extent to which they punish decline in performance could also impact the willingness of managers to take action to improve margins.

The willingness and motivation of EMCs to ascend the value curve will be attenuated by some behavioral factors that are path-dependent and environmentally-influenced outcomes of the path that the EMC has taken. The EMC's propensity to ascend the value curve will be dependent on how strong these factors are and how determined the company is to overcome them.

"Resource scarcity" Mindset: The mindsets of EMC managers are the outcome of the path their companies and domestic economies have followed. The domestic markets of EMCs have typically been protected markets with low levels of competition (Medina and Dussauge, 2002) and characterized by low purchasing power of consumers, and lower quality, environmental, and occupational safety standards than in developed markets (Prahalad and Lieberthal, 1998). There has often been little incentive for innovation and, sometimes, even barriers to innovative activity (Krishnan and Prabhu, 1999). A lack of sophistication in financial markets (Medina and Dussauge, 2002), absence of financial sources such as venture capital for investments in innovative activity (Sabarinathan, 2002), and a mindset conditioned by capital and resource scarcity (Bartlett and Ghoshal, 2000) make investments in new technologies, products or brands seem too risky. The willingness to attempt to ascend the value curve would depend on the extent to which such conditioning has taken place. This could impact even "born global" companies if their top management is based in a resource-deficient environment.

Perception of lack of familiarity of external markets: Prior research shows that the international orientation of key decision makers impacts the internationalization process (Bloodgood, Sapienza, & Almeida, 1996; Reuber & Fischer, 1997; Preece, Miles, & Baetz, 1999). However, many EMCs are family-owned and, while the family owners have a feeling of familiarity with their domestic markets, they lack a similar familiarity with overseas markets and are reluctant to make major investments in them (Bartlett and Ghoshal, 2000). Top managers may also be relatively ignorant about external markets. This gap can be overcome by locating top management in key overseas markets (e.g. Morita's move to the United States or the location of Wipro's CEO in the U.S.) but its existence is likely to slowdown efforts to ascend the value curve in external markets.

Existence of lower risk options: The availability of options to slow-down the erosion of margins or reduce the bargaining power of buyers (even though these may not be sustainable in the long term) can reduce the willingness to take concerted attempts to ascend the value curve. For example, Indian software companies have diversified into lower value-added activities such as back-office processing or call centres as these opportunities exist with current clients and will

possibly allow greater lock-in with such clients, even though the return on investment in these activities is probably lower than in their existing software business.

Ability to ascend the value curve: EMC Capabilities

While willingness to take the risks involved is a necessary condition, EMCs need to develop internal capabilities in order to be able to ascend the value curve successfully. Unlike in the case of developed country multinationals that seek international markets, *inter alia*, to leverage their advanced technologies (Vernon, 1966), EMCs typically lack strong technological knowledge. Assuming a model of firms as learning organizations, some of the relevant knowledge can be accumulated through the internationalization process itself (Johanson and Wiedersheim-Paul, 1975; Lall, 1983). The development of technological capabilities can be achieved through deliberate efforts as has been done by Korean firms (Kim, 1997; Forbes and Wield, 2002). Strategic alliances with established multinationals can be used to develop internal capabilities through a process of linkage, leverage and learning (Mathews, 2002) and these can be built on by internal efforts. Apart from technological capabilities, other capabilities required by EMCs to ascend the value curve include product development, technology integration, branding, acquisition integration, supply chain optimization and cross-cultural management. EMCs also need to have more decentralized structures in order to be able to manage products and services that are differentiated to meet the needs of diverse customer groups in developed markets.

Firms do not typically develop capabilities by accident or in a vacuum. The existence of the capabilities described above would depend on a number of strategic, contextual and internal organizational factors.

Strategic Historical Factors

Business model and strategy: The business model followed by firms has considerable impact on their ability to develop capabilities for value creation. In the Indian software industry, firms that concentrated on the export of manpower (sometimes pejoratively called “bodyshopping”) had little opportunity to develop firm-level capabilities. In contrast, those that tried to implement projects “offshore” from India developed project management and quality system implementation capabilities that enabled some degree of value addition.

Internationalization strategy: The reason for the firm’s entry into international markets would have influenced its development of capabilities. If the reason for entry into international markets was merely to utilize excess capacity or to be able to project the company as an international company to domestic consumers or to qualify for some imports thanks to the link of import quotas to exports, it is unlikely that significant capabilities would have been built. Further, learning from internationalization efforts would be contingent on the existence of specific learning mechanisms in the organization (see section on learning mechanisms below).

Company Origin: EMCs that are “born-global” either due to the size of the domestic market or the nature of the industry in which they compete may be expected to develop capabilities faster as they are subject to the competitive forces of global business from a very early stage and do not have the luxury of addressing the domestic market (Oviatt and McDougall, 1994; Knight and Cavusgil, 1996).

Contextual factors

Though it is firms that compete, features of the national environment (the “national diamond”) such as factor conditions, demand conditions, the presence and competitiveness of related and supporting industries, and firm strategy, structure and rivalry affect the pressure on firms to innovate (Porter, 1990). Government policy can also help or hinder capability development.

