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Alain Verbeke/Wenlong Yuan

Subsidiary Autonomous Activities in Multinational Enterprises: A Transaction Cost Perspective

Abstract

- This paper investigates the implications of subsidiary autonomous activities for the governance of the multinational enterprise (MNE).
- Bounded rationality constraints faced by MNE corporate level management lead to severe limits imposed on subsidiary autonomous activities. The bounded rationality construct is revisited, and decomposed into information selection and information judgment in the context of subsidiary autonomous activities.

Key Results

- A new conceptual framework is developed to gain insights into the governance-related conditions for the successful development of subsidiary autonomous activities.
- Managerial tools are suggested, namely more selectivity in geographic scope and more attention devoted to the composition of corporate level management, to foster convergence between corporate level and subsidiary level perspectives.

Authors

Alain Verbeke, Professor of International Business Strategy, McCaig Chair in Management, Strategy and Global Management Area, Haskayne School of Business, University of Calgary, Calgary, AB, Canada; Associate Fellow, Templeton College, University of Oxford, Oxford, UK and Solvay Business School, Vrije-Universiteit Brussel, Brussel, Belgium.

Wenlong Yuan, Research Associate, Strategy and Global Management Area, Haskayne School of Business, University of Calgary, AB, Canada.

Introduction

Rugman and Verbeke (2001, 2003) have provided an in-depth analysis of the internal functioning of the MNE, linking conventional transaction cost thinking (Buckley/Casson 1976, Hennart 1982, 2001, North 1990, Rugman 1981, Williamson 1975, 1985), with recent advances in international strategic management, as exemplified by the influential work of Professor Julian Birkinshaw from the London Business School and his co-authors (Birkinshaw 1995, 1997, 1999, 2000, 2001, Birkinshaw/Hood 1998, Birkinshaw/Hood/Jonsson 1998).

Rugman and Verbeke have focused on the issue of subsidiary entrepreneurship, more specifically subsidiary autonomous activities. First, Rugman and Verbeke observe the increasingly dispersed knowledge base (and innovation capabilities) in many MNEs, with new ideas to develop products and markets, originating in foreign subsidiaries (Håkanson/Nobel 2000). This knowledge dispersion does not simply result from corporate level management granting more autonomy to subsidiaries, but primarily from the maturing of these subsidiaries over time, building upon endogenous growth, interactions with local economic actors, and the resulting development of market or technological capabilities, etc. The key transaction cost reduction problem is thus not one solely related to the efficient, one-directional transfer of knowledge from corporate center to foreign operations.

Second, they suggest that one of the core transaction cost theory behavioral assumptions should be revisited, namely by substituting simple self-interest seeking behavior for the concept of opportunism (defined as self-interest seeking behavior with guile). In the realm of subsidiary autonomous activities, the main managerial problem is not primarily an agency problem, with subsidiary managers requiring more coordination and control to keep their actions aligned with corporate level objectives; rather it is a question of cost-effective, mutual alignment and developing shared cognitive maps at the subsidiary and corporate levels.

Third, they argue that corporate level management may have little affinity with the full spectrum of subsidiary competences/weaknesses and opportunities/threats that drive the development of subsidiary autonomous activities. These are entrepreneurial initiatives instigated at the subsidiary level and requiring resources, but they do not result directly from roles attributed to the subsidiary (its charter) or from corporate-level guidelines for resource allocation (which would lead to induced projects). The problem is thus not one of one-sided, optimal alignment of foreign affiliates' activities to predetermined corporate level objectives. The key issue is to reduce the bounded rationality constraints faced by corporate level management and to select the most promising autonomous activities in MNE affiliates for further development, although such activities will almost systematically be perceived *ex ante* as misaligned with corporate objectives *sensu stricto*.

Rugman and Verbeke (2003) further develop transaction cost based reasoning, building upon the three elements above, namely strong MNE knowledge dispersion and innovation, low expected occurrence of opportunistic behavior by subsidiary management and strong bounded rationality constraints faced by corporate level management. They suggest that the transaction costs associated with subsidiary autonomous activities result primarily from bounded rationality constraints faced by senior corporate level management, rather than from subsidiary opportunistic behavior. Effective internal governance may then require the MNE to refocus its use of coordination and control tools, including internal market tools (price-based incentives), bureaucratic tools (formalization) and socialization, in order to reap the full benefits of entrepreneurship in subsidiaries.

More specifically, one of the main challenges faced by the established MNE is how to properly manage the increase in subsidiary autonomous activities, as described by Birkinshaw and his co-authors. The pursuit of autonomous activities by subsidiaries may either benefit or harm the MNE, but senior corporate level management often appears to exhibit little sensitivity to the issue of distinguishing between the autonomous projects assumed by subsidiaries that ultimately will contribute to competitive advantage and those that will not. The thrust of Rugman and Verbeke's (2003) discussion of subsidiary autonomous activities and their observation of recurrent conflicts between corporate center and subsidiaries, is that present internal governance mechanisms in many MNEs, operating with a dispersed knowledge base, are insufficient to achieve order (meaning, mutual alignment between corporate level objectives and subsidiary activities), procedural justice and effective innovation outcomes (in terms of contribution to competitive advantage) simultaneously. Hence, these firms should introduce new governance mechanisms to reduce the transaction costs associated with senior corporate level management handling autonomous subsidiary activities.

