

**MNC Subsidiaries:**  
**Local-Global Hubs for Innovation**

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## **Abstract**

The multinational company (MNC) as a globally distributed innovative network in which R&D activities, innovation and technological advancement are increasingly undertaken by foreign subsidiaries, is a now popular view. Underpinned by both network and resource-based views of the firm, this study contributes to the emerging literature that takes a 'subsidiary perspective' of the MNC. Giving explicit recognition to each of the subsidiary's network partners, and combining this with subsidiary levels of capabilities and innovation, has allowed the researcher to delineate the differential innovative ability of four high-technology subsidiaries located in close geographic proximity. Twenty-four semi-structured interviews were used to collect the data.

The study makes a number of contributions. Firstly, it finds that the extent of subsidiary innovation depends on the levels of research and development within the subsidiary's scope. In addition, it provides indication as to why only a limited number of network partners actually influence subsidiary innovation. This study's main theoretical contribution is the development of a new model of subsidiary innovation that illustrates the importance of subsidiary 'combinative capability' in integrating its various sources and capabilities for greater innovation.

## **Keywords:**

MNC-Subsidiary Relations; Subsidiary Development; Subsidiary Innovation; R&D; Combinative Capability

# **MNC Subsidiaries: Local-Global Hubs for Innovation**

## **1. Introduction**

A common focus of research in the field of international business has been the globalisation of firms across a wide spectrum of industries, and the strategies adopted by these firms to create a global competitive advantage (Phene & Almeida, 2008). One aspect of these strategies involves the globalisation of the innovative activities of multinational companies (MNCs), particularly in high-technology industries (Almeida & Phene, 2004; Frost & Zhou, 2005). The view of the MNC as a globally distributed innovative network is gaining increased popularity, in which R&D activities, innovation and technological advancement, are increasingly undertaken by foreign subsidiaries (Andersson et al., 2002; Birkinshaw & Hood, 2001; Holm & Pedersen, 2000).

By virtue of the MNC structure, spanning multiple geographic locations, subsidiaries' localisation in diverse environments can serve as listening posts by "tapping into" localised knowledge (Cantwell, 1995). Leveraging knowledge within, and transferring knowledge back to the MNC enhances innovation and new product development (Hansen & Løvås, 2004; Subramaniam & Venkatraman, 2001) and contributes to the ability to compete globally. Concerning the development of innovations in the MNC, it is argued that rather than being passive recipients of centrally developed innovations, subsidiaries undertake their own innovation and technological development, and as a result, some of them acquire more important roles within the MNC, such as centres of excellence (Frost et al., 2002; Holm & Pedersen, 2000), and global innovators (Gupta & Govindarajan, 1991).

## **2. Theoretical Background**

The view of the MNC as a geographically dispersed network emphasises the internal network of relationships between different units and highlights the fact that MNC subsidiaries may be considered to be simultaneously embedded in two distinct network contexts, with the potential to access resources from two distinct knowledge contexts. First, subsidiaries are, of course, a part of a MNC that has the capacity to share knowledge across its various units (Bartlett & Ghoshal, 1989). This is its corporate (or internal) network, and is defined by the legal boundaries of the firm. The ability to leverage knowledge, resources, technology etc., from other subsidiaries within the MNC contributes to innovation and competence development (Hansen & Løvås, 2004; Subramaniam & Venkatraman, 2001) to the benefit of both local and global operations.

A second network is the subsidiary's external local context, made up of the subsidiary's involvement in relationships with counterparts external to the MNC, in their respective local markets. Examples include business relationships and 'the interstices between firms, universities, research labs, suppliers, customers', (Powell et al., 1996: 118), and local competitors, regulatory agencies, host government, etc. Schmid & Schurig (2003) highlight the importance of the external environment in generating new knowledge, ideas and opportunities. The subsidiary both influences and is influenced by the specific web of counterparts with which it interacts (Andersson, Forsgren & Holm, 2001, 2002). Each MNC faces a unique external environment that places specific requirements on its behaviour, in addition to which the internal corporate context of individual subsidiaries differs. The variation resulting from subsidiaries being embedded in idiosyncratic

networks, i.e., the distinct configuration of an individual subsidiary's relationships with corporate and external network counterparts vis-à-vis that of other MNC subsidiaries (Forsgren et al., 2005), implies that the knowledge and competence that a subsidiary develops are unique and of potential use in the operations of other MNC units (Andersson, Forsgren & Holm, 2001, 2002), who may use these locally generated capabilities in a synergistic manner (Rugman & Verbeke, 2001).

