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Subsidiary Initiative & Strategic Choice In Indian Software Subsidiaries of Multinational Corporations

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Abstract

In this paper, we investigate subsidiary initiative and strategic choice in the context of Indian software subsidiaries of multinational corporations. Contrary to earlier research, we find that high levels of subsidiary initiative are associated with subsidiaries that have low levels of integration and high levels of autonomy. We also find a new trend in the organizational arrangements of software subsidiaries within multinationals in that some multinational parents are allowing subsidiaries to chart their own destiny in return for a dilution of a part (or whole) of their stake in the subsidiary.

Subsidiary Initiative & Strategic Choice in Indian Software Subsidiaries of Multinational Corporations

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Background and Objectives of this Study

Over time, the raison d'etre of the multinational corporation has shifted from the exploitation of brands or technologies developed in its home country (Vernon, 1966) to the benefits of a distributed global network (Ghoshal and Bartlett, 1991). Reflecting this shift, the role of the multinational subsidiary has become more dynamic, and attracted the interest of management scholars. This increasing interest in subsidiaries is reflected in the large body of research that has investigated the diverse roles of subsidiaries (Bartlett and Ghoshal, 1986; Birkinshaw, 1997; contributions by different authors in Birkinshaw and Hood, 1998a; Birkinshaw and Hood, 1998b; Birkinshaw, Hood and Jonsson, 1998; Taggart, 1998).

While the setting up of a subsidiary is a conscious choice, the role of the subsidiary can be explained from three different conceptual perspectives (Birkinshaw and Hood, 1998b). The first perspective, home office assignment, suggests that the subsidiary is an extension of corporate strategy and exists to perform a mandate set for it by the parent. This is consistent with conventional notions of international business such as the Product Cycle Theory (Vernon, 1966). In this perspective, subsidiaries would first be set up in developed markets outside the home country so as to meet the increasing demand in these markets (Stage 2 of the Product Cycle), and would be set up later (Stage 3) in developing countries when the product is mature and the lower labour costs of developing countries would enhance competitiveness. The roles of the subsidiaries would correspond to this logic. The second perspective, subsidiary choice, is based on the strategic choice argument of Child (1972), and indicates that the role played by the subsidiary is shaped

by the choices and actions of the subsidiary. The third perspective, environmental determinism, attributes the role of the subsidiary to environmental factors such as pressures of the host country, and the resources in the subsidiary's environment.

Though no comprehensive tests of these different perspectives are reported in the literature, a meta-analysis of research studies and case descriptions suggests that subsidiary roles evolve over time, subject to the influence of the organizational context (e.g. the administrative heritage of the corporation and its subsidiaries, the degree of autonomy allowed to the subsidiary, the extent to which the subsidiary is integrated with the rest of the multinational network, etc.) and environmental factors (such as the degree of customization needed in local markets, the "quality" of the national diamond in which the subsidiary is located and the attitude of the host country government towards foreign investment and multinational corporations). Thus in the case of the entry of Kentucky Fried Chicken into the Japanese market (Bartlett and Rangan, 1992), an entrepreneurial subsidiary manager was given considerable leeway to make changes in the menu and format so as to facilitate entry into a culturally different yet financially important market. Yet, at a later stage, the same subsidiary was under pressure to narrow its deviations from KFC's global formats so as to ensure a more consistent global eating experience. In the case of Richardson Hindustan Ltd. (RHL), an Indian subsidiary of Richardson Vicks Inc., the parent company was willing to consider proposals from the RHL management for investment in research into local herbal cures so as to improve its image with the Indian government as well as pursue the possibility of local tax benefits (Aguilar, 1986). In the case of Canadian subsidiaries of multinationals, Birkinshaw (1997) has shown that the nature of subsidiary initiative is related to the organizational context – initiatives by the subsidiary in the internal market of the multinational were linked to higher levels of integration and lower levels of autonomy, while initiatives in the global market were linked to lower levels of integration and higher levels of autonomy.

The literature also suggests that the degrees of freedom available to a subsidiary are a function of the subsidiary's track record, and the track record of the top management of the subsidiary. Thus, at RHL (Aguilar, 1986), another proposal to manufacture an

intermediate for global use by the parent was looked at by corporate headquarters with some skepticism in the face of an earlier failure to scale up on a manufacturing investment, though at the same time the parent was not averse to considering proposals from RHL in view of the fine performance record of its manager, Gurcharan Das.

