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COMPETITIVE STRATEGIES OF TMNCs – AN EXPLORATORY STUDY OF INDIAN PHARMACEUTICAL FIRMS

Abstract

This paper is an attempt to strengthen and deepen the existing theories of competitive strategies of TMNCs through an exploratory study of international firms from the Indian pharmaceutical industry. Strategic group analysis of a proprietary data set of strategic variables from forty firms revealed significant variation in competitive strategies of firms from the same geographical, economic and industry context. Although these distinct international competitive strategies exhibit different value creation potential, they lead to similar levels of performance in terms of return on assets, thus indicating the equifinality of different paths to multinationality. Two broad types of competitive strategies underlie the taxonomy of strategic groups. One is the strategy of exploitation of a firm's idiosyncratic capabilities in foreign markets with similar environments, which supports the extant theoretical assertions. The other is the strategy of exploration aimed at acquisition of new, all-round capabilities by taking advantage of external liberalization, such that a few of the TMNCs are able to compete with established MNCs even in the developed markets. The latter finding provides theoretical support for emergence of globally competitive TMNCs despite severe challenges.

Key words: Competitive strategies, TMNCs, strategic groups

Competitive Strategies of TMNCs – An Exploratory Study of Indian Pharmaceutical Firms

1. INTRODUCTION

The emergence of firms from developing countries as important players in global markets has been one of the distinctive phenomena of globalization in the twenty first century. Coming from unique institutional and resource environments (Hoskisson, Eden, Lau and Wright, 2000; Khanna and Palepu, 2006), some of these firms are transforming themselves into 'emerging multinationals' by successfully competing with traditional MNCs from developed economies. The recent acquisition by the Indian company Tata Steel, of the Anglo-Dutch major Corus for about US$ 12 billion to jump from 56th to 5th largest steel company in the world (The Times of India, 2007), is just but one indication of where some of these emerging multinationals are headed.

The international expansionary activities of the 'third-world multinationals' (TMNCs), as they are commonly referred to in literature, are, however, fraught with many challenges (Lall, 1983; Wells, 1983; Khanna and Palepu, 2006). To begin with, they have to overcome the 'late mover' disadvantage. They have to compete with established firms from the developed economies that have better access to resources such as financial capital, advanced technologies and managerial capabilities (Guillen, 2000). Moreover, TMNCs typically hail from economies with underdeveloped institutions and market intermediaries that add to the transaction costs of accessing resources and doing business in general (Khanna and Palepu, 1997). What are the predominant strategies adopted by the TMNCs to internationalize and compete successfully in global markets? In a given geographical, economic and industry context, do the TMNCs follow a common competitive strategy or are there different strategic paths to their multinationality? If the latter, what are the performance implications of the different competitive strategy trajectories? There has been a growing interest to explore such questions and understand the competitive strategies of these firms among scholars (Khanna and Palepu, 2006) as well as practitioners (OECD, 2006; Business Week, 2006; BCG, 2006), as they have the potential to "radically transform industries and markets around the world" (BCG 2006).

This paper attempts to address these questions by conducting a strategic group analysis of a set of internationalizing firms from the pharmaceutical industry in a developing economy, viz.,

India. Strategic group analysis is a useful tool for examining the competitive strategies followed by groups of firms in the domestic as well as international context (Thomas and Pollock, 1999). It has emerged as an informative middle ground between industry level macro studies and firm level micro studies in competitive strategy research (Bogner and Thomas, 1993; Thomas and Venkatraman, 1988). Strategic group analysis has been effectively employed to study the international entry and expansionary strategies of MNCs from developed economies (Bogner, Thomas and McGee, 1996) and similar attempts have the potential to provide important insights on the unique internationalization strategies of TMNCs (Khanna and Palepu, 2006).

This paper analyses a set of forty international firms from the Indian pharmaceutical industry exactly a decade after the introduction of liberalization measures and finds evidence of the existence of strategic groups, each underlying a distinct competitive strategy of international expansion. The study aims to make two contributions - a) to add new insights to the theories of competitive strategies of TMNCs (Dawar and Frost, 1999; Khanna and Palepu, 2006) through an exploratory study of international firms from India and b) to add to the limited strategic group literature in the context of developing economies. The remainder of the paper is organized as follows. The next section reviews the relevant literature on the competitive strategies and strategic groups with a specific focus on developing economy firms. It is followed by a description of the pharmaceutical industry in India and its appropriateness as a research setting for the study of the competitive strategies of TMNCs. A section on methodology then outlines the research method of strategic group analysis, the sample and data collection and selection of strategic variables. We then report the results and develop a set of propositions on the competitive strategy options for TMNCs. The findings are discussed in detail and the paper concludes by drawing implications to theory and practice and offering directions for further research.