Similarly, Andersson et al., (1999) state that as every subsidiary is confronted with a specific external business network it can be assumed that, in total, foreign subsidiaries will accumulate heterogeneous capabilities and differently contribute to the stock of existing capabilities within the MNC (1999: 4). Andersson & Forsgren, (2000) suggest that resource interdependencies with the two contexts may influence the development of knowledge and capabilities within multinational subsidiaries. It has been noted that the evolution of relationships with the internal and external environment co-evolves with the accumulation or depletion of resources and capabilities caused by shifts in the subsidiary's charter (Birkinshaw & Hood, 1998).

Though all subsidiaries are part of a MNC and located in a host country network, they do not have equal access to knowledge resources. The differential innovative ability of subsidiaries can best be understood by examining both the characteristics of the contexts in which subsidiaries are embedded, and the relationships of the subsidiaries with other firms in these contexts (Almeida & Phene, 2004). Almeida & Phene (2004) study the dual importance of the corporate and geographic context, in influencing subsidiary

innovation. Their most recent contribution states that subsidiaries belonging to firms with high R&D intensity are expected to be better able to innovate “...and prior research has demonstrated that R&D expenditures are significantly correlated with patent output” (Phene & Almeida, 2008: 910).

While knowledge sourcing from both contexts is critical to innovation, the utilisation of this knowledge is dependent on subsidiary capabilities. To examine the role played by capabilities of the subsidiary in the innovation process, the construct of *absorptive capacity* (usually viewed at the firm level) may be used. Cohen & Levinthal (1990), Lane & Lubatkin (1998), and Minbaeva et al., (2003) suggest that absorptive capacity (or the firm’s ability to recognise, assimilate and exploit new external information) is critical to its innovative capabilities. For value creation through innovation, knowledge absorbed from the outside must be *combined* with subsidiary knowledge and knowledge from other sources (Kogut & Zander, 1992). Such *combinative capability* was first pointed out by Schumpeter (1934) who noted that innovation takes place by “carrying out new combinations” (p. 65). Indeed, the nature of innovation may require that several sub-units interact actively across extended periods of time to develop new products and processes. Thus combinative capability is an internal managerial capability that enhances a subsidiary’s innovation by moving knowledge within the firm and integrating knowledge from different sources (Phene & Almeida, 2008).

As Frost (2001) points out, what is missing from the literature on subsidiary innovation is an understanding of the innovation process in foreign subsidiaries that can be used to

generate predictions about the location of the knowledge sources they utilise (p. 104). Frost (2001) notes that in rapidly changing industries, the innovation process is informed to a large degree by new developments occurring outside the firm. One of the key contributions of Frost's (2001) study is his underscoring of the need to recast the literature in terms of a more nuanced question that has preoccupied researchers to date: not *whether* foreign subsidiaries 'tap into' local sources of knowledge (e.g., Almeida, 1996), but *under what conditions* do they? In their discussion on the development of subsidiary critical capabilities, Schmid & Schurig (2003) similarly ask: "which network partners are relevant in the case of a foreign subsidiary"? (p. 760).

It is assumed that leading-edge capabilities can be expected to emerge as a function of the unique demands and suggestions directed towards the corporation from local network partners and that the foreign subsidiary should be viewed as a double-faced organisation (Simoes et al., 2000) being characterised with a dual allegiance to its host country and the MNC (Birkinshaw, 1998). Schmid & Schurig (2003) find that the development of critical capabilities within foreign subsidiaries is neither dominated by external nor by internal network partners.

