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Participation of Strategic R & D in Subsidiaries' Decision Making

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ABSTRACT

This paper is cited within the literature exploring demand-side aspects of decentralized R&D activity; that is the participation of R&D directors in subsidiaries' strategic decision - making. Based on an original data set including 66 units located in Greece, we present evidence that, in the focal economy, the impact of R&D on corporate governance decisions is not influential. Only laboratories mandated with the production of a new product seem to have a determining role in designing corporate strategies.

KEYWORDS: Decentralized R&D, strategic decision making, Greece

Introduction

Multinational enterprise (MNE) research has produced various, and often competing, models to explain the type and intensity of the parent multinational control over its subsidiaries in order to effectively align the activities of the whole network. There are two streams of research investigating the above issue: one is centered around the MNE organization as a holistic, interconnected network and examine specific factors that determine the extent and form of required control (e.g. Bartlett & Ghoshal, 1989; Cray, 1984); while the other is focused on contextual issues related directly to subsidiaries, in an attempt to explain organizational integration patterns as a key factor of evaluating strategic shifts (Gupta & Govindarajan, 1991). Concerning the latter, most empirical evidence is provided for the global integration of business functions and especially R&D operations (Asakawa, 2001)

As far as R&D activity is concerned, a growing stream of empirical evidence has suggested that MNEs have assigned substantial R&D tasks to foreign subsidiaries (Reger, 1999). This functional enlargement of the laboratories had led to both qualitative and quantitative developments: their role has been expanded and their activities may deviate from typical standardization and aim at the production of innovative products. As for quantitative expansion, it appears that a growing number of MNEs have established an increasing number of R&D facilities outside their home country (Pearce & Singh, 1992).

Despite the fact that research on varied issues related to the integration patterns of decentralized R&D activity has flourished (e.g. Gupta & Govindarajan, 1991), evidence on the frequency of strategic communication between decentralized R&D laboratories with their related subsidiary environment is almost non-existent. The purpose of this study is to prov ide insights on the above identified gap in the literature by presenting evidence on the regularity of associations between these highly-valued units of MNEs with their immediate organizational environment.

Conceptual Background: Roles of Decentralized R&D Laboratories

There is a rich literature seeking to capture the essence and nature of R&D internationalization. The majority of classifications concerning R&D departments though, rely on the time dimension of this evolutionary process. The taxonomy used here derives from the strategic positioning of laboratories in the wider MNE operations. The first role we can define for a research and development laboratory of a subsidiary operating in a foreign country is the effective use of the existing technology in order to be embodied in the production process of well-established products. Its main function is, therefore, adaptation development, either of the products; so that it may need the distinctive characteristics of the subsidiary's market, or of the production process in order to use most effectively the production environment of the host country. We may term laboratories, which focus on that role as Support Laboratories (SLs). These SLs are then limited to supporting the ability of subsidiaries to use the existing technology to succeed in already determined target markets.

As the limited adaptation role of supported laboratories declines in relevance, more ambitious positions can be found for overseas labs in the pursuit of MNE's global competitiveness. One of this is for an R&D unit in a particular country to work as a closely integrated part of a subsidiary there to develop a distinctive product, which can be supplied to a regional, or even global, market (Pearce, 1999). We define this type of research and development laboratories, as Locally Integrated Laboratories (LILs). Their objective is different from the previous laboratories type. Instead of using the existing MNE's technology in order to produce well-established products, LILs extend the scope of the subsidiary, by using all the available resources in a creative collaboration, which expands the competitive product range of the group, i.e. they have a more "productive" scope.

The third possible role that can be distinguished for a laboratory, or the second that plays a part in the global-innovative strategy, is to provide basic or applied research inputs into a program of precompetitive work organized by a MNE. Thus, in contrast with the previous role of the laboratories, this type will not be allied with other operations, i.e. marketing, engineering and management of a MNE in the same country. Instead its alliances are with similar laboratories of the MNE in other countries, and especially with a parent laboratory, which is expected to coordinate the overall research program. Therefore, the laboratories that are involved in such tasks may be referred as Internationally Interdependent Laboratories (IILs). A pure IIL, therefore, would have no responsibility for dealing with the current competitiveness of subsidiaries in the same country. Its interest is rather to contribute to the expansion of the basic scientific knowledge of the MNE, from which future generations of products will derive.

Research Design

The current research is part of a wider survey providing evidence on the strategic bases of MNEs' expansion into the EU "peripheral" economy of Greece. Our data sources used here were the Business Directories of ICAP Greek Financial Directory and the database for foreign direct investment of National Bank of Greece. Both are widely used as standard sources for researchers, since they are considered as the most reliable and original sources of information on foreign operations in the focal economy. The population sampled was 315 foreign-owned subsidiaries. In the end, we received 144 responses, indicating a response rate of 45.71%. The firms in our sample represent fairly well a cross section of locally received foreign investments - both with regard to sector and geographic location - with that having a positive effect on the reliability and validity of the sample. Our sample characteristics are presented in Table 1. Among these 144 subsidiaries, 70 have identified to have an in-house R&D department, of which 4 did not wish to collaborate in the

survey; reducing the total number of useable responses to 66 (45.83%).