The present paper proposes a new perspective on governance mechanisms instrumental to improved corporate level management of subsidiary autonomous activities. This new perspective extends transaction cost based thinking in the sense that it introduces two, so far neglected design parameters, as critical to effective governance, namely the choice of geographic scope of the MNE's activities, and the composition of the corporate top management.

The paper is organized as follows. In the next section, the implications of knowledge dispersion inside the MNE and the related necessary revisions of the standard behavioral assumptions of transaction cost analysis are discussed. The significance of the bounded rationality concept, in the context of subsidiary autonomous activities, is described in the third section. In the fourth section, a framework is developed to understand the challenges posed by subsidiary autonomous activities in established MNEs and corporate management's handling of subsidiary autonomous activities. The last section concludes.

Understanding Managerial Behavior and Knowledge Dispersion in MNEs

What constitutes the 'optimal' internal governance structure for the MNE depends on a number of behavioral assumptions. If a transaction cost based approach is adopted, a key question is whether the two conventional assumptions of opportunism and bounded rationality are valid in practice. Opportunism, defined as self-interest seeking behavior with guile, when interacting with bounded rationality, has a substantial impact on the cost of transactions (Williamson 1985). It is debatable whether the assumption of opportunism is always critical to determine the firm's boundaries (Ghoshal/Moran 1996, Williamson 1993a, b), but it certainly does have implications for the ex ante incentive alignment stage of contracting (Williamson 1996). However, in the context of established MNEs, the propensity to engage in opportunistic behavior may be rather low:

"Transaction cost related thinking in the realm of the MNE would undoubtedly benefit from the substitution of the concept of opportunism (defined as self-interest seeking behaviour with guile) by just self-interest seeking behaviour. "Opportunistic" managers in the Williamsonian sense seldom continue to work in large, modern MNEs over prolonged periods of time; they are probably better served by operating in external markets" (Rugman/Verbeke 2003, p. 136).

This view suggests a revision of Williamson's perspective on opportunism (1975, 1985), see also Verbeke (2003). Subsidiary managers are still self-interest seekers, but the occurrence of opportunism in the Williamsonian sense, namely "the incomplete or distorted disclosure of information, especially to calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse" (Williamson 1985, p. 47), is rare in established MNEs, given, *inter alia*, "the existence of career concerns as important forces mitigating managers' shirking" (Foss 1994, p. 44). Self-interest seeking behavior is constrained by obedience and faithfulness to promises. This insight is also consistent with recent empirical studies, focusing on the self-regulatory behaviors of subsidiary managers (Gupta/Govindarajan/Malhotra 1999) and the inability of agency theory to explain the current headquarters-subsidiary relationships (O'Donnell 2000).

The inappropriateness of the opportunism assumption is clear when we consider the increasing autonomous activities in MNE foreign subsidiaries, as described by Birkinshaw and his co-authors. Here, corporate level management should encourage subsidiaries to be entrepreneurial and to apply fully their capabilities to identify and nurture business opportunities that may contribute to competitive advantage, and are beyond the scope of headquarters' cognitive maps. Unfortunately, it appears difficult to distinguish ex ante between opportunism and entrepreneurial leadership (Ghoshal/Moran 1996, p. 38). If corporate

headquarters' managers were to assume that subsidiary managers are opportunistic, they should give free rein to the corporate immune system (Birkinshaw 2000) and make sure all autonomous activities are aborted when they emerge, thereby foregoing any potential benefits of subsidiary entrepreneurship. Here, the perceived misalignment between corporate objectives (or expectations of induced initiatives) and subsidiary autonomous activities, would quasi-automatically trigger a negative cost/benefit calculus from the corporate level management's perspective.

However, under the assumption of simple self-interest seeking behavior rather than opportunistic behavior, as far as the motivations of subsidiary managers are concerned, the internal friction within the MNE should be low (or even absent altogether) from a purely Williamsonian perspective. Unfortunately, bounded rationality constraints faced by senior corporate level management in fact do lead to important frictions in the context of subsidiary autonomous activities (Birkinshaw 2000). Many subsidiary managers believe that their decisions "are in the best interests of the corporation as a whole, but not always in conformance with the expressed wishes of head office managers" (Birkinshaw 2000, p. 2). This case of bounded rationality is quite different from the conventional Williamsonian perspective, which tends to concentrate on the abuse of asymmetrical information (Dietrich 1994). Birkinshaw's (2000) observations of subsidiary autonomous activities and the corporate level management's response to such activities, are not about the abuse of information asymmetries, but about two other elements. First, subsidiaries and corporate level managers select different facets as relevant to strategic decision-making, given the *multifacetedness* of the relevant information. Multifaceted information is not the same as complex information; rather, it refers to a spectrum of accessible information, some of which will be selected as the basis for resource allocation decisions, based upon elements such as experiential knowledge (see the next section). Second, a *divergence in judgment* may occur between corporate level and subsidiary level, meaning a difference in interpretation of identical information facets, in terms of their implications for firm-level competitive advantage. Such divergence in judgment is not equivalent to alternative predictions of the future, given high uncertainty, but again results from elements such as a different experiential knowledge base at the corporate level and in subsidiaries.