2. LITERATURE REVIEW

2.1 Competitive Strategies and TMNCs

A large variety of strategy typologies and taxonomies (Doty and Glick, 1994) describing competitive strategies at generic level exist in literature such as Porter (1980), Mintzberg (1978), and Miles and Snow (1978). A stream of literature (Kim and Lim, 1988; Aulakh, Kotabe and Teegen, 2000) focused on empirically testing the applicability of these popular strategy

typologies in the context of developing economy firms. For example, Kim and Lim (1988) tested for the existence of Porter's (1980) generic strategies in the electronics industry of the then emerging economy of Korea and found evidence more in favor of mixed strategies than pure types. Aulakh et al. (2000) examined the export strategies of Latin American firms and found that cost leadership strategy worked better in the case of exports to developed markets while differentiation worked better when developing economies were targeted.

On the other hand, taking into account the unique environmental contingency of recent economic liberalization in many developing economies, there have been attempts in literature to develop specific conceptual models (Craig and Douglas, 1997; Dawar and Frost, 1999; Khanna and Palepu, 2006) that proposed a set of generic strategies available to firms from developing economies as they responded to severe institutional changes. However, except for the recent study of Khanna and Palepu (2006), their primary focus has been on survival strategies in the light of opening up of their economies and not on the possible competitive strategies to succeed in international markets and emerge as TMNCs. Craig and Douglas (1997) proposed that the strategic responses of developing economy firms could range from cost-oriented commodity approaches based on low-cost labor and other resources on one extreme – component manufacturing, private-label manufacturing - to higher value-creating approaches that capture a greater share of the value chain. Dawar and Frost (1999) observed that the typical response of most developing economy firms to liberalization seemed to be one of the three – call on the government for support, become a subordinate partner to a foreign multinational or sell out. They offered a mix of defensive and assertive options leveraging on some of the unique assets or resources possessed by developing economy firms. Arguing that each firm should assess whether it has any unique assets and whether these assets are exploitable abroad, they suggested four strategic options for firms in developing economies based on whether a company's unique assets are exploitable overseas and based on the intensity of globalization pressures – defend, dodge, extend and contend. In a recent paper, Khanna and Palepu (2006) suggested a few generic approaches that focused on capitalizing the institutional voids that characterize developing economies. Developing economy firms possess the unique advantage of managing institutional voids which they could exploit to counter foreign multinationals both in their local economies as well as in foreign markets with similar institutional environment.

The common thesis across all these frameworks seems to be that developing economy

firms would find it difficult to develop resources and capabilities to compete head-on with foreign MNCs and hence their predominant strategic options would be defensive or 'dodger' strategies that include fitting in at the lower end of the value chain or partnering a foreign multinational. Potential contenders (or TMNCs) are the exception than the rule. Successful internationalization, if any, is possible by means of exploitation of locally available or developed proprietary advantages (such as low costs or experience in dealing with institutional voids) in foreign markets, predominantly in other, similar, less developed countries. The few empirical studies that exist in this context find support for this thesis. For example, based on twelve case studies of emerging multinationals from Taiwan and Singapore, Sim and Pandian (2003) found that their strategic advantages stemmed from low cost, responsiveness and knowledge of local markets.

When we took a closer look at a handful of internationalizing firms in India, we too found evidence of firms' international expansion driven by *exploitation* of local advantages, but interestingly, we also found equally compelling evidence of firms rapidly *exploring* and acquiring resources and capabilities to move up the value chain (to cite a few examples, Wipro, Infosys in information technology industry; Sundaram Fasteners, Bharat Forge in auto ancillaries; Dr. Reddy's Labs, Ranbaxy in pharmaceuticals). The target markets for most of these firms were not just other developing economies with similar institutional environments like India, but developed economies such as U.S. and Europe as well. Finally these were not isolated examples of a few outliers, but constituted a significant chunk of the respective industries. Out of the 100 companies from developing economies identified as "The New Global Challengers" by a recent BCG report (BCG, 2006), as many as 21 were from three industries in India. These glimpses of evidences on competitive strategies of firms, which are more proactive and assertive in nature aiming to rapidly explore and acquire new capabilities and competing with established multinational firms on equal terms, beg for a more detailed study.

2.2 Strategic Groups

A primary motive for strategic group analysis is to explore differences in competitive strategies across different groups of firms. Strategic group analysis has been used to empirically test the existence of popular typologies such as Porter (1980) and Miles and Snow (1978) as well as to derive new sets of context and industry-specific competitive strategies using a rich variety of strategic and financial variables (Fiegenbaum and Thomas, 1990). In essence, the theory of

strategic groups argues that within an industry, firms with similar asset configurations will pursue similar competitive strategies with similar performance results (Thomas and Pollock, 1999). Hence, a primary criterion for the existence of strategic groups is significant performance differences across strategic groups (Thomas and Venkatraman, 1988) and 'development of clusters, per se, cannot be used as a test of their existence'. (Barney and Hoskisson, 1990, p.7).