All the empirical studies in this area are based on subsidiaries in the developed world, as are most of the cases (with a few exceptions such as the RHL case cited above). Further, most of the research in this area has looked at manufacturing or "integrated" subsidiaries and their well-established challenges of balancing local responsiveness with the efficiencies of scale and integration (Bartlett and Ghoshal, 1989). Recent years have seen a large increase in foreign direct investment by multinational corporations in developing countries, particularly in India and China. In the case of India, the software industry has been a prominent recipient of such investment. The successful evolution of the Indian software industry has been globally acknowledged as a case of successful industrial development by a developing country in a knowledge-intensive field (Arora, et. al., 2001; Arora and Athreye, 2002; Krishnan, 2003). Though this development was not driven by multinational subsidiaries (which currently account for 25-30% of software exports from India), these companies have played an important role in building India's brand image in software, setting quality standards, developing local capabilities, and pioneering new business models such as offshore development (Patibandla & Petersen, 2002; Krishnan, 2003).

The objective of this paper is to explore subsidiary initiative and strategic choice in the case of multinational software subsidiaries in India. This exploration offers the potential of interesting insights because of some features of the software work undertaken by these companies. Firstly, the most common explanation for multinational investment in Indian software subsidiaries is the cost advantage associated with the lower labour cost of software programmers in India. To optimize this benefit, rationality would suggest tight coupling of the Indian software subsidiary to the operations of the parent corporation and little room for subsidiary initiative. Secondly, in most cases, the software development activity in India is externally-focused, i.e. it is to augment the research and development

and commercial activities of the multinational for the global market rather than to address an Indian market opportunity. This would only reiterate the rationale for tight integration and a reduced role for subsidiary initiative. Thirdly, the government of India has played a benign role in the development of the software industry and has placed few demands on it, so there is hardly any need to shape the subsidiary's activities to local government requirements or pressures. These arguments suggest that there would be little reason for subsidiary initiative, and hence a limited strategic role for the subsidiary management. This study seeks to explore whether this is actually the case. If, contrary to expectations, there is a role for subsidiary initiative, how and why does it arise? And what, in that case, are the strategic choices that the subsidiary management makes?

Methodology

This study is exploratory in nature and seeks to understand a complex phenomenon in a previously under-investigated context. Given the nature of the study, existing case descriptions of multinational software subsidiaries in India offer a useful starting point. Though these cases may not have been explicitly written to explore the issues we have listed above, they provide rich material on which further in-depth studies can be based. The use of these cases has both advantages and disadvantages. Since the cases were not intended to focus on these research questions, the interviews with company respondents may not have been biased in any particular way vis-à-vis these questions. However, the main drawback is that we may have to speculate or read between the lines more than in the typical case-based research.

Fortuitously, rich cases are available on the Indian software subsidiaries of three prominent multinationals. The first one on Motorola India Electronics Limited (Ramachandran and Dikshit, 2002), hereafter referred to as MIEL, describes the evolution and management challenges faced by Motorola's Indian software subsidiary from its inception in 1991 till 2002. MIEL has a distinctive position in the history of the Indian software industry because it was the first organization in India to be rated at Level 5 on the Software Engineering Institute's Capability Maturity Model (SEI-CMM). This

constituted a landmark in the evolution of quality standards in the Indian software industry and was subsequently emulated by other Indian and foreign-owned software companies in India resulting in the country claiming the largest number of companies at that level in the world. The second case by Ramachandran and Raghavan (2003) describes the growth of Philips' software subsidiary in India, hereafter referred to as PSC, from its inception in 1996 till 2003. The third case written by Thomke and Nimgade (2002a and 2002b) describes the evolution of the Indian software subsidiary (Siemens RDC India) of the Siemens Information and Communication Network between its inception in 1994 and the year 2000.

In later sections, we also bring in some insights from (1) the consulting experience of the author with the multinational software subsidiary of a large MNC in the information technology industry, and (2) published reports on two other prominent companies, Hughes Software Systems and I-flex Solutions.

Findings from the Cases[1]

1. Reasons for Founding:

- In the case of MIEL, in the early 1990s, software was becoming increasingly important to Motorola's business. The corporate management was dissatisfied with the mindset of existing software groups within Motorola's product sectors and felt the need to establish new quality standards for software. The top management therefore decided to adopt a "clean-sheet" approach (p. 2) and set up a "process-oriented entity outside the core Motorola organization" (p. 2).