Frost's (2001) overarching argument is that the orientation of a subsidiary's technical activities toward the *exploitation* of existing capabilities or the *exploration* for new ones is the primary driver of the geography of its external sources of innovation. Similarly, Cantwell & Mudambi (2001) term this 'competence-exploiting' versus 'competence-creating'. Factors indicating a logic of exploitation are hypothesised to predict a greater

propensity by the subsidiary to draw upon sources of innovation originating in the home country, and the parent group. Factors indicating a logic of exploration are hypothesised to predict a greater propensity to draw upon technical ideas and knowledge originating in the host country, and lead to greater degree of new product introductions, as found by Yalcinkaya et al., (2007). In addition, the greater the innovative scale of the subsidiary, and the more that it exercises some technical leadership in a field of innovation, the likelier it is that its innovations will draw on knowledge that originates in the host country in which the subsidiary is located (Frost, 2001).

To some extent, the internal and external “role” of the subsidiary may overlap. However, taken together, the subsidiary’s network in its entirety, encompassing relationships with counterparts within and external to the MNC, affects the direction in which a subsidiary evolves (Ståhl, 2004). Both internal and external collaboration have been identified as being important for innovation (Hillebrand & Biemans, 2003, 2004). Furthermore, counterparts within both the subsidiaries’ corporate and external business networks are important as sources for competence development (Schmid & Schurig, 2003). The above discoveries suggest that a subsidiary’s relationships within the MNC and with external counterparts present opportunities for developing competitive capabilities and innovations. That is, subsidiaries’ innovative capability can depend on their interactions with both internal and external counterpart relationships. Schmid & Schurig (2003) define critical subsidiary capabilities as superior capabilities that have been generated in foreign subsidiaries and that are of use for other corporate entities, like HQ and sister



subsidiaries (p. 759). More specifically, they explore how critical capabilities are developed within the foreign subsidiary resulting from its network of relationships.

### **3. Research Methods**

The methodology selected is qualitative methods, using a case study approach. The cases chosen are four MNC subsidiaries in the medical technology industry, located in the same region. This study departs from the most common approach for analysing subsidiary innovation, which in general has proceeded through more quantitative methods. The most commonly used approach, and that most well established in the literature, for indicating innovative performance / output is by measuring patents citations (see, for e.g., Almeida, 1996; Phene & Almeida, 2008).

The objectives of this research are focussed on exploring innovation at the subsidiary level, through an analysis of the relationships that exist and impact same, and the existing capabilities of the subsidiary, thus requiring an exploration of the social and cultural contexts upon which same exists. Hence, the theoretical perspective of this research is phenomenological and in line with Eisenhardt's (1989) design of case studies, is one of theory building and is inductive in nature, rather than seeking generalisability through representativeness.

The objective in selecting the case studies was to choose an appropriate population that would control irrelevant variation and define the limits for generalising the findings (Eisenhardt, 1989). The cases were chosen to provide examples of innovation occurring

in MNC subsidiaries located in the same region, with the objective of achieving the greatest possible amount of theoretically useful information on the phenomenon.

The selection of companies for interview included one small (named DIAGNO), one medium (named VASCA) and two large-sized (named CORONA, and CARDIO) foreign-owned MNC subsidiaries, thus exhibiting a degree of variability within the sample. Anonymity was requested and promised in all four companies, hence the use of company pseudonyms in this study. Two of the subsidiaries included are among the largest and most important in their respective divisions, in terms of product development. New product development represents a critical activity in all of the subsidiaries chosen.

To provide context to the relevance of the region for subsidiary innovation, the focus of the study was appropriately targeted to the medical technology industry cluster of the Galway region, a city and county in the west of Ireland. The cluster is renowned worldwide as a particular focal point of activity within Ireland in the field of medical technology (Stommen, 2005), and the cluster now has the biggest concentration of medical technology employment in Europe. It contains thirty companies employing approximately seven thousand people, around five hundred of whom are engaged in leading-edge research and development (Fahy et al., 2008). It is home to three of the top four medical technology MNCs in the field of stent-making, and a recent study of medical technology companies in Galway found that many firms in the region are involved in a high level of innovative activity (Giblin, 2007). Moreover, these four subsidiaries are primarily involved in the development of the drug-eluting stent (DES), a

product which is considered one of the fastest-growing categories in medical technology (Hendron, 2009). In fact, Ireland produces almost 80% of the world's total production of DES products (Hendron, 2009).