A large number of strategic group studies have been carried out in the developed economy context in a variety of industries, such as U.S. pharmaceuticals (Cool and Schendel, 1987), U.S. insurance (Fiegenbaum and Thomas, 1990), Scottish knitwear (Porac, Thomas, Wilson, Paton and Kanfer, 1995), U.K. retail grocery (Athanassopoulos, 2003) and Japanese Steel (Nair and Kotha, 2001), but there have been relatively few empirical studies on strategic groups in developing economies (Peng, Tan and Tong, 2004). The study by Kim and Lim (1988) testing for the existence of Porter's (1980) generic strategies in the Korean electronics industry was carried out using strategic group analysis. Similarly, using ownership type as a classification variable, Peng et al. (2004) found evidence of strategic groups in China and argued that firms with different ownership types such as state-owned and privately-owned enterprises followed distinctly different competitive strategies. Studies employing strategic group analysis to analyze the competitive strategies of international expansion have been rare, even in the context of developed economies. In one such study, Bogner, Thomas and McGee (1996) have effectively analyzed the entry paths and competitive positions of European pharmaceutical firms in the U.S. market using strategic groups and found that the strategic assets and competencies of the European MNCs significantly shaped their entry strategy and competitive posture.

Our study is motivated by the belief that similar analyses using strategic grouping methods in the context of internationalizing firms from developing economy have the potential to provide important insights on the unique competitive strategies of TMNCs.

3. RESEARCH SETTING - THE INDIAN PHARMACEUTICAL INDUSTRY

Two important characteristics of the Indian pharmaceutical industry make it an ideal setting for the study of competitive strategies of TMNCs. First, along with the IT and automotive ancillary sectors, the pharmaceutical industry is considered one of the main drivers of India's recent high export-led growth. Second, as we describe below, the Indian pharmaceutical industry faced a dual impact of economic liberalization and changes in intellectual property regimes in the mid-1990s,

thus threatening its very sources of competitive advantage. However, despite such external challenges, the industry has seen a resurgence of incumbent firms, a large number of which are emerging as significant international players.

The Indian pharmaceutical industry is sizeable and is ranked globally 4th in terms of volume and 13th in terms of value (CRIS INFAC, 2004; KPMG, 2006). It ranks second among industries in India (after information technology) in terms of internationalization as measured by exports as well as foreign direct investment by constituent firms. In an analysis of about 120 firms for which financial data was available for ten years between 1996 and 2005, we found the average export intensity of an incumbent Indian firm growing from about 15 per cent to over 24 per cent, with foreign sales growing at a remarkable annual rate of over 21%. The noteworthy feature of internationalization of the Indian pharma firms is the presence of a large number of international firms in the industry rather than a few large ones. Out of the 120 odd firms in the industry, over fifty per cent (53 firms) had more than 25% of their sales composed of foreign sales for the year 2005 and about one-third (32 firms) had more than 50% of their sales contributed by overseas markets. Another important feature of internationalization of Indian pharma companies is in terms of target geographies. India's pharmaceutical exports are not dominated by a focus on other developing economy markets, but are spread over developed as well as developing economies. As of 2000-01, the US constituted the largest market for Indian exports (10%), followed by Russia (6%), Hong Kong (5%), Germany (4%) and others (ICRA, 2002). The share of US has been on the rise, increasing to 17 per cent in 2003-04 from 10 per cent in 1999-2000 (CRIS INFAC, 2004).

Instead of granting patents to end-products as is done in developed countries, the Indian Patent Act allowed patents of the manufacturing process. Indian firms could produce the same molecules that were under product patent in other countries by altering the manufacturing process, often at a fraction of the original research costs. Indian firms developed special skills in process research and could produce the drugs at much lower costs compared to multinationals, which were burdened with the original research costs, and hence were not in a position to sell the drugs at much lower prices.

In 1991, the Indian government began to open up the economy in a major way and Indian pharmaceutical industry in particular witnessed some of the most profound changes possible. In 1994, after becoming a signatory of General Agreement on Tariffs and Trade (GATT, now

WTO), India committed to introduce product patents by 2005 after a permissible transition period of 10 years. As committed, the Indian government introduced the product patent regime from January, 2005 onwards. This change in legislation on patents has significant implications for the Indian pharmaceutical industry. Reverting to the product patent regime would provide the protection sought by leading global pharmaceutical firms to bring in their best products to India and would result in a steep increase in competition. This also marked a dramatic strategic change for Indian pharmaceutical firms, which had traditionally survived manufacturing and selling knockoffs of patented drugs in India by exploiting the prevailing process patent regime. The Indian pharmaceutical firms would also be handicapped to take the full advantage of the reverse engineering and manufacturing expertise which was their major strength. However, Indian firms were notified of this change in 1995 and had a transitory window of ten years to prepare themselves for the ensuing patent regime change. The internationalization achieved by the Indian pharmaceutical firms was in the light of these external challenges in the business environment.