Factor conditions: EMCs are more likely to have the ability to build the capabilities to ascend the value curve if they have access to skilled people, financial resources, managerial skills, access to consultants who can transfer best practices, etc. The more specialized these resources are, the more likely that they will be the basis for value-adding strategies in external markets. The availability of innovative sources of funding that allow companies to experiment in international markets increases willingness to take greater risks.

Demand conditions: The demand conditions in the domestic market would have also influenced the development of firm capabilities that could facilitate value addition in external markets. In the early 1990s, Indian software companies creating banking solutions for the Indian market were unable to improve their domain or business process design capabilities because Indian banks were largely insulated from developments in global banking and looked at computerization merely as automation of existing business processes. Not only were the products created unsuited to international markets, developing these products did not enable software companies to develop deep domain competencies or knowledge of business processes that could be leveraged in the international market.

Presence & competitiveness of related and supporting industries: The existence of strong upstream and downstream industries provides the impetus to develop capabilities that can be used in external markets as well. In the Indian software industry, strong system integration and facility management capabilities are limited to those companies that had prior experience in the hardware industry such as Wipro. With the trend in information system outsourcing moving towards large multi-year contracts that bundle software design and implementation with the provision of all related services such as management of the information technology infrastructure, system integration and even provision of the service itself (such as payroll, pension fund, or telemarketing), players with integrated capabilities may be at an advantage.

Firm strategy, structure and rivalry: Firm strategy can have considerable impact on capability development. Among the top Indian software companies, there is considerable rivalry to attract

the best talent. Companies seek to position themselves as the best learning and career options for young, talented engineers. As part of this, they seek to emphasize their advanced technological capabilities and their initiatives to promote innovation. Infosys Technologies has set up a Software Engineering & Technology Laboratory to showcase the latest technologies while Wipro has launched an initiative to support innovation and intrapreneurship within the company.

Government policy: Government policies can both enhance and inhibit the ability of EMCs to develop capabilities for value creation. In technocratic states like Korea and Taiwan, the governments recognized early the implications of increases in real wages and supported domestic R&D activity as a means of improving competitive capabilities. Continued protection of the domestic market and the availability of low-cost credit were made contingent on R&D efforts and export performance (Amsden, 2001). The fact that India will shift to a WTO-compliant patent regime from 2005 means that Indian pharmaceutical companies will have to follow international patent conventions in the domestic market. This is putting pressure on them to create new molecules. Until a few years ago, by placing restrictions on overseas investments by Indian companies, the government restricted the options available to Indian software companies to make acquisitions abroad, thus preventing them from using the acquisition route to improve their capabilities or gaining access to higher margin markets.

Level of Complexity involved: In different businesses, the differences in complexity and skills required between succeeding steps of the value curve vary. These also differ in different parts of the value curve. For example, the process engineering skills developed by Indian pharmaceutical companies to reverse engineer bulk drugs could be easily extended to finding new ways of manufacturing generics going off patent. But the development of new drug release mechanisms or new drugs involves completely different skills from those involved in finding more efficient processes for generic drugs. Whether a capability can be built or not is related to the degree of complexity involved. It is also related to the extent to which the related skills and technologies are available in the market (see section on "Product-market Opportunities and Constraints" below for a further discussion on this issue).

Internal/Organizational Factors

Learning Mechanisms & Absorptive Capacity: During the course of earlier internationalization efforts, the EMC would have had diverse opportunities to learn about technologies and markets. How well these were exploited will influence the firm's ability to ascend the value curve. An important dimension of this effort to build absorptive capacity (Cohen and Levinthal, 1990) is the creation of structures and systems to learn from alliances. The success at learning is probably more important than the outcome of the alliance itself. For example, Indian pharmaceutical company Ranbaxy formed an R&D joint venture with Eli Lilly in the early 1990s. Though the JV was subsequently dissolved, Ranbaxy benefited by learning good laboratory practices and patenting procedures that could be transferred to its own R&D activity. Internal research and

development efforts are also important to build internal capabilities that enhance absorptive capacity.

Leadership: The development of capabilities needs support from a far-sighted leadership. It often involves secluding parts of the firm from volatility in the environment. The top management of Dr. Reddy's Laboratories (DRL), a leading Indian pharmaceutical company, set up a research laboratory for new drug discovery in 1992 even though at that time Indian pharmaceutical companies were still trying to persuade the Indian government not to adopt international patent conventions and instead to continue with a regime that permitted reverse engineering of patented molecules. But the CEO of DRL, Dr. Anji Reddy, decided that they could not afford to lose time in developing capabilities that would be inevitably required one day. Leadership and vision have played a role in overcoming other barriers, particularly those related to the resource-scarce mindset. It is such a vision that induced Parvinder Singh, the then CEO of Indian pharmaceutical company Ranbaxy to invest in the creation of corporate research capabilities in spite of alternate investment opportunities in local distribution that may have yielded higher short-term returns (Ghoshal, Piramal & Bartlett, 2000).

In addition to such capabilities, the existence of market opportunities will affect the ability of a company to ascend the value curve.