Table 1 about here: Sample Characteristics

Sector	Total Sample	Number of Respondents	Number of Useable Responses with R&D	Response Rate
Automobiles and Transport Equipment	19	12	9	63.16%
Chemicals	18	11	5	61.11%
Electronics and IT	15	10	6	66.67%
Food and Beverages	47	29	18	61.70%
Manufacturing	62	31	15	50.00%
Miscellaneous[1]	19	9	3	47.37%
Other Manufacturing[2]	34	9	6	26.47%
Pharmaceuticals	31	16	10	51.61%
Services	51	11	2	21.57%
Textiles	19	6	1	31.58%
Total	*315*	*144*	*66*	*45.71%*
HQs Country of Location	**Total Sample**	**Number of Respondents**	**Number of Useable Responses with R&D**	**Response Rate**
EU Countries	129	61	29	47.29%
Other European Countries[3]	78	33	13	42.31%
Asia Pacific Rim[4]	46	18	8	39.13%
US	62	32	16	51.61%
Total	*315*	*144*	*66*	*45.71%*

Notes:
[1] *Miscellaneous include Agribusiness, Equipment for Bakery, Home Equipment*
[2] *Other Manufacturing includes Tobacco, Paper and Forest Products, Heating and Air Conditioning and Office Machinery*
[3] *Includes subsidiaries from Switzerland, Liechtenstein, Luxembourg and Russia*
[4] *Includes Canada*
Source: Authors' survey

Our main data source was a structured questionnaire. Respondents to this survey were asked to evaluate the frequency of scheduled meetings of R&D directors with subsidiaries' Board of Directors. In particular, our research question addressed to subsidiaries was:

Survey Question: Do your R&D directors participate is strategic decision-making as this emerges throughout BoD meetings? (please tick as relevant)

a. Regularly
b. When it is necessary (e.g. to implement the introduction of a new technique or product)
c. Never, as it is not necessary

Discussion of Findings

According to the results presented in Table 2, it seems that subsidiaries located in Greece do not follow, in general terms, a highly inter-functional strategic procedure as part of their organizational structure related to research and development, since the 63.7% of the respondents replied that participation in important strategic BoD meetings takes place only when it is necessary and a considerable 17.8% stated that it does never occur.

A further analysis of the results provided reveals important evidence concerning the impact of R&D departments in the formation of strategic decision making. Thus, nearly 18% of units seem not to participate at all in subsidiaries' decision making process. This is more prevalent for Japanese MNEs; indicating the limited importance of decentralized R&D for these companies. Our findings could provide support to the following two arguments against the strategic decentralization of R&D procedure. First, R&D may be very effective at consolidating strength within an existing technological regime directed by the parent corporation, but it may turn into a severe disadvantage, if this technological regime loses competitiveness. Second, if new technologies emerge and make the well-established ones become obsolete, decentralized R&D is too short-term oriented and may not be able to cope with this change; participating in this vein to the strategic reorganization of subsidiaries' competitive impetus. This assumption is even more valid in case of Greece subsidiaries, where there does not seem to exist any systematic established connection with external technological sources, such as the universities and public research institutions.

Table 2 about here: Intensity of R&D Participation in Decision Making

Participation of R&D Directors in Subsidiaries' BoD Meetings *(per cent of cases)*	Regularly	When Necessary	Never	Total
By Location of HQs				
EU Countries	24.0	65.0	11.0	100.0
Other European Countries[1]	16.5	70.0	13.5	100.0
USA	21.0	62.0	17.0	100.0
Japan and Rest of the World[2]	12.0	58.0	30.0	100.0
Average	**18.4**	**63.7**	**17.8**	**100.0**
By Type of Laboratory [3]				
SL	8.0	62.5	28.5	100.0
IIL	15.5	62.5	21.2	100.0
LIL	31.5	64.5	3.8	100.0
Average	**18.4**	**63.7**	**17.8**	**100.0**

Notes

1. Includes subsidiaries from Switzerland, Liechtenstein, Luxembourg and Russia

2. Includes subsidiaries from Australia, South Korea, Panama and Canada

3. Roles of Decentralized R&D Units

SL	Adaptation of existing products and/or processes to make them suitable to our market and operations and provision on adaptation and/or development to other producing subsidiaries of our MNE group
LIL	To play a role in the development of new products for our distinctive markets
IIL	To carry out basic research (not directly related to our current products) as part of a wider MNE-group-level research programme.

Source: Authors' survey

Though, 18.4% of respondents stated that they participate regularly in BoD meetings. This could be conceived as a decentralized approach towards R&D management. One of the key potential positions for decentralized research and development, within the global competitive evolution of MNEs, relates to the sharpening of commercial application of their existing technologies, through an enhanced responsiveness to any idiosyncratic elements in the needs of the focal markets. This can involve the tactical adaptation of products or production procedures that embody established group's knowledge, or the more strategic development of new products either from original technology recently derived from precompetitive work or through the radical reapplication of knowledge from the group's existing competencies. For successful commercialization of adapted or innovative products, any available source of input is valuable for R&D departments. Under these assumptions, LILs, by no surprise, had evaluated quite high this answer (31.5%). As far as the country of subsidiary origin is concerned, the influence of R&D in subsidiaries' strategic decision making is more prevalent for EU and US multinationals.

Conclusions

The purpose of this research was to identify the impact of activities enhancing the knowledge-related competitive trajectory of subsidiaries in the strategic decision – making of these corporations. Overall, it seems that only the laboratories with a more 'productive' role participate on a regular basis in this procedure. Further, it can be argued that the expansion of labs' qualitatively role, is positively correlated with a more central position of not only the technological, but also the strategic trajectory of the MNEs. Finally, EU and US subsidiaries seem to ascribe to a more autonomous and decentralized role for their overseas laboratories.

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