- In the case of PSC, it was founded in 1996 as a result of shortage of qualified software people in Europe (particularly in their home country, Holland) and the growing software intensity of products. PSC was not really a corporate initiative

[1] The findings here are from the cases on MIEL (Ramachandran & Dikshit, 2002), PSC (Ramachandran & Raghavan, 2003) and Siemens RDC India (Thomke & Nimgade, 2002a & 2002b).

but was driven by individual businesses, and primarily by the Consumer Electronics business, though the other businesses got involved subsequently.

- The Siemens RDC India case attributes its founding "at least partly to avail of inexpensive – at 20% of the German labor costs – and readily available English-speaking software specialists" (p. 10).

Finding 1.1: Increasing software intensity of their products, shortage of resources (both internally and in the geographies where they are based), and dissatisfaction with existing capabilities induced these companies to set up software subsidiaries in India where software professionals were available at low cost.

2. Is there evidence of subsidiary initiative?

- In the case of MIEL, the broad role of the subsidiary was defined by the corporate office, but its translation into practice was left to subsidiary management. A senior member of Corporate Research staff was assigned to head MIEL. The initial focus was only on getting the right team (consisting of people with a positive attitude to experimentation and learning) and quality processes in place. MIEL did not pursue business from Motorola product divisions until the subsidiary head was convinced that they had their quality processes in place. MIEL was set up as profit centre with "complete freedom to partner with any of the product sectors within Motorola to grow its business" (p. 3) but this did not ensure that projects came their way. MIEL had to struggle to get projects and the initial projects came thanks to managers of Indian origin in Motorola product divisions who were willing to try out MIEL.

- At a later stage, when MIEL was seven years old, the then subsidiary manager proposed a new business model whereby only one-third of revenue would come from traditional service projects and the remaining two-thirds would be generated from products and solutions. He presented this vision at a Global Software Group

Managers' workshop in the summer of 1998 and obtained approval. To facilitate this transition, he set up systems engineering and business development groups, a senior management forum to consider business proposals, and decided to outsource less challenging work.

- In the case of PSC as well, projects did not come on a platter. The local management had to do a lot of selling and take some risks to get projects. For example, one of the first big breaks for PSC was the development of a user interface software for colour TVs. The internal customer in Europe was unable to commit to an open-ended time-and-material contract due to budgetary constraints. PSC was not supposed to take up fixed price contracts because they did not have any mechanism to cover losses in case their estimation turned out to be wrong. "But given that this opportunity would enable PSC to establish credibility as a key player and enter the 'organization's mind', [consumer electronics lab head] Nagarajan convinced the CTO of CE to underwrite the losses, if there were any" (p. 10). He then formed a team consisting largely of fresh engineers from universities to undertake the project.

Finding 2.1: Subsidiary initiative played a visible role in obtaining business at the early stages, when the liability of country of origin had to be overcome and organizational credibility built.

Finding 2.2: Subsidiary initiative is also critical if the subsidiary wishes to re-position itself in the multinational network.

3. Motivations for Subsidiary Initiative

- The 1998 attempt to move MIEL away from service project based work was justified by the MIEL management on the basis of a need to leverage domain expertise, and to provide excitement and challenge to MIEL professionals. This initiative was led by an Indian, then newly appointed as subsidiary manager, who

had been with MIEL since its inception, and was keen to take MIEL to a new level.

- By 2003, the PSC management was concerned about the rising costs and the narrowing of the differential between development costs in India and elsewhere. They were also conscious of the emergence of other locations that possibly offered lower costs. They were keen to create a distinctive position for PSC as an Innovation Centre within Philips.

- The PSC case quotes a PSC manager: "We want to be a highly valued partner..... It is not our customers' wish to have us as a partner but our wish to be one" (p. 30).

- The Siemens RDC India case quotes a local manager: "We would like to climb the value chain to work with customers, create growth and career opportunities, and start charting our own destiny" (p. 15).

Finding 3.1: In the early stages, as indicated in item 2 above, survival and growth were the main drivers of subsidiary initiative.
Finding 3.2: In the later stages, subsidiary initiative was driven by (a) perceived pressures to ensure that the value created by the subsidiary exceeded (rising) manpower costs, (b) the aspirations of managers, and (c) the need to retain people.