Ability to ascend the value curve: Product-market Opportunities and Constraints

The EMC's ability to ascend the value will depend on opportunities and constraints related to the product market. Discontinuities in markets and technologies and pressures on buyers to disaggregate their supply chains constitute important opportunities in the product-market. Hypercompetition in end product markets makes direct entry into those markets very difficult but can open up other opportunities in intermediate markets. The relationship of the EMC's country-of-origin with the product/service in question and related products and services will also influence the extent to which product-market opportunities can be exploited. The degree of tacitness of technical knowledge and the extent to which technical knowledge is traded in the market, the ability to penetrate decision-making networks, and the degree of market access are other important drivers of product-market opportunities that involve the EMC ascending the value curve.

Discontinuities in markets and technologies: These provide the opportunities for ascending the value curve for they reduce the advantages of incumbents. Samsung was able to establish its brand thanks to the convergence of digital technologies and its ability to position itself at the forefront of that revolution. The shift from mainframes to client-server technologies helped Indian software companies address a newly emergent market for reengineering existing solutions as well as creating new ones. The emergence of the internet and e-commerce similarly provided

Indian software companies the opportunity to design and implement complete software solutions on an even footing with established information technology service companies.

Pressures on buyers to disaggregate their supply chains: Engineering companies in Taiwan have followed the route of Original Equipment Manufacture (OEM) to Own Design Manufacture (ODM). Many semiconductor and computer manufacturing companies in Taiwan started out by manufacturing products to specifications given by their customers and competed based on lower labour and manufacturing costs. Impacted by rising labour costs and lower margins, these companies over time shifted to Own Design and Manufacture (ODM). This shift enabled them to capture some of the downstream value that was otherwise being lost to their customers. It also enabled them to use techniques like Design for Manufacturing to optimize designs and push down the cost of production thereby recovering some of the cost advantages lost due to higher labour costs (Shih, 2002). The ODM strategy became possible because the margins of the large brand names in the computer business were themselves under tremendous pressure and they were unable to resist the benefits of lower costs offered by the ODM suppliers. With product cycle times reducing, and technologies becoming more modular, the brand name players were unable to add more value than an ODM supplier.

Extent of hypercompetition: Hypercompetition in end-product markets can raise substantially the risk of competing in such markets. The experience of Acer in the U.S. personal computer market suggests that it will be nearly impossible for an EMC to penetrate such a market through a frontal entry and in the absence of a credible differentiator. In such a market, entry may be next to impossible until a major change in technology or market structure takes place. However, as explained above, hypercompetition in the end-product market may also accelerate the disaggregation of the supply chain and create new opportunities as well.

Synergy between country-of-origin and product/service offered: The ability of an EMC to ascend the value curve is likely to be enhanced if there is a positive synergy between the country-of-origin and the product offering. However, the association of a country with a particular product or service can work both for and against firms from that country offering related products and services. In the low end of the software services business, the Indian connection helps as India is clearly identified with the provision of such services. However, a strong Indian connection could be a disadvantage for a company seeking to be a provider of consulting services as India's "brand image" is not consistent with the provision of such "high end" services. Thus an Indian company seeking to be a consulting firm would have to not only position itself as a global firm, but also behave like one. The latter depends on developing a global mindset – "the extent to which the corporation as a collectivity reflects an understanding of diversity across cultures and markets coupled with an ability to integrate across this diversity" (Govindarajan and Gupta, 2001: 9). This may be difficult if the top management of the company has very strong emotional involvement with the country of origin and is unable to find ways of creating genuinely global teams. Thus emotional involvement with the country-of-origin may influence the ability of the firm to actualize the synergies between the country-of origin and the product/service offered.

Availability of knowledge in the market: The knowledge required to operate at the higher ends of the value curve is very often tacit, and hence not traded in the market. Availability of such knowledge in-house influences the ability of firms to move up the value curve a great deal. Higher levels of technical and market complexity increase "revenue distance" (Aron and Singh, 2003), which can be closed only through acquisition of technical and market knowledge. Even ignoring the strategic motives of those who own such knowledge (customers, owners of intellectual property, etc) and the capabilities of the seekers (i.e. the financial and absorptive capabilities of EMCs), the level of tacitness involved itself makes it difficult for such knowledge to be contractually transferred. Empirical research shows that the less codifiable and the harder to teach is technology, the more likely the transfer will be to wholly owned operations (Kogut and Zander, 1993). A generalized interpretation of this result is that EMCs seeking to acquire capabilities and knowledge which are not available in house and which are tacit in nature, may not find a market in which they are available and traded. A related issue is that technical complexity may be easier to deal with than market complexity. EMCs have demonstrated the ability to master some of the most complex technologies over time, and with independent experts and researchers now offering technological solutions in the market, it is possible to acquire most technical skills. In contrast, the subtle and tacit understanding of customer needs and consumer behaviour may be more difficult, particularly from a distance. When technology and the market complexity get inter-twined, this may be the most difficult situation of all.

Ability to penetrate decision-making networks: In service businesses such as the software business, moving up the value curve involves taking on projects and activities that are of strategic importance to the client. This means that final decisions regarding contracts are taken by the top management of the client. A large multimillion dollar enterprise-wide IT contract for a top multinational that has strategic implications is bound to involve the CEO of the contracting company. Even if one ignores the anecdotal information that suggests that such contracts are decided on golf courses, there is probably some truth in the fact that old boy and other networks play a role in the determination of such contracts. While in theory a foreign company including one from an emerging market could employ top management in the external market that could have access to key decision makers in client companies, this may be difficult in practice.