4. METHODOLOGY

4.1 Research Method

We have used the tool of strategic group analysis to explore whether there are any distinct underlying patterns in the competitive strategies of Indian pharmaceutical firms. Simply put, the concept of strategic groups argues that firms within an industry form groups according to their strategies, which can be revealed through cluster analysis of select strategic variables (Tang and Thomas, 1992). In line with this, we decided to conduct a cluster analysis of strategic variables reflecting internationalization strategies of the Indian firms for the year 2005 – the last year of the ten year transitory period. Indian pharmaceutical firms had been notified of the liberalization measures in the year 1995 and had been adopting various strategies in preparation for the new regime. It is reasonable to assume that these strategies would manifest in visible and measurable outcomes by 2005, which the strategic variables aim to capture. The cluster analysis of the strategic variables would discern any distinct internationalization approaches followed by distinct groups of firms. This was followed by focused study of five randomly selected firms from each of the strategic groups to achieve more in-depth understanding of the phenomena and the underlying determinants of the various internationalization approaches. We believe that this

combination of quantitative and qualitative approaches has enabled us to explore and untangle the complex web of issues surrounding TMNCs and make cautious generalizations.

4.2 Sample and Data Collection

Hoskisson et al. (2000) detailed the several difficulties posed by developing economies in data collection. The secondary data from *Prowess,* from the Centre for Monitoring Indian Economy (CMIE) has been increasingly used by researchers (Khanna and Palepu, 2000; Khanna and Rivkin, 2001; Chacar and Vissa, 2005) for large sample studies on India, which formed one of the data sources for our study. India's pharmaceutical industry consists of about 250 firms in the organized sector which account for over 70 percent of the products in the market with the top ten firms representing about 30 percent (KPMG, 2006). For the purpose of our analysis, we consider all the firms in the *Prowess* database under the industry classification (two-digit) of Drugs and Pharmaceuticals. After eliminating a) all subsidiaries of multinationals, b) firms with less than Rs.500 million (approximately USD 10 million) in sales (for FY 2005) and c) firms with less than 10% revenues from foreign markets (FY 2005), we were left with 51 firms. Given that a majority of firms from emerging economies are still in the early stages of the internationalization process with exporting being the dominant mode of international expansion (Aulakh et al., 2000), with limited or no FDI, we used export intensity as a criterion for sampling international firms. A further 11 firms were eliminated due to missing data on the strategic variables used in the study, thus leaving a sample of 40 firms for cluster analysis. All the forty firms in the sample derived a majority of their foreign sales from developed markets of mostly America and Europe. The data on the strategic variables were not directly available from *Prowess,* but had to be culled from sections of annual reports such as *directors' report* and *management discussion* through content analysis. For ensuring reliability and accuracy, the data was independently collated by two researchers and cross-checked by one of the authors for both accuracy and inter-rater reliability, which was found to be very high.

4.3 Selection of Variables

The variables used as dimensions in identifying strategic groups were selected on the basis of various competitive strategic options available to Indian pharmaceutical firms and also in line with the variables used in earlier studies on international expansion of pharmaceutical firms such as Bogner, Thomas and McGee (1996). Care was taken to ensure that the selected measures allowed for consistency of measurement across all the firms in the sample. Following

the exhortation of Peng et al. (2004) for parsimony in selection of variables of strategic groups, we used five strategic variables relevant for internationalization encompassing the areas of – R&D intensity, research focus, product type and manufacturing.

4.3.1 Research & Development (R&D) Intensity

R&D capability has always been a critical strategic factor for a pharmaceutical company competing in the international markets. With product patent regime in force from 2005, it is imperative that Indian companies need to sharply upgrade their R&D skills to face global competition. The R&D intensity of many Indian pharmaceutical firms is much lower compared to global pharmaceutical firms because reverse engineering and process research is much less expensive compared to new drug discovery research which the majority of large international firms are engaged in. R&D intensity as measured by the ratio of 'amount spent by a firm annually on R&D and its sales revenues is a broad indicator of the strategic thrust of the firm on research.

4.3.2 New Drug Discovery

Research and development aimed at new drug discovery is the backbone activity of any global pharmaceutical major. New drug discovery is a very specialized, long, and highly expensive process, taking up to 10 years and costing up to US $ 800 million for a single drug (2001 estimates by Tufts Centre for the Study of Drug Development). Synthesis of new chemical entity (NCE) is the first step in the process of development of a drug. NCE is a chemical molecule developed by the innovator firm in the early drug discovery stage, which after undergoing clinical trials could translate into a drug that could be a cure for some disease. The number of new molecules or NCEs under development is therefore a good measure of the focus of the firm to emerge as a research-based global pharmaceutical major.