4. Factors influencing subsidiary initiative

- MIEL's success led Motorola to establish software development centres in other locations. MIEL's software development processes were transferred to these new centres, often by personnel from MIEL. Managers from MIEL were also deputed to head some of the other centres. In 1997, these centres were integrated together into a Global Software Group (GSG) and the GSG took upon itself the task of marketing the software activities of the different centres to the Motorola product

divisions, and allocating projects to the different software development centres. The rationale for this was to ensure equitable allocation of work to the different centres. Though this could have become a constraint to MIEL's efforts to go up the value curve, it strengthened the resolve of MIEL's management to differentiate itself from the others and be "first among equals."

- As described in item 3 above, the 1998 strategic shift of MIEL necessitated the creation of systems engineering and business development groups. The case indicates that it was difficult to get experienced engineers to move from traditional operational and project execution roles to the systems engineering group because of a perception that delivery of projects was what counted in the organization. The business development group tended to get overwhelmed by the number of proposals it received as well as by the arguments of the technical staff who made the proposals

- The MIEL case does not indicate the source of funding for these systems engineering and business development activities.

- MIEL's 1998 initiative to move the business model away from service projects to products and solutions met with only partial success. Out of five new initiatives pursued, three failed to get commercialized. For the two initiatives that received business buy-in, MIEL was unable to realize more than compensation for its time and effort in headcount terms, i.e., it was unable to appropriate any of the value it had created for the product divisions beyond the costs it had incurred.

- While MIEL itself sub-contracted some repetitive tasks to other local companies, parent company divisions also directly contracted with third-party software companies. MIEL found that it was actually forced to compete with companies to which it had itself sub-contracted projects earlier. At the same time, however, MIEL did not have the freedom to pursue business outside the Motorola network.

- In PSC, "by far the biggest challenge PSC had faced in its six-year history was the retention of talent within the organization" (p. 32).In the case of PSC, high rates of attrition influenced the decision of the parent company to set up a software centre in Hungary in 1999 (though this centre was subsequently closed following the post-2001 downturn). The managers in the parent businesses believed that people at PSC did not have enough domain expertise, and did not stay long enough in the company to develop it. They felt that because of this lack of domain expertise they had to constantly give more detailed specifications and requirements than would be otherwise necessary.

- PSC created a management tool to track its progress on the value curve by identifying the location of each project on a customer needs hierarchy. This five stage chart enabled the management to see how the subsidiary was progressing on this dimension. However, the case does not provide any information as to the progress made by the subsidiary in ascending the value curve.

- In the case of Siemens RDC India, the ICN management was reluctant to shift more complex work to India because of the lack of domain competence and testing infrastructure in India. Also, though the RDC India had established itself for enthusiastic execution of projects by young engineers, ICN managers were concerned by high attrition rates, which in turn impeded the accumulation of domain-specific knowledge in the RDC. At the same time, engineers at Siemens RDC India were keen to work on dream projects that would "involve 'leading-edge' areas such as mobile communications or Internet protocols (rather than areas such as quality testing or integration)" (p. 12).

- Siemens RDC India was part of a network of regional development centres within the Siemens ICN business. In allocating projects to subsidiaries, ICN was influenced by the competence base of each subsidiary, its closeness to market, and its track record. However, Siemens RDC India could not change its capability profile very easily since experienced people were not easily available in the

labour market, and the development of capabilities within depended on obtaining projects from ICN.

Finding 4.1: Barriers to subsidiary initiative include the administrative heritage of the subsidiary itself, difficulties in evaluation of business potential due to the limited links to the market, availability of funding to develop capabilities, and attrition of qualified people (with its implications for parental perception of the subsidiary as well as the building of domain competencies).

Finding 4.2: The competitive environment for a software subsidiary consists not only of other software or development subsidiaries within the parent company's network, but also third party software vendors. Corporate mandates to structure competition (such as in the case of the Motorola GSG) influence the competitive behaviour of subsidiaries. Competitive re-positioning is constrained by the track record of the subsidiary as well as its ability to obtain resources to develop new capabilities.

Finding 4.3: Going by MIEL's experience, it is difficult to break out of one position on the value curve and move to a higher position. The nature of past relationships with internal customers (in this case contracting based on manpower effort) and the strong bargaining position of the customers within the product divisions are difficult to overcome. These barriers are made more difficult by parent company policies such as asymmetries in the flexibility open to product divisions (can source from anywhere) and software subsidiaries (can supply only to parent company divisions).