The two above sources of bounded rationality constraints at the corporate level can be largely explained by the fact that MNEs increasingly operate as networks, with particular bundles of strategically important knowledge embedded in multiple subsidiaries rather than at the corporate level only (Bartlett/Ghoshal 1993, Hedlund 1986). The conventional transaction cost based perspective is that knowledge dispersion does not lead to critical managerial problems if corporate level managers are capable of selecting bundles of 'decisive' knowledge, sufficient to make 'rational' decisions without additional information (Casson 1994,

Foss/Foss 2002). That is, even if knowledge is dispersed in MNEs and subsidiaries possess some hidden knowledge, corporate level managers with decisive knowledge would still be able to make correct decisions, guided by the criterion of expected contribution to competitive advantage. Any divergence in judgment between corporate level management and subsidiaries would then merely reflect subsidiary managers behaving opportunistically. In that situation, authority, fiat and thus hierarchical governance would be the most appropriate control mode to reduce frictions in the MNE. However, that view assumes that corporate level management is simply faced with a problem of access to correct information and appropriate processing of that information. In practice, corporate level management in established MNEs may have full access to any information it desires as well as excellent information processing capabilities, but often it is unclear what should constitute decisive knowledge, and how such decisive knowledge should be interpreted, especially in the context of subsidiary autonomous activities, as emphasized by Rugman and Verbeke (2001, 2003a).

The focus on divergence in judgment among different economic actors, even within a single organization, has been discussed in the recent management literature (Foss 2001a, b, Foss 2001c, Fransman 1994, Lampel/Shapira 2001, Rabin 1998, Radner 1996, Williamson 1996). This debate builds upon a variety of insights from research in psychology and economics, especially the literature on cognitive and judgmental biases (Pagano 1999, Rabin 1998, Radner 1996). For example, Rabin (1998) emphasizes, building upon a series of experiments in the psychology literature that, “once forming strong hypotheses, people are often too inattentive to new information contradicting their hypotheses” (p. 26) and “providing the same ambiguous information to people who differ in their initial beliefs on some topic can move their beliefs further apart” (pp. 26–27). These findings demonstrate that individuals do not exhibit a uniform and perfect cognition, even when selecting the same information. The multifacetedness of information fosters not only a variety of possible information facet selections but also a variety of interpretations of each facet (and therefore differences in judgment): this is the key bounded rationality problem encountered by senior corporate level management in MNEs, when faced with autonomous strategic activities of subsidiaries.

The above explains why corporate level management, not having been involved from the outset in the development of subsidiary autonomous activities, may have little affinity with the rationale and content of such activities. Corporate level management may therefore select the simple “let it be” or “abort them all” options, without much further reasoning beyond arguments related to the presence of financial slack (or lack thereof), or consistency with broad company-level goals (or lack thereof). Unfortunately, if no selection mechanisms are introduced to weed out at least some autonomous activities, this may result in the loss of direction, and MNEs may engage in an unfocused allocation of resources.

In contrast, aborting all autonomous activities means dismissing out of hand any promise of potential benefits. These two unfortunate, extreme situations, of either generously allocating resources to autonomous activities or aborting them all, imply that MNEs should craft mechanisms to differentiate more carefully between those subsidiary autonomous activities that can potentially contribute to competitive advantage, and those unlikely to do so. Here, the key issue is not primarily the reduction of conventional, Williamsonian information asymmetries aimed to curb possible opportunism by 'agents' (i.e., subsidiary managers):

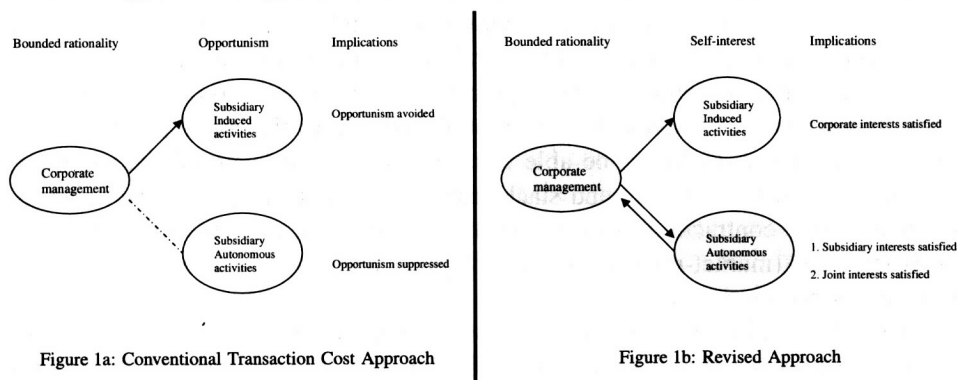
“Corporate headquarters must be made to understand why subsidiary behavior is in fact consistent with corporate goals such as long term profitability and growth, and why routines imposed by headquarters aimed to induce behavior consistent with centrally set goals, e.g., when assessing “parent driven” investment projects, may sometimes be inappropriate.” (Rugman/Verbeke 2003, p. 132)