For the purpose of this study, there was one standard interview schedule devised. Specifically, the initial schedule pertained to the four CEOs in each subsidiary. Following CEO interviews, interviewees further down the "hierarchy" were interviewed. Consistent with the traditions of naturalistic inquiry, the sampling method of selecting participants on the basis of their particular knowledge about the phenomena under study, with the aim of maximising the information that could be obtained, was considered appropriate (see Lincoln and Guba, 1985). The author found it manageable to gain access to multiple respondents within each subsidiary.

#### **4. Results and Discussions**

Sanna-Randaccio & Veugelers (2007) find that the interplay of internal and external knowledge flows influences the MNC's choice to effectively disperse its innovative- and R&D-related activities internationally. They find that the intensity of competition in the local market emerges as important in determining the profitability of R&D decentralisation and that R&D decentralisation becomes more profitable the larger is the knowledge base in the local economy. These findings lead into the following discussion, which delineates the internal and external network partners influencing subsidiary innovation.

Hillebrand & Biemans (2004) state that the degree and quality of internal co-ordination interfaces is a prerequisite for effective external and internal relationships. This study found that the subsidiaries that utilise partners for innovation selectively choose those partners with maximum potential to create value. The value lies in leveraging their internal (subsidiary-level) strengths with other partners' strengths to maximise innovative capabilities, and effective co-ordination depends on how aligned each parties' contributions are. Technology and resource complementarity is obviously vital for partner selection. This study also found that the strategic alignment of both parties' goals is essential for subsidiaries to more effectively combine external and internal capabilities.

The subsidiaries in this study, though to different extents, are involved in more capability *exploitation* than *exploration*, albeit explorative efforts are considered very important at CARDIO. The study also found that research is more concentrated at HQ, whereas development is dispersed among subsidiaries. The theoretical implication of the finding supports the literature; factors indicating a logic of exploitation are hypothesised to predict a greater propensity by the subsidiary to draw upon sources of innovation originating in the home country, and the parent group. Alternatively, factors indicating a logic of exploration are hypothesised to predict a greater propensity to draw upon technical ideas and knowledge originating in the host country, (as found by Frost (2001) and Yalcinkaya et al., (2007)). This study supports the above logic, by showing that when subsidiaries are more R&D-intensive, their relationships with key local knowledge bases intensifies. A key finding within this is a subsidiary's 'combinative capability' in translating R&D for greater overall innovative effectiveness, i.e. more valuable

innovations. The theoretical implication is that R&D itself will not automatically generate more innovation *per se*, rather its effectiveness depends on how the subsidiary combines its internal capacity with its external sources, which leads to effective innovation. The subsidiary's self-determination is of paramount importance.

MNCs have the potential to access resources from two unique knowledge contexts. In this research, each subsidiary both influences and is influenced by the specific web of counterparts with which it interacts (Andersson, Forsgren & Holm, 2001, 2002), yet to varying degrees. This variation is as a result of the diverse idiosyncratic networks in which each subsidiary is positioned and the synergistic manner in which each subsidiary utilises their network and translates this into more valuable subsidiary innovation. Both internal and external collaboration have been identified as being important for innovation (Hillebrand & Biemans, 2003, 2004). This study disaggregated each subsidiary's dual context to delineate which network actors are having the greatest influence on subsidiary innovation, and how. In other words, why the subsidiaries of different MNCs in the same location may develop varying innovative capabilities, considering the same network partners are available (within reason) to each.