5. Distinctiveness

- Though, over time, MIEL developed a range of domain competencies related to the technologies going into the products of Motorola's product divisions, its distinctiveness arose largely from the software engineering processes that it has created and diffused across the other software development centres in Motorola.

- Software engineers in ICN had traditionally worked on mainframes. Siemens RDC India was differentiated largely based on the PC-based software skills that it offered and it was a natural location for projects that required such skills. However, there is repeated evidence in the case of how the lack of domain knowledge and competence related to telecommunication switching products came in the way of Siemens RDC in India playing a bigger role in ICN. The engineers' lack of domain familiarity implied the need to specify minute details that would typically not need to be specified to engineers experienced in the field.

Finding 5.1: The distinctiveness of the subsidiary can be the result of either organizational strategic decisions or of environmentally determined factors. In the case of MIEL, the early focus on software engineering and software quality helped create distinctiveness on this dimension. However, the distinctiveness of Siemens RDC India was largely related to the environmental factor of the large availability of engineers with PC-related software skills.

6. Organizational Context

- In the case of MIEL, the subsidiary management used organizational re-structuring as an important tool to influence the nature of working and the development of capabilities. For example, to build better customer relationships, one subsidiary manager organized MIEL into three customer-focused software development centres, each focusing on a given Motorola product division. Another subsidiary manager subsequently reorganized MIEL into technology domains to increase the depth of technical expertise, reduce duplication, and thereby reduce costs.

- At PSC, each division corresponded to one of the global product groups of Philips (consumer electronics, semiconductors, medical systems, etc.). This partly reflected the way the Centre had been founded, but also represented the way the businesses functioned in the marketplace. The PSC management encourages close

working between the divisions and their customers, but fought to retain the right to shift people from one project to another within each division and across divisions.

- At Siemens RDC India, the subsidiary worked with only one business of Siemens (Siemens ICN) and was closely aligned with it.

Among the three cases, as is evident from the case details presented in earlier sections of this paper, MIEL displays the most subsidiary initiative, followed by PSC and then by Siemens RDC India.

Finding 6.1: Subsidiary initiative in software subsidiaries is the highest and the most sophisticated in subsidiaries that have higher autonomy and lower levels of integration with the parent.

Discussion

The facts of the three cases presented above indicate that some of the assumptions with which we started are not fully correct. Though the three cases indicate that the multinational corporations were influenced by the cost savings of locating software development activities in India, there were other important drivers such as shortages of people resources in their home countries, and the desire to build new paradigms of working far away from the influence of the administrative heritage of the parent. Surprisingly, though, in two of the three cases, there is little evidence of tight coupling between the software subsidiaries and the parent company/product divisions in the sense that even after setting up the subsidiaries, the parent company/divisions did not appear to have a clear plan for how they would exploit the subsidiaries in terms of getting software projects done on a continuing basis. Instead, subsidiary managers had to press for projects to be allocated to them.

As expected, there is no evidence of the subsidiaries moulding their activities in any way to meet the expectations of the government. As has been reported by other studies on the Indian software industry (such as Arora, et. al., 2001), the government appears to have played a hands-off role in the development of this industry, and hence multinational software subsidiaries were not under any pressure to "please" the government (cf. RHL case cited above).

Evidence from these three cases of Indian software subsidiaries of multinational corporations suggests a variety in the extent of strategic initiatives taken by the subsidiaries. In the case of MIEL, subsidiary initiative (establishment of software quality standards and processes that did not exist earlier in the company) clearly enabled the survival and growth of the subsidiary, and helped it establish itself in the network of the multinational corporation. Later, MIEL sought to change its business model to products and solutions rather than just executing service projects, again an instance of subsidiary initiative. In the case of PSC, proactive risk-taking by subsidiary managers enabled it to create a niche for itself in the network. Siemens RDC India was relatively tightly coupled with the parent and there is no explicit evidence of subsidiary initiative, though there is a suggestion of subsidiary aspiration. As summarized in finding 6.1 above, subsidiary initiative in the software subsidiaries we have studied is the highest and the most sophisticated in subsidiaries that have higher autonomy and lower levels of integration with the parent. This conflicts with the finding of Birkinshaw (1997) who found that internal market initiatives were associated with high levels of integration and low levels of subsidiary autonomy. Birkinshaw explained this finding by attributing the ability to taken on internal market initiatives to credibility with the parent which was built through frequent communication and close working with the parent (hence low autonomy).