Birkinshaw and Hood (2001) have suggested several mechanisms to reduce the above problems, based on observed best practices in large MNEs. These include giving seed money to subsidiaries, using formal requests for proposals, encouraging subsidiaries to be incubators and helping the subsidiaries build international networks inside the MNE. Socialization elements, including the recognition at the corporate level that some subsidiaries have gained a reputation in bringing autonomous projects to fruition can also be used here. The element of reputation should not be underestimated: each successful autonomous initiative contributes not only to the relevant subsidiary's capabilities, but also to the corporate level capability in efficiently addressing the challenge of subsidiary autonomous activities. This implies a co-evolutionary process inside the MNE, whereby the actual management of subsidiary autonomous activities alleviates the corporate level bounded rationality constraints over time. An additional complexity must be noted here: Birkinshaw (2000) noted a sharp distinction between internal and external subsidiary initiatives. In the former case, subsidiaries attempt to affect upfront the information facet selection and judgment at the corporate level: they rely on internal networking and their prior reputation for excellence to change corporate attitudes vis-à-vis subsidiary initiative. In the latter case, autonomous projects are largely hidden from the corporate level, until some initial level of success has been achieved. Here, the assumption prevails that the subsidiary might not be able to change corporate level attitudes upfront, and that sufficient autonomy and slack resources permit more effective “autonomous initiative contracting” with corporate management, after the initial level of environmental (market-related) or technological uncertainty surrounding the initiative has been reduced.

The above discussion of the main contributions of Rugman and Verbeke (2003) is summarized in Figure 1, whereby the conventional transaction cost ap-

proach is contrasted with the new perspective proposed by Rugman and Verbeke (2003), and which has the following characteristics. *First*, the bounded rationality problems faced by MNE corporate level management are viewed as problems of information multifacetedness and divergence in judgments with subsidiaries. These are organizational constraints that can be mitigated through organizational redesign, i.e., a rather normative approach in line with the Chandler (1962) tradition. This approach distances itself from the Williamsonian black box concept of bounded rationality, which is mainly used as a background assumption to explain, a posteriori, observed phenomena, such as the systematic adoption of new organizational forms like the M-form (For similar criticisms on the usage of bounded rationality concept, see, e.g. Foss 2001a, Foss 2001c, Foss 2003). A detailed understanding of the bounded rationality problems faced by corporate level management, the nature of subsidiary autonomous activities, and the reciprocal influence between the two, especially in terms of internal co-evolution, is necessary to expand the current analysis of MNE governance. When concepts such as bounded rationality are applied in the context of subsidiary autonomous activities, recognition of these ex ante problems faced by corporate level management itself, may reduce its involvement at the initial stage of such activities (this implies respect for subsidiaries engaging in “external” initiatives, initially hidden from the corporate level, and building upon subsidiary slack resources). Here, either ex-post approval of such activities will occur after some level of success has been achieved, or ex post abortion after failing to meet some minimum performance threshold. This distinction between the ex ante and ex post dimensions of bounded rationality, suggests that the initial stages of subsidiary autonomous activities may (at least for the “external initiatives”) significantly reduce the problems of divergent information facet selection and interpretation in the case of weak subsidiary reputation.

Figure 1. Bounded Rationality and Subsidiary Activities: Conventional TCE Approach and the Approach in Rugman and Verbeke (2003)



Second, the substitution of opportunism by simple self-interest seeking behavior reveals the limits of conventional transaction cost thinking to understand subsidiary activities. In the conventional transaction cost approach, subsidiary autonomous activities are reflections of opportunism of subsidiary managers and should be aborted (Figure 1a); while in the revised transaction cost approach, subsidiary autonomous activities reflect the self-interest seeking behavior of subsidiary managers, that may or may not be in line with the interests of the MNE as a whole. The functioning of MNE governance to induce desired behavior from employees and subunits in the organization (the arrow between corporate management and subsidiary induced activities in Figure 1) has been discussed extensively (e.g. Williamson 1985), but the linkage between corporate level management and subsidiary autonomous activities has not been explored much in the realm of transaction cost research.

Components of the Bounded Rationality Construct

Bounded rationality, as understood by Herbert Simon (1957, 1965), is based on two principles: (1) economic actors have limited computational capacity because of informational complexity. (2) Economic actors are faced with incomplete information because of informational uncertainty. We have argued above, however, in the context of subsidiary autonomous activities in MNEs, that bounded rationality in MNEs may be entirely unrelated to corporate management's inability to access and process information on autonomous activities in subsidiaries. Our perspective on bounded rationality is that information may be fully accessible but the problem is a twofold divergence between corporate level and subsidiary level: first, as regards the selection of information facets considered as the most critical for decision-making purposes; second, as regards the interpretation of the facets chosen. This is not a problem of computational limitations in information processing, but of divergence in judgment. Selection of different information facets, and divergence in the interpretation of these facets, lead to idiosyncratic assessments of the potential contribution of autonomous activities to competitive advantage, somewhat in line with the absorptive capacity concept (Cohen/Levinthal 1990, Lane/Lubatkin 1998, Szulanski 1996), but an important difference should also be noted. Absorptive capacity is conceptualized as "the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends" (Cohen/Levinthal 1990, p. 128), while our usage of bounded rationality refers to the divergence in selecting and judging information bundles already inside the organization, but by subsidiary management versus corporate level management.