Within a subsidiary's internal network (and overall) it is a collective fact that the subsidiary's divisional HQ is the most influential partner impacting subsidiary innovation. Bi-directional, rather than multi-directional knowledge flows, in the form of cross-site teams, with divisional HQ is the primary, and in some cases, the sole source of internally-resourced innovation. This stems from the subsidiary's dependency on HQ for

technology, funding, and the general control that HQ exerts over its subsidiary. CORONA and CARDIO are seen to have links with one other sister subsidiary for new product development efforts. However, this link is not for innovative activities, rather it is purely an operational necessity. An example is where CORONA gets a product to a certain stage, and it is then transferred to the sister site for further development, or vice versa.

Cross-site R&D teams (between divisional HQ and subsidiary), with direct, rather than indirect reportage lines, appear to be the most binding internal communication link a subsidiary can have. Because distributed R&D is seen by each subsidiary as increasing innovation and co-operation, it is safe to assume that such teams are viewed in a very positive light with regards to improving innovative capabilities and performance.

‘Key Opinion Leaders’ (KOLs), employed by the HQ, are seen as the other most significant internal network partner impacting innovation. However, in all cases, except for CARDIO, subsidiary management are rarely in direct contact with KOLs. Rather, the KOL ideas and advice are funnelled down to subsidiary management through HQ. Again, this shows the monopoly HQ wish to maintain on overall MNC critical ideas and most interviewees point to frequent and compulsory communication with divisional HQ as inhibiting idea generation and innovation.

Turning to the local environment, the most important source of knowledge for innovation arises from linkages with the local university, National University of Ireland, Galway,

(NUIG), where NUIG is seen as somewhat of a ‘competence base’ for specific R&D activities. It was found that certain subsidiaries have a more binding relationship with the university. For example, CORONA’s assistance in setting up a postgraduate programme specific to the industry. The formation and dedication of CORONA’s relationships with NUIG is facilitated by the possession of valuable knowledge, which in turn permits reciprocity in knowledge exchange. However, an important finding is the ambiguity associated with the relationship. IP rights and protection are a constant concern, which frequently results in either partner holding back on certain issues, especially with regards to the critical ‘research’ component of R&D. Despite this, the fact that CARDIO are working on the ‘R’ phase of projects with the university, and that the research is almost at commercialisation stage, illustrates the constant determination of the subsidiary to upgrade its strategic charter. The personal, informal relationships which subsidiary management have developed with university individuals and centres are also important to note. However, it remains that subsidiaries more generally interact with the university on less strategic activities. For example, DIAGNO and VASCA classify their academic links as being “weak”, “ad-hoc”, and “infrequent”.

Although no other local network counterpart can be seen to have an important influence on subsidiary innovation, subsidiaries rate the Irish government and its agencies as having the next greatest impact on their innovation efforts. Government incentives and IDA strive to encourage and financially aid subsidiary upgrading, yet the subsidiaries caveat the need for these actors to adapt their model for retaining foreign business. Most notable is subsidiary concern over the Irish corporation tax rate now competing with

other worldwide locations, and the need for government to upgrade to more proactive policies.

Local end-users of the subsidiaries' products are theoretically vital collaborators for new product development success and innovation, but they are not used as much as they could be. CORONA points to the lack of research-oriented end-users in the locale. Local suppliers are rarely used for the outsourcing of, or collaboration on, R&D-related activities and innovation. The exception is CARDIO, which is actively involved in R&D and product-related innovation with a local supplier. Sensitivity of information and activities is cited as the main reason for such little collaboration, as is "not knowing the capabilities of local suppliers". The industry's professional association in Ireland, the Irish Medical Devices Association (IMDA), scores a categorical 'low' in management's rating of local influences on innovation.

Subsidiaries' coopetitive relationship with its direct, local competitors is an interesting finding. The local industry is characterised by companies all specialising in one area of medical technology, which is cardiovascular. Rather than taking advantage of this, cooperation on sensitive R&D and product innovation is non-existent between companies. The industry is extremely competitive, and litigious, thus cooperation would jeopardize IP protection. However, direct competitors do collaborate in a 'consortium-type' way by collectively lobbying government for medical technology-related investment and the encouragement of establishing competence centres relevant to the



industry. Subsidiaries also point to the advantage of having their competitors located in close geographic proximity, from a skill supply perspective.