How do we explain the difference in the nature of software subsidiary initiatives compared to the initiatives studied by Birkinshaw? Software subsidiaries are quite different from the traditional sales operation or integrated (manufacturing + marketing) subsidiaries of MNCs that have been the subject of most earlier studies. For one thing, they are focused on a narrow range of tasks. Further, they are staffed exclusively by

"knowledge workers" – highly qualified scientists and engineers, typically with post-graduate degrees, and often with education or experience outside the country. While this profile is no different from the profile of an employee of any technology-intensive activity anywhere, there are differences in the job environment and motivation of employees that impact the management of a software subsidiary. Compared to the parent company's R&D centre, software subsidiaries in India tend to have employees with a lower age profile and less domain expertise. However, the bigger difference is in the career aspirations of employees. While R&D personnel in developed countries tend to be wedded to their domain and think nothing of spending their whole career in a single organization if that allows them to pursue their research interests, in developing countries software subsidiary personnel seek upward mobility both economically and socially, that is both in terms of remuneration and position. Since a number of multinationals have entered India in a relatively short span of time, and local companies also offer a number of challenging jobs, competition for manpower is intense, and this makes the task of retention of manpower particularly difficult. In particular, manpower retention in technical roles is a challenge as the more ambitious employees move to managerial jobs that carry higher remuneration and allow movement up the corporate ladder. While multinationals are able to attract talent thanks to their brand, reputation, compensation and the lifestyle that the compensation allows, retention is thus a challenging task.

These differences are important because they create tension in the relationship between the parent (particularly senior R&D and technology personnel at headquarters) and the subsidiary. Managers in the parent doubt the domain expertise of subsidiary employees because the latter have spent just a few years in the domain compared to dozens of years spent by parent company employees. These R&D managers, having spent their whole career in a single domain, stress the importance of experience, as in their understanding, knowledge is cumulative and has a high tacit component. This knowledge is gained as a result of "learning by doing" and can not be easily transferred through training. They are surprised to see engineers in their software subsidiaries make mistakes which a person with domain expertise (such as an R&D engineer in the parent company's R&D centre) would not make. They are even more concerned when a person in whom they have

"invested" leaves the company after a few years and the process of knowledge transfer has to be repeated. The supervisory leadership in the software subsidiary has the task of balancing the expectations of the parent company R&D managers with the aspirations of their software engineers.

To overcome the "deficiencies" in domain competence, parent company R&D managers are inclined to divide work into easily executable packages with clear deliverables. These packages are clearly defined and involve implementation of algorithms already developed at the parent company R&D centre, testing of code, simulations, generation of output data, etc. In other words, the tension on account of perceptions of manpower mismatch gets translated into lower level, repeatable work. Since R&D managers in the parent are in any case concerned by the loss of jobs and the movement of work outside their home country, this provides a convenient reason to oppose transfer of higher value work overseas.

At the same time, the supervisory leadership in the host country is struggling with the problem of retaining talent. The general belief is that in addition to compensation and employee benefits (such as good canteen facilities, a gymnasium and flexi-time working), the promise of challenging, intellectually-stimulating work is an important motivator of software professionals (Krishna, Ojha & Barrett, 2000). The subsidiary management needs to feel that it is doing cutting edge work for its own morale as well. Besides, nationalist ambitions and a media focus on products developed in the host country (newspapers in Indian give considerable coverage when multinational subsidiaries located in India develop identifiable products or cutting edge technologies) are drivers of the notion that software subsidiaries need to keep ascending the value ladder. As labour costs increase, the cost advantages of routine work decline and there is the possibility of alternate locations looking more attractive as indicated in the PSC case – this is another motivation to move towards higher value-added work.

Thus subsidiary initiative by software subsidiaries in India is partly a result of subsidiary managers seeking to cope with the environment in which they operate – the pressure of

retaining and motivating talented and ambitious engineers with numerous career options; rising labour costs; achieving their own career aspirations; pressures from the media and wider societal expectations; and seeking to control their own destiny at a time when there is a sense that "India's time has come". Perhaps these forces are not as strongly at work in the Canadian subsidiaries that Birkinshaw (1997) studied. An alternate explanation is that given the physical and cultural distance between India and the home country of the typical multinational parent, for an Indian software subsidiary, internal market initiatives take on the magnitude and challenge of the global market initiatives of Canadian subsidiaries which were associated with low integration and high levels of autonomy.