4.3.3 Focus on Low Value-add Products

The internationalization strategies of firms from developing economies are expected to be driven by a focus on low value added products as they lag in capabilities to compete at the high end of the value chain. At the low end of the value chain of pharmaceutical products lie active pharmaceutical ingredients (API or bulk drugs) and the proportion of API product in the revenues of a company reflects its focus on low value added products. The poor standards of disclosure for Indian firms have made it difficult in the past to assess the product composition of

total sales and export revenues. However, in line with improving regulations, many Indian firms have started reporting in recent years the percentage of API sales in their domestic and foreign sales. Thus, the proportion of API exports in total exports was chosen as a measure of the extent to which low value added products form the thrust of the firm's internationalization strategy.

4.3.4 Focus on Generic Drugs

Generic drugs are the chemical and therapeutic equivalents of 'reference brand drugs' typically sold under the chemical names at prices below their branded equivalents. Generics are at a higher end of the value spectrum of pharmaceutical products compared to API or bulk drugs and require special capabilities to produce as well as market. As the U.S. forms nearly eighty percent of the market for generics for Indian firms (CRIS INFAC, 2004), the strategic focus on generics can be measured by ANDA (Abbreviated New Drug Application) filings, which are mandatory regulatory filings with the US Food and Drug Authority (FDA) if a firm wants to launch a generic drug in the U.S. according to the Hatch Waxman Act (1984). Four types of ANDA filings are made, commonly known as Para I, II, III and IV filings. A Para I filing is made when the innovator has not made the required patent information in the Orange Book. A Para II filing for the launch of a generic drug is made when the drug is already off patent. A Para III filing is made when the ANDA applicant does not have any plans to sell the generic drug until the original drug is off patent. A Para IV filing is made when the ANDA applicant believes its product or the use of its product does not infringe on the innovator's patents listed in the Orange Book or where the applicant believes such patents are not valid or enforceable.

Filing of ANDAs is an elaborate, complex and a very expensive process, costing anywhere from a few thousand dollars to up to US $ 15-18 million for a single Para IV filing. Hence the number of ANDAs filed by an Indian pharmaceutical firm is a reliable measure of the extent to which the internationalization strategy of the firm is based on a thrust on generic drugs.

4.3.5 Focus on Contracts with Foreign MNCs

Based on their traditional strength of low costs of manufacturing and research, Indian firms could get into long term contracts with foreign multinationals as outsourcing partners, thereby fitting into the lower end of the value chain with them. As part the recent improvements in regulatory disclosures by Indian firms, some pharmaceutical firms have begun reporting revenues stemming exclusively from contract research and manufacturing (CRAM) activities. The proportion of CRAM revenues to total revenues is a measure of the strategic focus of the

firm on becoming an international outsourcing partner through contract research and manufacturing.

5. ANALYSIS AND RESULTS

Cluster analysis was carried out on the strategic variables identified above with firms labeled as cases using the Ward's hierarchical technique of clustering through squared Euclidean distances. Ward's algorithm was used in earlier strategic group studies as well (Bogner, Thomas and McGee, 1996). Ward's method has a bias of balancing groups equally, though in our case the bias did not come in the way of formation of large groups when the data required as such. Clustering method involved usage of pairs of furthest objects for calculating the distance between two clusters. All the variables were standardized through Z-scores so that any large values of variables are not overemphasized. The number of clusters was identified by studying the agglomeration schedule that outlines the squared Euclidean distances between cases or clusters of cases with a good solution indicated by a sudden jump (gap) in the distance coefficient. Using these criteria, five distinct strategic groups were identified.

5.1 Existence of Distinct International Competitive Strategy Clusters

Table 1 displays the variable means and membership of the five distinct groups of firms based on the five strategic variables. The results of t-test comparisons between the group means of clustering variables found that the mean differences were significant, with each group significantly different from all other groups. The five distinct strategic groups of firms can be summarized as follows.

Insert Table 1 here

TMNC Group 1 consists of 18 firms marked by the high proportion of API or bulk drugs in their export revenues. They have filed very few ANDAs, have no NCEs under development and have a low proportion of CRAM revenues. The average R&D intensity of the firms of this group is the lowest among all the identified groups at 2.6% of sales. Leveraging on the country-specific competitive advantage of high skills in chemical synthesis and process research coupled with low manufacturing costs, firms belonging to this group have emerged as significant

international players in the API market. We call them *Exploiters* as they have primarily concentrated on exploiting their existing skills.

TMNC Group 2, consisting of 15 firms, is characterized by firms that have made some foray into the global generics market indicated by ANDA filings of over five per firm on an average. Some of the firms in this group have one or two NCEs too under development. These firms have also evolved from being pure API firms with the average share of API in exports at less than thirty percent. The average R&D intensity of this group is more than double that of the *exploiters* at 5.8 percent. It is evident that these firms have been making serious attempts to acquire new capabilities over and above their traditional strengths in order to foray into new markets such as global generics. We view this group of firms as *Explorers*.