Restrictions on market access: Though the forces of globalization have improved the access to most markets, there are still counterforces at work. There have been repeated efforts to restrict the grant of visas for information technology professionals from countries like India. At the higher end of the value curve like information technology consulting, access to the customer's site is essential to be able to provide the service. However, such restrictions on market access cover the whole spectrum including efforts to pass legislation to prevent outsourcing of back-office operations to Indian companies.

Implications for Action by EMCs

The framework proposed above suggests that to ascend the value curve in international markets, an EMC has to increase its willingness to do so, develop relevant capabilities, make use of product-market opportunities and overcome product-market constraints. Some of the approaches used by EMCs to achieve these are described in the following sections.

Enhancing willingness

A number of practical approaches can enhance the willingness of an EMC to ascend the value curve in international markets. Some of these lie within the locus of the EMC itself while others need governmental support or concerted action by industry associations. Bartlett & Ghoshal (2000) advocate two approaches that they call "Push from Home" and "Pull from Abroad" to break out of the marginal mindset of lack of confidence. The former consists of upgrading local products to global standards even if the local market does not demand such standards or shocking domestic managers into realizing the position of their products or company in the global market by exposing them to the reality which is often a sharp contrast to the position enjoyed in the domestic market. The latter consists of exercising a "pull" on domestic capabilities by hiring strong managers in global markets who place difficult demands on the domestic operations. It is worth noting that in both these cases it is assumed that the problem lies with middle managers and that the top management is leading the effort to overcome the mindset challenge.

The resource scarcity mindset can be partially overcome by targeted government support. For example, in the early years of the evolution of the Indian software industry, the government provided a one-time support of part of the export marketing expenses, thereby making the participation of Indian software companies in important exhibitions in new markets easier. This also enhanced the familiarity of the top management of firms with external markets. Governments and industry associations can facilitate this familiarity through study tours, country visits and the setting up of market intelligence and information centres related to different markets. Family-owned businesses can do this by encouraging their family members to attend educational programmes and work in different countries; in this, care should be taken to avoid excessive focus on one or two countries.

Acquisitions of companies in developed markets can overcome the risks and difficulties of organic market entry; removing regulatory constraints to foreign acquisitions can increase the EMC's willingness to ascend the value curve in those markets. The Indian pharmaceutical company, Ranbaxy, has created a manufacturing base for generic drugs by acquiring manufacturing companies that have regulatory approvals in their local markets.

Development of Capabilities

Thanks to the attention given by scholars to the resource based view in recent years, the processes by which firms develop new capabilities are well studied and documented. In the specific context

of EMCs ascending the value curve, the focus needs to be on those capabilities that will lead to the greatest creation and appropriation of value in global markets.

There is a close link between resource endowments (in this case firm capabilities), resource commitments and activities undertaken by firms (Ghemawat and Pisano, 1999). The enhancement of capabilities that allow the firm to undertake higher value-adding activities takes place through the firm making irreversible resource commitments (Ghemawat, 1991) and performing capability-building activities within the firm (Leonard, 1995; Ghemawat and Pisano, 1999).

EMCs can build a resource base by acquiring the generic resources that are within their reach and combining them, using organizational mechanisms, to result in capabilities that facilitate movement up the value curve (Brush, Greene and Hart, 2001). The pool of acquirable resources can be expanded through strategic alliances and joint ventures with established multinationals (Mathews, 2002). Porter (1990) advises firms seeking global competitiveness to create pressures for innovation, seek out the most capable competitors as motivators, establish early-warning systems, improve the national diamond, welcome domestic rivalry, globalize to tap selective advantages in other countries, use alliances only selectively and locate the home base to support competitive advantage. Technological capabilities can be built by shared problem-solving, implementing and integrating within the firm, experimenting and by importing knowledge from outside the firm (Leonard, 1995). Forbes and Wield (2002) advocate a process of incremental innovation that takes firms through the stages of learn to produce; learn to produce efficiently; learn to improve production; learn to improve products; and, finally, learn to design new products.

Overcoming Product-market Constraints & Leveraging Opportunities

EMCs can adopt different strategies to overcome product-market constraints and capitalize on new opportunities. One important approach is to look for "loose bricks" (Hamel and Prahalad, 1985), those markets in which established multinationals are not focusing their attention for strategic, geo-political or regulatory reasons. Bartlett & Ghoshal (2000) refer to a new form of this that they call "benchmark and sidestep" that consists of using the presence of MNC competitors to enhance internal capabilities (typically through hiring people with MNC experience in an effort to transfer best practices) and using those capabilities to enter markets where the established MNCs have limited presence. Another approach is to change the rules of the game by offering customization at low cost or changing the very basis of competition itself (as Japanese manufacturers did in the photocopier industry). Discontinuities in markets provide excellent opportunities for entry into higher value-added segments as evidenced by the ability of Indian software companies to take on software development projects for e-commerce. The other important strategy to compete in higher value-added international market segments is a niche strategy (Kohn, 1997; Porter, 1985:523); success in multiple niches can offer opportunities to subsequently increase the degree of competitive scope (Shih, 2002).