Emerging Trends & their Implications for Research in this Area

Some other trends in the evolution of the relationship between software subsidiaries and their parents are visible. One trend is the high profile shifting of entire product or component development and maintenance responsibilities to Indian subsidiaries (such as in the case of Oracle, Intel, Adobe, Texas Instruments, etc.). In many cases this is of products that are already mature and therefore further product development has to be at a low cost. In a few cases this is of new products as well. To what extent these shifts are due to parental decisions and to what extent to subsidiary initiative is unclear and merits further investigation.

Anecdotal information based on discussions with the subsidiary manager of another multinational software subsidiary in India suggests that there are both "pull" and "push" factors involved. The "pull" from the Indian software subsidiary is driven by the forces outlined in the previous section. The "push" comes from business managers in the parent who are keen to cut costs to improve competitiveness. These business managers are interested in crafting a new "business-logic" driven relationship with their software subsidiaries in India that they could never build with highly independent corporate or divisional R&D set-ups in the parent company. The re-structuring of large multinational corporations under shareholder and analyst pressure to improve operational performance provides the opportunity for software subsidiary managers in India and business

managers in the parent company to work together, resulting in the transfer of product ownership to the Indian subsidiary. Subsidiary managers have the challenge of identifying and seizing such opportunities.

In another development, as the trend towards global outsourcing gathers momentum, many multinational parents are willing to consider new organizational arrangements. Outsourcing of R&D and software to third parties is increasingly common as many companies see their core strength in their brand, understanding of the market and distribution rather than in R&D or technology. With product proliferation becoming more commonplace, and the need to launch large numbers of products in compressed time frames, companies seek innovative, risk-sharing relationships with third party product developers. For example, in the telecom domain, South Korean giant Samsung is willing to put in the market, under its own brand name, handsets developed by third parties on a revenue-sharing basis, but with the risk of failure borne primarily by the developer of the handsets.

In this environment, wholly-owned subsidiaries are placed under scrutiny, particular over their costs. Third-party R&D service and software vendors eager to expand their business are knocking at the doors of multinationals offering attractive rates and quality manpower. Even mature software and R&D subsidiaries are feeling vulnerable under this pressure. At the same time, driven by national pride and desires for challenging work, they are seeking greater ownership over their work and a greater say in controlling their own destiny.

For the more entrepreneurial subsidiary, one possible approach is to re-define the subsidiary-parent relationship (See Figure 1). Conceptually, this is analogous to the changing nature of the employment contract proposed by Ghoshal and Bartlett (1997). While the traditional employment contract consisted of an employer offering lifetime employment in return for the employee offering loyalty in executing the company's strategy faithfully, the new employment contract consists of employees being responsible for their own competitiveness and learning with the role of the top management being to

support employees' entrepreneurial initiatives. This transition is described as moving from "Loyalty for Job Security" to "Competitiveness for Growth Opportunities."

Translated into the subsidiary-parent relationship, the traditional model can be called "Loyalty for Security in the MNC Network." Under this model, the subsidiary implements the parent's strategy faithfully and in return the parent ensures the subsidiary's continued existence. The new model is "Competitiveness for Growth Opportunities," where the empowered subsidiary is responsible for its own competitiveness and learning, and the parent supports the subsidiary's entrepreneurial initiatives.