One of the key contributions of this research, (in support of Frost (2001)), is the specific demarcation of the two contexts (local and global) and *under what conditions* subsidiaries actually ‘tap into’ each knowledge source. Andersson, Forsgren & Pedersen (2001) state that “80% of the most important relationships have been identified as being external to the MNC” (2001: 186). Unparallel to Andersson, Forsgren & Pedersen (2001), and Schmid & Schurig (2003), who found that the development of critical capabilities within subsidiaries is neither dominated by external nor by internal network partners, this research discovers that subsidiary capabilities for innovation are largely dominated and influenced by its divisional HQ. However, this research supports the findings of Schmid & Schurig (2003), who identified (a) the subsidiary – parent relationship, and (b) the subsidiary – customer relationship as being most important. Also, in agreement with Schmid & Schurig’s (2003) conjecture, interviewees in this study say that “competitors might directly or indirectly shape all activities” (2003: 771).

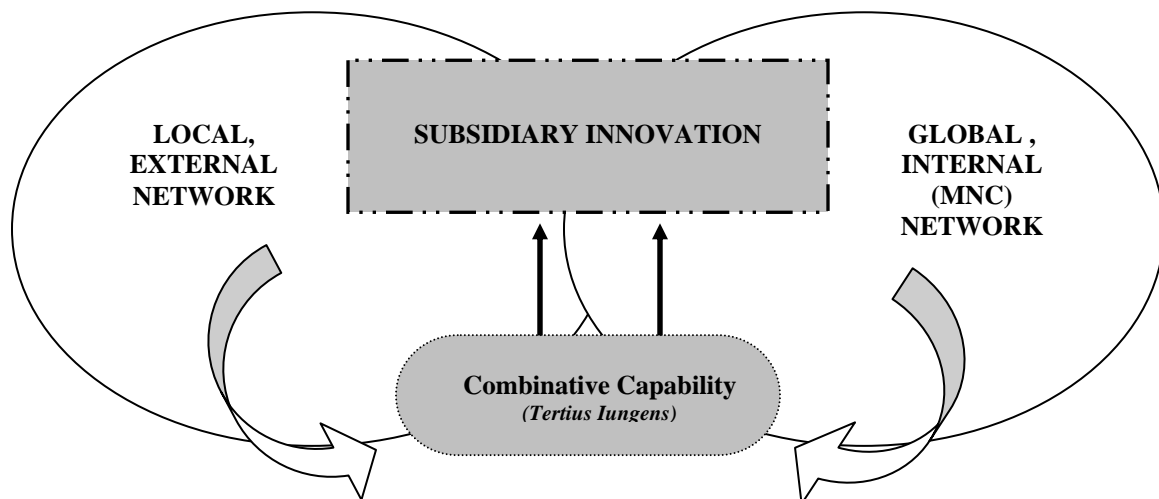
Both global workflow interdependence and local linkages are essential for innovating and the long-term success of a subsidiary. Creating dependent and counter-dependent relationships with both networks, be they sparse or dense (Obstfeld, 2005) positions subsidiaries better in their MNC innovation network and “the more pronounced their innovative activities shall be” (Boehe, 2007: 488). CARDIO, VASCA and CORONA have stated that accumulating the heterogenous capabilities inherent in the local

knowledge base, has let them contribute uniquely to the stock of existing innovative capabilities within the subsidiary and within the MNC. This supports Ståhl (2004), who shows that the subsidiary's network in its entirety, encompassing relationships with counterparts within and external to the MNC, affects the direction in which a subsidiary evolves, and also affects the level and quality of innovative output.