Tacit knowledge can be gained by hiring experienced managers who are natives of foreign markets and who have worked in established companies that have strong technological and market-related capabilities. Consultants (both large firms and individuals) are also important sources of tacit technical and managerial knowledge. With the downsizing of large firms and the rationalization of operations through mergers and acquisitions, a number of individuals with technical and managerial expertise are today available and if the EMC has the ability to integrate across these technical and managerial capabilities, it can build strong core competencies of its own. The ability to retain highly qualified managers and technical personnel from other (developed) countries will depend on the EMC's ability to adjust its managerial style and governance processes to bridge cultural gaps. Thus, adopting a global mindset (Govindarajan and Gupta, 2001) is an essential part of ascending the value curve in international markets. This global mindset will also help the EMC bridge the revenue distance, penetrate decision-making networks and play a more proactive role in tackling market access.

Future Directions for Research on EMCs

Timing and Positioning

There are interesting questions that this paper does not address. An EMC that attempts to ascend the value curve too early may find the risks outweigh the benefits as the EMC is still vulnerable to sudden changes in the environment. If it postpones it for too long, it runs the risk of its core competencies getting converted into core rigidities (Leonard Barton, 1992) and being typecast as a "low-end" player as in the case of the Indian Software industry. Similar to the problem faced by companies in responding to disruptive technologies (Christensen, 1997), ascending the value curve can actually come in the way of servicing present customers and present profitability, yet failure to do so can jeopardize the future of the company. Is there an optimum time in the evolution of the EMC for it to make this attempt? To what extent should it attempt to do so? Going too far may bring the EMC into direct competition with MNCs from established markets, a confrontation for which the EMC may not be ready. These are some of the dilemmas faced by EMCs, and future research needs to take a closer look at how these can be resolved.

Manufacturing vs. Services

Much of the earlier research on strategy in international business (with notable exceptions such as Erramilli and Rao, 1993; Sharma and Johanson, 1987) focuses on manufacturing businesses. Particularly in the context of EMCs becoming globally competitive, it is common to find discussions of companies following the sequence of acquiring a production capability, followed by an investment capability and then an innovation capability (Dahlman, Ross-Larson and Westphal, 1987) or equivalents thereof (Kim, 1997; Forbes and Wield, 2002). Thus, in the manufacturing context, the focus has been on the acquisition of technological capabilities. In service businesses, the acquisition of technological capabilities is not such a major challenge. With the increasing globalization of services, and the success of Indian companies in global

service businesses without apparently facing any difficulty in terms of technological capabilities, there is a new stream of research to be pursued.

If one compares the Indian software industry to the Taiwanese IT industry, a number of interesting contrasts become apparent. Large Indian software companies target big buyers who have large IT budgets, but from the perspective of managing projects, would like to limit the number of vendors they deal with. Integrating backward into writing the software is a possibility but increases managerial complexity and coordination costs. Over time, the Indian software firm's relationships and knowledge of the client create switching costs for the client. Since there are no issues of lumpy capacity additions or upfront capital investments in plant and machinery, there is no driving need for capacity at all costs; this keeps a check on prices. Software companies also have a much larger number of potential customers and therefore a more fragmented buyer industry than the Taiwan IT industry (CSFB, 2003). Overall, there seem to be higher barriers to commoditization in the software services business than in the typical manufacturing business. While the software service business does not need large irreversible upfront investments, there are at the same time barriers to entry and imitation such as scale (size of projects), scope (range of skills), and managerial capabilities (managing large projects, quality management, etc.). Compared to manufacturing businesses, the creation of brands in professional services businesses is more complex because of the intangible nature of services and difficulties in standardization.

Further conceptualization of the differences between manufacturing and services and the implications of these differences for EMCs in the service business is an important future stream of research.

Vision and leadership

The high risks and counter-intuitive approaches needed to push an EMC up the value curve draw attention to the importance of leadership and top management vision in building emerging market multinationals. Though leadership and vision are strongly emphasized in strategy teaching, they tend to be undervalued in the rational-analytic frame of research because they are nebulous and difficult to measure and treated by researchers as residual explanations for phenomena that can not be explained in other terms (for an important exception, see Westley and Mintzberg, 1989). Case studies and anecdotal (but reliable) accounts of EMCs suggest that leadership and vision are critical to their evolution into full-fledged multinationals. If research and practice are to be bridged, researchers will have to come to terms with these phenomena.

Cross-paradigmatic research

There is an urgent need for cross-paradigmatic or integrated research to look at EMC problems. Researchers have tended to look at EMC research issues with a single lens (IO theory, international business theory or the resource-based view) and unsurprisingly their conclusions have reflected the lens they used. However none of these theories by themselves are adequate to

explain the strategies adopted by EMCs. We therefore believe that future research in this area needs to transcend paradigmatic boundaries even if it makes the research more messy and intractable.