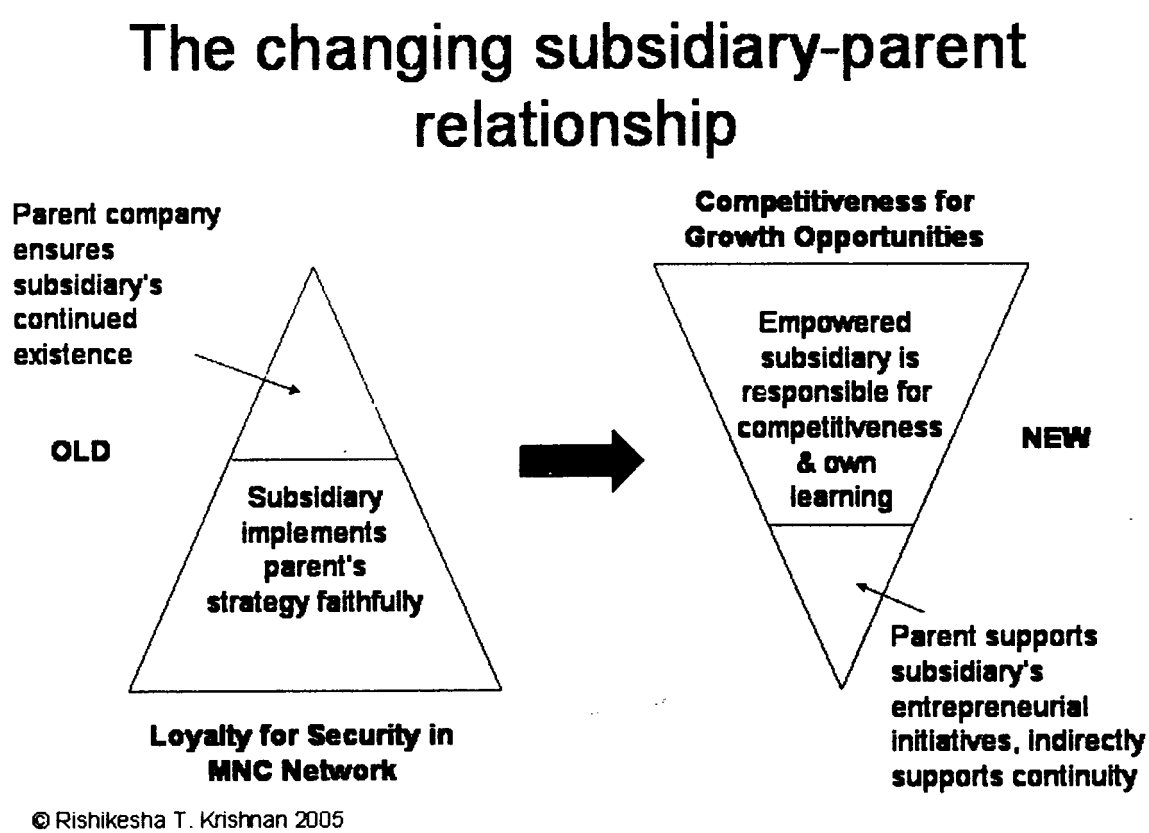

Figure 1: The Changing Subsidiary-Parent Relationship

What does this mean in practice? Consider the case of Hughes Software Systems (HSS). Started in India as a subsidiary of communications multinational Hughes, it focused on projects for its parent to start with and developed a reputation as one of the few multinational subsidiaries to be doing high-end telecom software product development in India. Over time, HSS started taking on third-party projects, and its parent diluted its stake through a successful initial public offering. HSS continued to sharpen its skill profile, and combined with the quality of the subsidiary's management (CEO Arun Kumar, originally from Hughes, has led the company through its varied transitions) this attracted the attention of high-tech manufacturing giant Flextronics that has purchased the controlling stake in the company and renamed it as Flextronics Software Systems. The Flextronics decision is evidence of the competitiveness of HSS, and clearly HSS would not have reached this stage had it not been allowed to evolve on its own entrepreneurial path.

The case of another successful software product company in India, I-flex, is similar. Starting as a Citicorp subsidiary, it developed a successful banking product for Citibank. To enable it to access a wider customer base, Citicorp transferred its holding to a venture arm and floated a part of the equity through an IPO. Recently, the venture arm's holding was sold to software giant Oracle. This is expected to remove any misgivings that other banks have about I-flex's Citicorp connections. Yet, I-flex will continue to service Citibank operations in different countries where its products are installed.

Common across the HSS and I-flex cases are the subsidiaries' entrepreneurial initiatives, and the willingness of the parents to provide the space for these initiatives to flower. The sweetener in both cases was presumably the ability for the parents to monetize (at handsome multiples!) the value created by the subsidiaries. In the long-run both the parents and the subsidiaries appear to have benefited.

These new developments suggest that a promising new stream of research on multinationals will open up if one can ask the right questions. In a recent interview, the global head of the Boston Consulting Group identified the networked organization as the

organization of the future (Baishya, 2005). With multinationals exhibiting fluidity and shifting relationships, new paradigms to study multinationals and their networks will need to emerge.

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