In the following, we discuss the reasons for the bounded rationality constraints faced by corporate level management in large established MNEs and consider three groups of parameters: institutional context, organizational context, and corporate level management context. Institutional context refers to the extent of dissimilarity between institutions in the home country and host country (Kostova 1999, Xu/Shenkar 2002). Organizational context refers to organizational attributes, such as structures, routines, and dominant logic, which enable and drive information selection and interpretation. Corporate level management context refers to demographic characteristics of MNE corporate level management. The three groups of parameters reflect the influence of country level, organizational level, and group level characteristics influencing bounded rationality constraints faced by MNE corporate level management.

Institutional context mainly refers to the institutional distance between the MNE home country and the subsidiary host country. A higher institutional distance, consisting of cognitive, normative and regulatory components increases bounded rationality constraints faced by corporate management in MNEs. First, the cognitive dimension refers to the shared social knowledge, schemes, mindsets through which information coming from the environment is identified as relevant and interpreted (Kostova 1999, Scott 1995, Xu/Shenkar 2002). A higher cognitive distance increases the likelihood that senior corporate level managers will select and judge information related to a foreign subsidiary differently from the subsidiary management. Second, the normative dimension refers to the norms, values and beliefs in social lives. An MNE as a network has to conform to multiple norms and values to be viewed as legitimate, but isomorphism of a subsidiary with the local environment may lead to incongruence with the values of senior corporate managers (Westney 1989). Finally, the regulatory dimension refers to the prevailing laws and rules, and differences in regulations among countries may also contribute to selecting and judging information differently at the corporate and subsidiary levels.

The impact on the bounded rationality constraints faced by corporate level management vis-à-vis subsidiaries has only been implicitly noted in the literature that discusses the choice of an optimal location for foreign direct investment or other entry modes (Ghemawat 2001, Kostova 1999, Xu/Shenkar 2002). The suggestion that the institutional distance between home country and host country of an MNE affect the risks and costs of international expansion, and that an MNE should invest in adjacent markets (Rugman/Verbeke 2004), may be explained by the influence of this distance on the bounded rationality constraints faced by corporate level management. The normative implication, discussed in depth by Rugman and Verbeke (2004) is therefore that MNEs should invest in closer (intra-regional) markets to facilitate cooperation and coordination with subsidiaries.

Organizational context is important because firms can economize on bounded rationality through organizational design. For MNEs, even if the institu-

tional distance is large, they can still reduce the bounded rationality constraints faced by corporate level management through designing firm-specific organizational tools. Interestingly, mainstream transaction cost based thinking usually assumes that even bounded rationality issues related to the firm's institutional context (see above) and corporate management context (see below) should be addressed by redesigning the organizational context.

Williamson (1975, pp. 20–40), has briefly described several tools used by organizations to reduce bounded rationality, opportunism, and information impactedness problems. These tools were grouped into two categories (Williamson 1985): decision processes and governance structure. By sequential decision-making or heuristic problem-solving, decision-makers gather increasing knowledge about the events as they emerge. Other tools, including organization specific communication systems, convergent expectations and atmosphere, are components of the governance structure, and should be assigned to specific transactions in a discriminating way. The concept of convergent expectations is mentioned only casually by Williamson (1975, p. 25), as “an additional advantage of internal organization”, without any further analysis of how such convergent expectations should be promoted. They are viewed primarily as the outcome of other mechanisms, such as efforts to improve socialization and to build a corporate culture.

The more normatively oriented research has addressed extensively the creation of convergence in information selection and interpretation, through organizational design. The following concepts appear especially useful in the context of managing autonomous projects. *First*, procedural justice, defined as “the extent to which the dynamics of a multinational corporation's strategy-making process are judged to be fair by the top managers of its subsidiaries” (Kim/Mauborgne 1993b, p. 504). Perceived fairness depends upon the quality of bilateral communication, the subsidiary management possibilities to challenge corporate level decisions, the familiarity of corporate level management with local conditions, the transparency of corporate level decision making (especially the willingness to explain corporate level decisions), and finally consistency in decision making procedures. These five elements (Kim/Mauborgne 1991, 1993a, b, 1995, 1997), may be viewed as decision process components that permit the reduction of bounded rationality constraints faced by corporate level management. Bilateral communication gives the chance to both parties respectively to voice and to listen to the rationale for – and content of – autonomous activities. The possibilities provided to subsidiary managers to “legitimately challenge the strategic views of the head office” (Kim/Mauborgne 1993b, p. 504) may incite corporate level management to include the local perspective in information facet selection. Familiarity with local conditions ensures that corporate level management is in tune with the subsidiary's environmental and internal opportunities and constraints. Decision making transparency in terms of accounting for past decisions provides a detailed explanation of corporate level judgment of autonomous activ-

ities, so that subsidiary managers can understand the cognitive maps of corporate level management. Finally, consistent decision-making procedures across subsidiary units provide a sound basis for company-wide comparisons of different autonomous activities. The inclusion of a procedural justice component in bureaucratic coordination and control tools, may contribute to overcoming divergence between corporate and subsidiary levels, as far as the selection and judgment of relevant information facets is concerned.