Appendix 1

The Indian Software Services Industry

The growth of the Indian software industry has been modern India's most prominent industrial success story. In the year 2001-02, the software and related services industry reported revenues of US \$10.1 billion. Of this figure, US \$7.68 billion came from exports. This industry accounts for almost 2% of India's Gross Domestic Product and over 16% of India's exports. Just five years earlier, the industry accounted for only a little over 2% of the country's exports (Nasscom, 2002).

Indian software companies entered the industry by providing low-cost, skilled manpower to clients in developed markets (principally the U.S.). To start with, this manpower provided labour at the customer's site, typically under the direction of an external consultant or the firm's own information systems department. Starting with low value-adding jobs like maintenance and testing, the software companies graduated to reengineering existing pieces of code to new operating systems and platforms. Demand for the latter was created by the shift of users from mainframes to client-server systems.

In the years immediately preceding 2000, Indian software companies obtained many projects to solve the "Y2K" problem (Arora et.al., 2001) The internet and e-commerce explosion helped companies graduate to large-scale coding assignments that actually developed new applications. Simultaneously, Indian software companies developed good project management and quality processes that enabled them to manage large projects whether at the customer's site or back in India ("offshore") at their own development centre.

The declining cost of telecommunication links and the wide diffusion of the "always on" internet combined with the good track record of the companies have led to a steady increase in the proportion of offshore revenues (Nasscom, 2002). The industry experienced the first economic downturn in its short history during the financial year 2001-02 which resulted in a sharp decline in growth rate but also arrested wage cost increases that had been threatening to affect the competitiveness of the industry. Though margins fell as a result of intense competition between the leading software companies, they still remain healthy. Very specialized companies particularly in domains such as telecom that suffered disproportionately due to the downturn were the worst affected (Kumar and Krishnan, 2002). Low-end maintenance jobs proved to be the most steady streams of revenue as clients cut down ambitious projects (Srinivas and Jayashankar, 2002).

Ironically, today, successful Indian software companies like Infosys and Wipro enjoy better margins and valuations than established developed country software service companies like EDS and CSC with much bigger brand names and a larger range of higher value offerings. To reinforce their cost-based advantage, many successful service companies have (1) focused on creating competence in chosen domains and created domain competence centres; (2) moved (to some extent) from pure time-and-material ("T&M") contracts to fixed price contracts; (3) created "ready-to-use" components around which solutions can be structured; and (4) implemented knowledge management systems that enable them to reuse code and make best use of programming resources. In the product-market domain they are trying to make a gradual shift to positioning themselves as problem-solvers rather than implementers. Indian software companies have created components and frameworks around which solutions can be built for existing services clients though they have not actually entered the software products market.

However, Indian software companies have had limited success in ascending the value curve into consulting and product development. The main barriers to growth in consulting have been lack of domain expertise, lack of a brand image, and the image of Indian software companies as efficient low-end service providers. The barriers to product development have been the high upfront investments involved, physical distance of the key global market for products from India (and the absence of challenging customers in India), lack of domain expertise, limited ability to conceptualize products and the easy revenues that can be generated from the services business thanks to the trend towards outsourcing by large multinational corporations (Krishnan and Prabhu, 2002). However, Indian software service companies have seen a secular decline in margins since 2001 (CSFB, 2003) and this may induce some fresh thinking in the industry.

Other constraints to entry into higher value segments for Indian software companies include government restrictions on foreign acquisitions, and the increasing limits on the movement of professionals in the wake of the recession in major markets and the anti-terrorism drive.

A prominent trend has been the diversification by Indian software services companies into other outsourcing businesses like direct marketing, back-office processing and customer care services. Though these are lower value-added activities, business opportunities exist with current clients. The service and quality-related competencies of Indian software companies can be more easily applied to these businesses. Companies hope that the provision of these "IT-enabled" services will help them achieve greater lock-in with large clients, and increase switching costs (Krishnan, 2002).

Indian software companies face significant competition from their customers and higher-end consulting firms who are setting up their own software development centres in India. This is the fastest growing segment of the Indian software industry. Of particular significance is the threat from consulting firms as in the past many software contracts came to Indian software companies via these consulting firms. In this model, the consulting firm typically undertook the business problem solving and system design work and the Indian company did the computer programming

and implementation. The threat of backward integration by the consulting firms is enhanced by their reported willingness to work on lower margins than the Indian software companies.

Indian software service companies have been pioneers of noteworthy organizational innovations such as the concept of the Offshore Development Centre (a software development centre devoted to a particular client, often located within a larger facility that shares infrastructure and support services) and the widespread use of Employee Stock Options in India. They have gradually been moving towards developing a global mindset by hiring more foreign nationals (particularly in sales and marketing) and shifting decision-making closer to the key markets in which they operate.

Another recent phenomenon in the software services business has been the growing importance of mega deals through which large clients award high-value, multi-year contracts to service companies that are willing to take over and run their entire IT infrastructure and services. The ability to take on such contracts requires a strong financial base, a diverse range of competencies and strong managerial skills. However, so far, Indian companies have had only limited success in being awarded mega deals. This may due, in part, to their inability to penetrate the top management decision-making structures with the same facility that is enjoyed by established large companies operating in the U.S. market.