While knowledge sourcing from both contexts is important for subsidiary innovation, the managerial capability to combine knowledge from different sources is found to be a critical feature of enhancing these subsidiaries' innovative capability (also found by Phene & Almeida, 2008). Perhaps a subsidiary's combinative capability is the vehicle by which local linkages are manifested into greater local embeddedness. Obstfeld (2005), in his characterisation of the network actor as a knowledge 'broker', states that such activity is central to the combinative activity at the root of innovation. Obstfeld (2005) suggests that different contexts may dictate the need for dense or sparse networks for innovation, but requires the *tertius iungens* skill of actors as a constant. In this study, the *tertius iungens* strategic orientation of CARDIO is an excellent example of the gains to be made by effectively combining the subsidiary's entire network sources of innovation, through both weak and strong ties, and by serving as a conduit of knowledge and innovation in the process. Moreover, CARDIO illustrates that its *tertius iungens* in integrating knowledge originating in both local and global 'pockets' of innovation contributes to the subsidiary's enhanced capabilities and strategic position in the MNC.

The theoretical contribution of this study may be encapsulated in the following “model of subsidiary innovation” (next page). The model depicts the reciprocal dependence of each context, with subsidiary innovation being at the core of the model. Locating the subsidiary at the intersection of the dual context is important as it correctly implies the dual positioning of the subsidiary in its local and global networks. The diagram incorporates the subsidiary’s combinative capability as a key driver in how the subsidiary utilises and combines its entire network for greater innovation.

**Figure 1. Model of Subsidiary Innovation**



#### **4.1 Limitations**

The main aim of this study was to explore the phenomenon of MNC subsidiary innovation. Four subsidiaries, belonging to different MNCs in the same industry, within a specific region, were chosen. Although this allowed for comparisons and contrasts to be drawn between the subsidiaries, the primary limitation is the impossibility to ascertain whether the findings are applicable to subsidiaries in other industries, or in other

geographical regions. This research, as in previous work also, focuses on what may be described as ‘least conservative’ cases for finding evidence of subsidiary innovation, e.g. foreign subsidiaries in high-technology industries such as biotechnology and semiconductors, often located in dynamic regional settings such as Silicon Valley (e.g. Almeida, 1996). The unique regional context of the study is not intended to be generalisable to other within-country regions. In addition, the present study examines MNCs from the US only. This bias somewhat diminishes the generalisability of the results in this study to concern subsidiaries of US-based MNCs. Further research on samples from non-US countries is warranted.

## **5. Conclusions**

This study highlights a key message – subsidiary management, in an effort to upgrade and guarantee their strategic importance in the MNC network, should combine the unique interplay of locally-sourced and internally-generated value-added knowledge in order to enhance their innovative capacity and output. This is what constitutes the “differential innovative ability” (Almeida & Phene, 2004) of MNC subsidiaries.

This study provides a good indication to government and its inward investment agencies of the value of having MNC subsidiaries perform innovation-related activity in the region. The study revealed that for most subsidiaries, the local environment is considered to be quite important for the sourcing of innovation-related knowledge and resources, and can be a means of embedding MNC subsidiaries in the region. In its turn, and similar to

the conclusions of Birkinshaw & Hood (2000), MNC subsidiaries can have a positive impact on the development of regional clusters, provided they engage in knowledge-intensive activities. While “the government accepts that there is a strong link between investment in the research and innovation base of the economy and sustained economic growth” (National Competitiveness Council, 2004), public policy should continue its influence in fostering linkages at the local level and in upgrading the innovative efforts of the region. Greater emphasis needs to be placed on fostering links with other local partners, such as local suppliers and local end-users, which are currently very weak, arms-length relationships. It must also support the synergistic relationships evident between the university and subsidiaries, especially for innovations and R&D that are of a more sophisticated, higher value-added nature, because retaining them is of critical importance for long-term sustainability.

The study clearly exhibits the view proposed by Simoes et al., (2000); that MNC subsidiaries are a double-faced organisation, being characterised with a dual allegiance to its host country and the MNC (Birkinshaw, 1998). Hence there is excellent scope for policy makers and subsidiary management to collaborate and further leverage the locational advantages of innovation in Ireland, to the benefit of both. Ambos & Schlegelmilch (2008) state that national culture matters in R&D location decisions, hence the nation should actively proclaim their location advantage when attempting to lobby for R&D investments from overseas. Establishing a global profile of Ireland as a premier location for carrying out world class R&D will require greater coherence and exploitation of synergies in the development of policy (Fahy et al., 2008).

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