Second, the price mechanism can also be used (Grandori 1997a). Managers may simply make decisions according to prices without searching for any new information. The use of profit centers, transfer pricing, gaming, voting, etc. may qualify as market mechanisms (Bradach/Eccles 1989, Grandori 1997a, b, North 1990). Prices, if viewed by subsidiary managers and corporate managers alike as the key information to be selected for strategic decision-making purposes, may also be easier to judge without divergences in interpretation. However, in the case of substantial market-related or technological uncertainty, as is typical for many autonomous projects, the price mechanism may be difficult to use. In such cases, even if corporate level and subsidiary level managers have access to exactly the same information, the contribution of alternative projects to the MNE's future income stream and competitive advantage cannot be accurately predicted. Here, internal managerial judgment, largely relying upon experience-based knowledge, on the projects' expected economic outcomes, becomes critical.

Third, there are several socialization-based instruments. A major extension is the role of firm specific atmosphere, aspects of which may include the role of corporate culture, trust, clans, etc. (Adler 2001, Alvesson/Lindkvist 1993, Ouchi 1980) in intra-firm transactions. Kreps (1990) introduces the corporate culture concept to explain how reputation effects infuse confidence in trades within large, hierarchical organizations with diffused ownership in the face of unforeseeable contingencies. If some types of organization specific atmosphere are present, such as trust, corporate level management will not need to second-guess the rationale of subsidiary managers' decisions because it will assume that corporate level management would have made the same decisions in the same situation and with the same experiential knowledge, given the high level of subsidiary management socialization. Furthermore, communication systems with organization specific coding may carry large volumes of information, and facilitate the common understanding of critical issues. Communication may be viewed as discourse (Kogut/Zander 1996), in the sense that not only the content of the situation is communicated, but also the interpretation of the situation. It should also be noted that within an MNE, specific functions and professional specializations are more likely to develop a shared general orientation than is the case for the MNE as a whole (Alvesson/Lindkvist 1993). Thus, formal and informal communication systems between corporate level management and subsidiaries should also influence the bounded rationality constraints faced by corporate level management.

Corporate management context is also important, and a substantial body of literature has explored the demographic characteristics (such as age and education) of top management teams (Bantel/Jackson 1989, Lawrence 1997, Michel/Hambrick 1992, Wiersema/ Bantel 1992), focusing on aggregate attributes rather than individual characteristics, assuming that the most relevant variables are related to cognitive abilities, attitudes and expertise, and that group attributes influence behavior independently of individual attributes. Thus, the group attributes of corporate level management may also influence their bounded rationality constraints.

One well accepted group attribute is the diversity of corporate level management. A high diversity in the background of senior, corporate level management implies the presence of multiple cognitive bases (Wiersema/Bantel 1992). In addition, a higher functional diversity of corporate level management suggests more diversity in information sources and a broader set of perspectives available in decision-making processes. Senior MNE, corporate level management will gather information from different sources and may interpret information from different perspectives, thereby augmenting its affinity with multifaceted issues. A number of empirical studies have suggested that functional heterogeneity facilitates innovativeness, because creativity requires the combination of facts and ideas in novel ways. However, this advantage does not arise as a result of heterogeneity with respect to age, tenure, and educational major (Bantel/Jackson 1989).

The size of corporate level management should also affect the bounded rationality constraints it faces. A larger size of corporate level management, although expensive, should reduce the bounded rationality problems it faces, see Chandler (1991, p. 40). Empirical research on the composition of top management teams in MNEs is scarce at present, but the above analysis predicts that large-scale successful implementation of autonomous initiatives will be associated with a greater size and more heterogeneity in corporate level management.

A New Framework to Manage Subsidiary Autonomous Activities

The analysis above has suggested that two components of bounded rationality determine how established MNEs manage subsidiary autonomous activities, namely the selection of specific information bundles on these activities, and the divergence in judgment of these information bundles between corporate level and subsidiary level management.

First, the information selection parameter measures the affinity of corporate level managers with both the rationale for autonomous strategic activities in sub-

subsidiaries and their content, as crafted by subsidiary managers. This information selection may be ‘intrinsically convergent’, ‘divergent’ or ‘made convergent through managerial design’. ‘Intrinsically convergent’ information selection implies that the corporate level management has a strong affinity with the rationale and content of autonomous activities as crafted by subsidiary management. ‘Divergent’ information selection reflects a significant lack of common understanding because the information bundles selected by corporate level management as relevant to strategic decision-making are different from those selected by subsidiary management. Information selection that is ‘made convergent through managerial design’ implies that corporate level management, although not fully attuned to the process of crafting subsidiary autonomous activities, uses mechanisms such as the ones described in the previous section, to foster convergence in information selection. Here, selective intervention generates partial, but highly relevant information that permits corporate level management and subsidiary level management to focus on the same information facets, to discuss the relevance and limits of these facets, and to perform a joint assessment of the likely contribution of autonomous activities to competitive advantage.