There is increasingly direct competition between large Indian software companies for big contracts. This has accentuated the decline of margins. Other forms of competition include competition for talent, and for brand image in the market for talent. Companies try to differentiate themselves on the work environment they provide and the learning opportunities for software professionals within their companies.

The Government of India has, in general, played a supportive role in the growth of the Indian industry, though the growth of the industry has been led by the firms themselves and not by the government. In the early years of the evolution of the Indian software industry, the government provided some financial support for marketing through a scheme managed by the Export-Import Bank of India, thereby making the participation of Indian software companies in important exhibitions in new markets easier. This also enhanced the familiarity of the top management of firms with external markets. The government has also helped through the Software Technology Parks scheme that provides international quality telecommunications infrastructure and duty-free import of hardware by software exporting companies and exempting software services from income tax for a period of ten years. The government-created education and research infrastructure was the source of much of the initial manpower for the software industry though there are now a number of private educational institutions as well.

Prominent Indian software companies include Infosys Technologies (listed on NASDAQ) and Wipro (listed on NYSE). Infosys reported revenue of Rs. 36.2 billion in the year 2002-03 (\$753 million under US GAAP) and a net margin of 26% (Infosys, 2003). Earlier, Infosys' topline grew

by about 37% in 2001-02 and reported healthy margins of 31% (Infosys, 2002) despite a global recession. Infosys has refrained from dramatic efforts to go up the value curve like a major entry into software products or the acquisition of a big-name consulting firm, preferring incremental efforts to buttress its reputation and capability profile. It has made a name for its high and consistent quality of execution, and standards of corporate governance. Wipro Technologies, the global technology services division of Wipro Ltd., reported revenue of \$902 million in 2002-03 (Wipro, 2003). Like Infosys, Wipro enjoys a strong reputation for the quality of its software services. In addition, thanks to its evolution from a hardware company into a software company, Wipro has perhaps the widest competence base in the Indian software industry. Wipro's Chief Executive Office, Vivek Paul, operates from the United States though Wipro is formally headquartered in India.

Appendix 2

The Indian Pharmaceutical Industry

The Indian pharmaceutical industry has been one of the high performance industries of the 1990s. About one-third of its 2002 production of \$5.2 billion was exported to other countries. At least two Indian pharma companies have displayed the potential to be significant global players in the future.

Like other industries in India, the pharmaceutical industry had a high degree of regulation before 1991 (for details of the changing regulatory framework for pharmaceuticals in India and the response of firms, see Madanmohan and Krishnan, 2003). Two peculiar features governing this industry were price control and India's recognition of only process (and not product) patents. In response to these constraints, Indian drug companies developed the capability of finding new low-cost routes for drugs being sold in other markets and entered external markets in search of higher margins. This was typically manifested as either sale of formulations to the erstwhile Soviet Union or export of bulk drugs to established markets. In 1995, exports accounted for 20% of the Indian pharma industry's revenues.

In the face of the deregulation of the Indian economy, and indications that India would sign the WTO agreement (thereby introducing product patents for drugs in India), some of the larger Indian pharma companies like Ranbaxy and Dr. Reddy's Laboratories (DRL) turned their attention to new drug development and the development of new drug delivery systems in the mid-1990s. Ranbaxy and DRL have hired large numbers of scientists, many of them with research experience with MNCs, to staff their research laboratories. By the end of the 1990s, three Indian pharmaceutical companies were among the top ten Indian organizations from India in terms of US patents.

Indian pharma companies have also addressed the growing market for generics and have used their process skills to identify alternate routes to manufacture molecules going off patent. In some cases, they have also been able to utilize the American provision for 180 days exclusivity for the first company producing a drug going off patent.

In November 1993, Ranbaxy CEO Parvinder Singh announced a goal of transforming Ranbaxy into a research-based international pharmaceutical company with \$1 billion in sales by 2003 (Ghemawat and Kothavala, 1998). In pursuance of this goal, Ranbaxy invested in the creation of corporate research capabilities in spite of alternate investment opportunities in local distribution that may have yielded higher short-term returns (Ghoshal, Piramal & Bartlett, 2000). Ranbaxy entered into a global alliance with Eli Lilly in 1994 and formed joint ventures for marketing and R&D. Though the R&D JV was subsequently dissolved, Ranbaxy benefited by learning good laboratory practices and patenting procedures that could be transferred to its own R&D activity. Ranbaxy has created a global manufacturing base for drugs by setting up new plants and acquiring manufacturing companies that have regulatory approvals in different markets. By 1998, Ranbaxy had joint ventures or subsidiaries in fourteen countries including the United States, China, the United Kingdom and the Netherlands, marketing offices in another 6 countries, and a licensing arrangement in Indonesia (Ghosh and Datt, 1998). Ranbaxy's latest results indicate that it is on track to achieve the \$1 billion mark in consolidated revenues by 2004.