TMNC Group 3 has two firms which resemble the *Exploiters* closely in that they too have a significantly large proportion of API sales in exports, no ANDAs and NCEs and low R&D intensity. However, they stand apart from the rest of the groups due to the fact that close to fifty percent of their revenues are from contract research and manufacturing (CRAM). Leveraging on the same set of competencies that Indian Pharmaceutical firms are traditionally endowed with, these firms have chosen to focus themselves to a niche segment of contract research and manufacturing. In all probability, they would also have started off as API suppliers to large international players, gradually gained the confidence of the firms that they are supplying to and converted their deepened relationship to an outsourcing partnership to the mutual benefit of both parties. We call this group of firms *Niche Players*.

TMNC Group 4 consists of four firms that seem to have traversed quite far on the evolutionary path towards becoming research-driven international pharmaceutical firms. On an average, the group has over 27 ANDA filings and close to 5 NCEs under development per firm. The average R&D intensity for the firms in the group is over 12 percent, close to leading global pharmaceutical firms in percentage terms. These firms are characterized by a relentless drive to acquire all-round capabilities to emerge as true international pharmaceutical firms. We call them *Potential Global Firms*.

TMNC Group 5 consists of a lone firm, Ranbaxy Laboratories. Ranbaxy is the largest pharmaceutical firm in India in terms of sales and over sixty percent of its revenues are accrued in foreign markets. The Firm's products are sold in over 100 countries with manufacturing operations in 7 countries and a ground presence in about 34 countries. It has a significant focus

on global generics markets as indicated by its 150 ANDA filings. It has 4 NCEs under development which is low for its size of operations. Given its characteristics, it can easily be termed as a *Global Firm*.

It follows from the existence of these distinct strategic group that different groups of firms have pursued different competitive strategies to become international. Hence, we propose that:

Proposition 1: Given the same politico-economic, institutional, temporal and industry context, TMNCs tend to adopt distinctly different international competitive strategies.

5.2 Linkage with Performance

The next logical step is to explore whether the distinct internationalization approaches of the groups are associated with any performance differentials. For this we have chosen two most frequently used performance measures in literature – a profitability measure, Ratio of Net Profit after Tax to Sales (ROS) and Return on Assets (ROA), a broad measure of returns on total capital employed in business. The mean values of these two measures for each strategic group are provided in Table 2. The profitability margin measure, ROS, is a good indicator of the extent of value addition carried out by the firm in terms of its product mix, whereas ROA is a generally accepted fair indicator of overall financial performance.

Insert Table 2 here

As regards the profitability measure (ROS), it is clear from Table 2 that the mean profitability margin is the lowest for Exploiters and it goes up substantially for Explorers and further up for Potential Global firms and Global firms. As can be expected, ROS of the Niche Players group is distinct from the other four groups. One-way ANOVA procedure confirmed that means of groups are significantly different from each other at a significance level of ten percent or lower. From this, it is reasonable to derive that, apart from the stand-alone group of Niche Players, the other four groups of Exploiters, Explorers, Potential Global and Global firms respectively are on a continuum of value accretion, with the potential value addition being the maximum for the strategic group of Global firms as reflected in its highest average profitability. From this, we propose that,

Proposition 2: The different competitive strategies of TMNCs have significantly different profitability and thereby value addition potential associated with them.

The second measure of performance, ROA, is a broader level indicator of how efficiently the firm has deployed its assets in business, irrespective of the business strategies followed in terms of portfolio of products and markets. Table 2 indicates that there is no discernible association between the different strategic groups and ROA. The strategic group of Exploiters, with the lowest mean ROS, has a mean ROA of 18.3% which is reasonably high and in fact, is higher than the strategic group of Potential Global firms with a much higher mean ROS. One-way ANOVA procedure confirmed the hypothesis that the ROA means of two or more groups are not significantly different. This indicates that different firms may choose to follow distinctly different internationalization strategies with distinctly different value addition potential, but each leading to similar results in terms of return on assets. Hence, we propose,

Proposition 3: Even as TMNCs adopt distinctly different competitive strategies with significantly different profitability potential, they may achieve similar overall performance in terms of return on assets.

6. DISCUSSION AND CONCLUSIONS

This paper attempts to throw light on the international competitive strategies of TMNCs through a strategic group analysis of internationalizing firms in the Indian pharmaceutical industry. It identifies significant variation in the competitive strategies adopted by the Indian firms given the same geographical, economic and industry context and in response to identical environmental stimulus. More importantly, it finds that these distinct internationalization strategies carry differential value addition potential, while leading to similar levels of profitability as measured by returns on assets, thus indicating evidence of equifinality of the different paths to multinationality.