The parameter of divergence in judgment reflects the gap (low or high) between corporate level managers and subsidiary managers in assessing the value of autonomous activities, even when having selected identical information bundles. Both information selection and divergence of judgment refer to *ex ante* levels at the initial stage of subsidiary autonomous activities. Thus, Figure 2 can be constructed to illustrate the six alternative bounded rationality situations faced by corporate level management, when addressing subsidiary autonomous activities.

Figure 2. The Management of Subsidiary Autonomous Activities in MNEs

		Information selection		
		Intrinsically Convergent	Divergent	Convergent through Design
Divergence of Judgment	Low	1	3	5
	High	2	4	6

In cell 1, corporate level management is fully attuned to the rationale for – and content of – subsidiary autonomous activities, and the interpretation of this information by corporate level managers and subsidiary managers is the same. This situation may result from corporate management having an experiential knowledge base similar to that of the subsidiary. This can be expected for autonomous activities arising in, e.g., subsidiaries located in proximate countries, with strong socialization of management at all levels, and with corporate level and subsidiary level managers sharing the same demographic characteristics. Here, subsidiary autonomous activities are likely to be strongly supported by corporate level management. In cell 2, corporate level management is still attuned to what is going on in subsidiaries, in terms of the rationale and substance of subsidiary autonomous activities, but those activities are judged inconsistent with the overall MNE objectives, in terms of appropriate resource allocation to particular businesses and markets. This may result from a mere lack of slack resources to fund all autonomous activities, rather than from opportunism expected from subsidiaries. Here, subsidiary autonomous activities are aborted for reasons that are clear and can be made explicit. This situation may lead to the de-internalization of the autonomous activities pursued if they are viewed as intrinsically valuable, but not aligned with the MNE's strategic priorities.

Cells 3 and 4 reflect the more problematic, often observed situations whereby corporate level management typically aborts subsidiary autonomous activities based on information selection divergent from what occurs in the subsidiaries, see especially Birkinshaw (2000). Here, the potential contribution of subsidiary autonomous activities to MNE competitive advantage, whether judged by corporate level managers as satisfactory or non-satisfactory, is not based on the same information as used in the subsidiary.

Cell 3 includes cases whereby corporate level management and subsidiary management may interpret the information facets selected by corporate level management in the same way (e.g., high risk of exchange rate instability in a host country); however, the subsidiary management does not view these information facets as relevant for assessing the potential contribution to the firm of an autonomous activity. Subsidiary management thinks that other information facets, neglected by corporate level management, should be focused upon. In contrast, in cell 4, free rein is given to the corporate immune system. Subsidiary managers crafting autonomous activities are perceived as engaging in opportunism at worst, and behavior incongruent with MNE strategic priorities at best. The typical reaction of corporate level management to autonomous activities in this case is the “we know best what information is relevant and how to judge it” attitude. The information facets used by corporate level management to assess autonomous activities largely reflect a fundamentally different perspective from what prevails at the subsidiary level, possibly entirely unrelated to the substance of the proposed autonomous activities themselves, but resulting from specific institutional, organizational and corporate management contexts.

In cells 3 and 4, high bounded rationality constraints faced by corporate management, reflect the selection of different information bundles and/or diverging judgments as compared to subsidiaries. Here, the abortion of autonomous activities may lead to high motivation loss in subsidiaries and discouragement of future subsidiary autonomous projects.

In cells 5 and 6, corporate level management attempts to place itself in the subsidiary managers' shoes by introducing mechanisms that alleviate the bounded rationality problems characteristic of cells 3 and 4. Such mechanisms typically constrain the corporate level management's own propensity to select information bundles different from those viewed relevant by the subsidiary, and they reduce the probability of alternative interpretations of identical information facets.

For example, internal competition among subsidiaries, following the completion of a standardized submission of project proposals, with a clear business plan, may be used as the mechanism to decide which autonomous activities will receive corporate support and which will not.

A single MNE's corporate level management may be faced with different sets of subsidiary autonomous activities spread across the various cells of Figure 2. From a normative perspective, it is important to reduce the occurrence of decision making processes in cells 3 and 4, and to shift them to cells 5 and 6. The main normative message of this paper is that high bounded rationality constraints in cells 3 and 4 can be reduced through "design", thereby moving to cells 5 and 6. This is especially important for peripheral subsidiaries, unlikely to benefit from a naturally occurring convergence in information facet selection and interpretation, as described by the left-hand side of Figure 2.

If bounded rationality constraints are conceptualized as governance difficulties resulting from a divergence in information selection and judgment by corporate level management and subsidiaries, "convergence through design" means something different as compared to what would be proposed by conventional transaction cost economics thinking, as noted in the previous sections. It also suggests an extension of the broader information processing perspective on effective organization (Bosch/Volberda/Boer 1999, Egelhoff 1982, 1988, 1991, Galbraith 1973, 1977, 2000, Simon 1957, 1965).