The top management of DRL set up a research laboratory for new drug discovery in 1992 even though at that time Indian pharmaceutical companies were still trying to persuade the Indian government not to adopt international patent conventions and instead to continue with a regime that permitted reverse engineering of patented molecules. But the CEO of DRL, Dr. Anji Reddy, decided that they could not afford to lose time in developing capabilities that would be inevitably required one day. From 1992, DRL invested about Rs. 1120 million in R&D over an 8-year period. By 2001, it had filed 55 US patents of which 19 had been granted and licensed three molecules to foreign drug firms (two to Novo Nordisk, and one to Novartis) for a total revenue of \$8 million up to June 2001 (*Business Today*, 2001). It is now building up a pipeline of new chemical entities that it hopes to convert into some globally successful drugs. Though smaller in size than Ranbaxy, DRL has demonstrated its ability to identify new drug niches and have a relatively high success rate in drug discovery. In the current year, DRL has increased its R&D intensity from 5.5% to 8%.

The success of Ranbaxy and DRL has influenced many other Indian pharmaceutical companies to invest in research and development and pursue external markets more aggressively (Ghosh and Datt, 1998).

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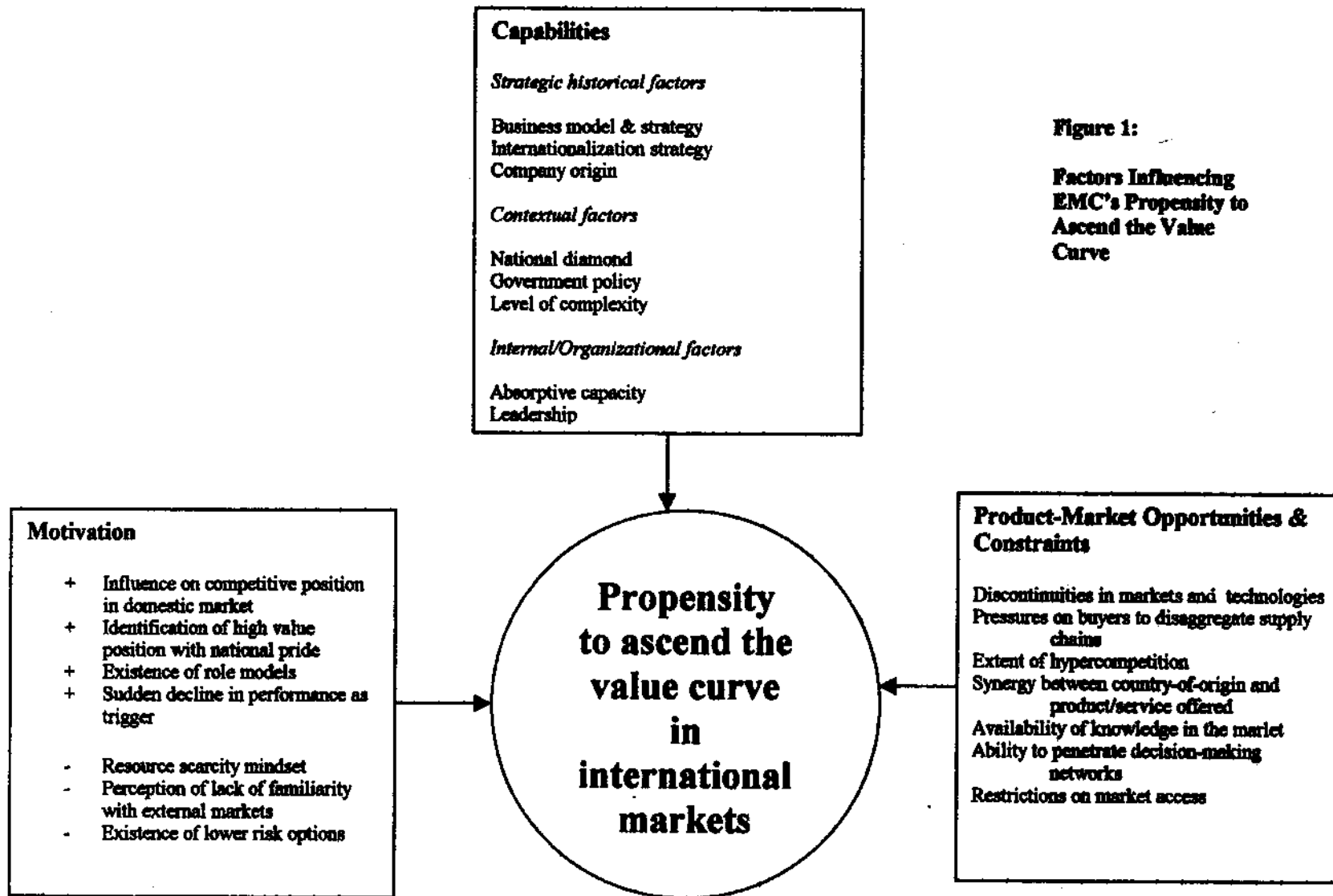


Figure 1:
Factors Influencing EMC's Propensity to Ascend the Value Curve

Notes

¹ In this paper, any reference to an EMC is related to a company from emerging markets that has a presence in international markets. Value addition is looked at in the specific context of its internationalization.

² We would like to acknowledge recent work by Makino, Lau and Yeh (2002) in giving us the idea for the general form of this framework.

³ Though Japan, Korea and Taiwan are not emerging markets, the experiences of the multinational companies from these countries are relevant to this study as they evolved into multinationals with similar starting disadvantages as faced by companies from today's emerging markets.