Historically built capabilities in process research in a regulated policy regime and country level factor advantages leading to low costs (Joshi, 2003) seemed to have provided a group of Indian firms with advantages to emerge as *international suppliers of API or bulk drugs*. The

same set of capabilities enabled another group of Indian firms to emerge as preferred *outsourcing partners in contract manufacturing or process research for global pharmaceutical firms*. These two groups of firms seemed to have been content with *exploitation* of their idiosyncratic competitive advantages to achieve internationalization. Another group of firms emerged *as significant players in the global generics*, drugs that have gone off patent, primarily in developed economy markets such as US and Europe. This required *exploration* and acquisition of a new set of specialized, firm-specific capabilities - R&D capabilities in development of low-cost generics, technical/regulatory and marketing skills in developed markets. The last group consisted of firms aspiring to emerge as truly *research-based international pharmaceutical firms*. This strategy required Indian firms to literally 'become one of them (global pharmaceutical majors)' with acquisition of all-round capabilities – a strong R&D capability in new drug discovery, international presence, marketing and distribution capability, manufacturing competence and financial strength.

The strategy of exploitation of idiosyncratic resources and capabilities in foreign markets with similar environment follows from extant theoretical assertions on TMNCs (Dawar and Frost, 1999; Khanna and Palepu, 2006). However, the exploration and acquisition of new, all-round capabilities by taking advantage of external liberalization, such that a few of the TMNCs are able to compete with established MNCs even in the developed markets, is a new insight from our exploratory study. We would like to point out the substantive differences between our taxonomy of exploiters, explorers, niche players, potential global and global firms, and the typology of Dawar and Frost (1999) of defenders, extenders, dodgers and contenders. Firstly, all our categories of firms are internationalizing firms, whereas only two of the categories of Dawar and Frost (1999), extenders and contenders, are related to internationalization. Their other two categories, defenders and dodgers, relate to strategies to protect their position in the home markets. The same competitive strategy of exploitation of unique assets of a firm in foreign markets underlies both extenders and contenders On the contrary, three of our categories, explorers, potential global and global firms, require considerable acquisition of new capabilities.

What are the key determinants that have given rise to these distinct competitive strategies by TMNCs in the same political, economic, industry, institutional and temporal context? Why is

it that some firms chose to leverage mostly their existing capabilities[1] (Exploiters), while others had embarked on the ambitious journey towards becoming global majors by developing and/or acquiring new capabilities? To obtain a deeper understanding, we chose one firm from each of the distinct strategic groups randomly (Neuland Labs from TMNC_G1; Cipla from TMNC_G2; Dishman Pharma from TMNC_G3; Dr.Reddy's Labs from TMNC_G4; and Ranbaxy from TMNC_G5) and analyzed them as in-depth case studies using secondary data. We compared and contrasted these five firms in terms of three strategic actions that we felt were critical for internationalization in the pharmaceutical industry namely - trend in R&D spend; building manufacturing competence; and overseas mergers and acquisitions.

Chart 1 below compares the five firms in terms of R&D spend as percentage of sales revenues over five years ending 2005.

Insert Chart 1 here

Ranbaxy and Dr.Reddy's Labs have continuously increased their R&D spend - while DRL spends the highest in terms of percentage of operating income at over 10%, Ranbaxy has the highest R&D spend in absolute terms. Cipla's R&D spend is a respectable 4%, but Neuland and Dishman are not spending any significant amounts in R&D.

High manufacturing quality and international certifications are a prerequisite for getting acceptability in the international pharmaceutical markets. All the five firms have upgraded the quality of their manufacturing processes by initially going for quality certifications of Indian GMP and later on, international certifications such as USFDA and WHO-GMP. As of 2005, Ranbaxy and Dr.Reddy's have the maximum number of USFDA certified plants among the five firms at six each, followed by Neuland Labs which has two, Cipla with one USFDA facility and Dishman which is yet get any facility USFDA certified. Ranbaxy was the only one out of the five firms, which has globalized its manufacturing operations by spreading across seven countries, all of them conforming to international GMP requirements.

The strategy of overseas mergers and acquisitions (M&A) is cited to be one of the prime means of acquiring new resources and capabilities by TMNCs. Table 3 below provides a

[1] The terms 'resources', 'competences', and 'capabilities' have specific meanings in strategy literature (Teece, Pisano and Shuen , 1997). This paper does not delve into the finer meanings of these terms, but uses a broad term 'capabilities' to mean the resources, competences and capabilities that a firm needs to possess, acquire or develop to pursue successful strategies.

comprehensive list of foreign acquisitions between January, 2000 and March, 2006 by the five firms from the strategic groups. It can be clearly seen that Dishman, Dr.Reddy's and Ranbaxy have actively pursued the M&A route to acquire capabilities as well as market share.

Insert Table 3 here

From this discussion, it is evident that, while firms such as Neuland and Cipla chose to pursue strategies based on their exiting capabilities, other firms such as Ranbaxy, Dr.Reddy's Labs and Dishman Pharmaceuticals were active in systematically identifying, acquiring and developing a set of new capabilities necessary to succeed in both developing and developed markets. In other words, the latter categories of firms seem to possess capabilities which strategic management literature refers to as dynamic capabilities, defined as the capabilities by which the firm's managers 'integrate, build and reconfigure internal and external competencies to address rapidly changing environments' (Teece et al., 1997, p.516).

The findings reported in this paper have important implications for theory and practice. In contrast to the extant theorizing on the competitive strategies likely to be adopted by TMNCs, the findings of the paper indicate that, despite severe constraints and lower position on the scale of economic development, developing economies can throw up a few TMNCs that are globally competitive and are capable of posing stiff competition to the established MNCs from the developed economies. Armed with superior dynamic capabilities, these TMNCs may adopt various strategies such as overseas acquisitions, import of know-how, equipment, financial capital and so on, taking advantage of increasingly liberalized economies and may catch with the established MNCs sooner than later. The paper thus throws open a rich area for theory building – the role of firm level factors in shaping the internationalization process and strategies of TMNCs. However, these ideas need to be validated and rendered more generalizable through further empirical research. Large sample studies may be attempted to formulate and test specific hypotheses with regard to specific firm-level factors and dynamic capabilities that may impact the internationalization of TMNCs.

To sum up, the paper draws on the limited extant theory on competitive strategies of TMNCs, examines evidence from the Indian pharmaceutical industry and based on deductive and inductive reasoning, offers new insights. The paper also throws open fresh research

questions that need more theorizing efforts. We have only partially addressed the research question on why do firms follow different internationalization trajectories even though they are subjected to identical environments. We have tried to explain this through the lens of dynamic capabilities. However, why do some firms possess these dynamic capabilities that enable them to proactively seek and acquire new capabilities, while others do not? What are the primary sources or the drivers of the dynamic capabilities? There are other questions such as - why do some firms with near identical stock of resources resort to *exploration* and build distinctively different set of dynamic capabilities as opposed to mere *exploitation* of existing stock of resources and capabilities? Without doubt, follow up research studies addressing these questions and research ideas are likely to have significant implications for both theory and practice.

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Table 1: Variable Means for Strategic Groups and Sample

Strategic groups	*No. of Members*	*%_API*	*ANDAs*	*NCEs*	*%_CRAM*	*R&D percent*
TMNC_G1	18	93.4%	1.8	0.0	1.9%	2.6%
TMNC_G2	15	26.3%	5.6	0.4	0.0%	5.8%
TMNC_G3	2	51.8%	0.0	0.0	49.7%	2.5%
TMNC_G4	4	43.3%	27.5	4.8	4.6%	12.1%
TMNC_G5	1	12.0%	150.0	4.0	0.0%	9.5%
All groups	40	59.2%	9.4	0.7	3.8%	4.9%

Table 2: Means of Performance Measures for Strategic Groups and Sample

Strategic groups	*ROS %*	*ROA %*
TMNC_G1 – Exploiters	1.97	18.34
TMNC_G2 – Explorers	10.82	22.58
TMNC_G3 – Niche Players	7.83	14.11
TMNC_G4 – Potential Global Firms	11.27	17.17
TMNC_G5 – Global Firms	11.83	25.52
All groups	6.59	19.63

Table 3: Details of Foreign Acquisitions by Select Cluster Firms

Acquirer	*Target*	*Date*	*Deal Size (US$ Mn)*	*Remarks*
Dishman	Synprotec, UK	Apr-05	3.8	100% stake in UK firm with 20 years of customer relationships in US and Europe
Dishman	103S, Switzerland	Dec-05	Est. < 5 .0	100% stake in Swiss-based contract research firm
Dr.Reddy's	BMS Labs, UK	Mar-02	12.8	100% stake in UK based pharmaceutical firm
Dr.Reddy's	Trigenesis Therapeutics, USA	May-04	11.0	100% stake in US based dermatology firm
Dr.Reddy's	API business of Roche, Mexico	Nov-05	59.0	100% stake in API business in Mexico
Dr.Reddy's	Betapharm, Germany	Feb-06	570.3	100% stake in 4th largest generic firm in Germany
Ranbaxy	Bayer's generic business, Germany	Apr-00	Est. <5.0	No details available
Ranbaxy	Veratide, Germany	Jun-02	Est. <5.0	100% Veratide brand in Germany
Ranbaxy	Signature Pharmaceutical's Mfg unit, USA	Jul-02	Est. < 5.0	100% of liquid manufacturing unit
Ranbaxy	RPG Aventis, France	Dec-03	80.0	100% stake in fifth largest generic firm in France
Ranbaxy	Efarmes, Soain	Jun-05	< 5.0	100% stake in generic product portfolio
Ranbaxy	Terapia, Romania	Mar-06	324.0	96.7% stake in the Romanian Firm
Ranbaxy	Allen, Italy	Mar-06	Est. < 10.0	Purchase of Glaxo's unbranded generic business in Italy
Ranbaxy	Ethimed, Belgium	Mar-06	Est. < 10.0	100% stake in generic drug distributor

Source: MAPE Advisory Group, 2006

Chart 1: R&D Spend