Information-processing theory assumes that the quality of information processing determines organizational performance. The information processing capabilities of an organization, operationalized through its organizational structure, should fit with the information processing requirements imposed by its strategy and environment. A lack of fit creates two problems. First, insufficient information to make valid decisions. Second, information redundancy and efficiency loss. Egelhoff (1982, 1988, 1991), in his path-breaking research, has applied information processing theory to the choice of organizational structures by MNEs. He has argued that four elementary MNE structures, namely the use of world-

wide functional divisions, an international division, geographical divisions, and worldwide product divisions, are fundamentally different in their information processing capacity. This information processing capacity reflects the firms' information focus (internal company focus, rest-of-the-world focus, country/regional focus, or product focus) and the importance they attach to the information processing perspective, namely a strategic or tactical importance.

In the context of the differentiated network MNE, subsidiary autonomous activities should be viewed as one of the main sources of information requirements, complementing the more conventional strategic and environmental complexities and uncertainties studied by Egelhoff (1982, 1988, 1991). However, even such an information processing perspective of MNEs does not consider all the key issues related to the knowledge management required to deal with subsidiary autonomous activities.

First, increased knowledge dispersion, one of the drivers of autonomous activities, imposes new information management requirements on corporate level management for strategic knowledge. Subsidiaries engaged in autonomous activities make use of a complex combination of four types of knowledge bundles: location-bound firm specific advantages (FSAs) that lead to benefits of national responsiveness, non location-bound FSA transferred from the parent or the MNE network, non location-bound FSAs created by the subsidiary itself and diffused throughout the MNE, and subsidiary-specific advantages "that can be exploited globally without the bundle of knowledge itself being easily diffused internally" (Rugman/Verbeke 2001, p. 244). It is precisely the idiosyncratic combination of these knowledge bundles present in the subsidiary that lead to bottom-up, rather than top-down, autonomous activities.

This issue has been largely neglected in the mainstream literature on the MNEs' management of information processing challenges, because subsidiary based knowledge does not feature in that literature. For example, unrelatedly diversified MNEs are viewed as requiring only a low information processing capability of corporate level management. This is because each division functions as a self contained, profit unit and there is little need for coordination among divisions (Jones/Hill 1988). Moreover, unrelatedly diversified MNEs build upon the existence of an internal capital market (Williamson 1975), and control of each division relies largely on financial performance without any in-depth consideration of the substance of actual divisional operations. Consequently, MNEs in this situation are positioned in cell 5 of Figure 2. Here, a well-designed internal capital market brings convergence in information selection and judgment. In contrast, the situation of relatedly diversified MNEs is more complex. Here, the quasi autonomous profit units, including foreign subsidiaries need coordination and control not only based on financial criteria, but also based on more subjective measures (Hoskisson/Hill/Hicheon 1993). Further, externalities in relatedly diversified MNEs may span several units, and the impacts of

resource sharing and re-distribution decisions need to be monitored by corporate level management. The presence of autonomous subsidiary activities then adds an additional need for information management.

As noted above, various organizational context tools, in addition to internal market mechanisms, can be introduced to improve the management of subsidiary autonomous activities, in the spirit of Galbraith (1973, 1977). However, the two elements usually neglected in most research on governance redesign, but fundamentally contributing to alleviating bounded rationality problems, as suggested in the previous section, are higher selectivity in geographic scope of operations, and increased diversity in the size and composition of the senior management team at the corporate level. Rugman and Verbeke (2004) have advocated higher selectivity in geographic scope, given the empirical evidence of rapid decay of non-location bound FSAs in most Fortune 500 companies, once they venture outside of their home region. This rapid decay is usually reflected in a much lower market share and weaker market position in host regions as compared to the home region, and thereby triggers enormous institutional divergence between subsidiary managers and corporate level managers. Finally, increasing the size and functional diversity of corporate management should also improve corporate level – subsidiary interactions (Bantel/Jackson 1989, Chandler 1991, Hurst/Rush/White 1989, Michel/Hambrick 1992, Wiersema/Bantel 1992).

Conclusion

This paper has argued that the successful development of subsidiary autonomous activities in MNEs requires the introduction of specific governance mechanisms to reduce bounded rationality constraints faced by MNE senior managers at the corporate level. Building upon Rugman and Verbeke's (2003) recent work, we have extended their perspective on the role of internal governance in fostering subsidiary autonomous activities, and in reducing the bounded rationality constraints of corporate management. Five conclusions can be drawn from our analysis.

First, current knowledge management research in MNEs tends to assume that the location of knowledge is already known, so that knowledge transfer is the primary focus of analysis (e.g. Szulanski 1996). In fact, the organizational barriers faced by autonomous activities indicate that the focus of research should be on crafting convergent attitudes on what constitutes valuable knowledge. Recognizing the existence of subsidiary specific advantage requires changes in the mental models of corporate level management, through governance redesign.

Second, autonomous activities may also drive the dynamics of internal governance mechanisms (shown as the arrow from autonomous activities to corpo-

rate management in Figure 1b) (Dermer 1988). In the conventional transaction cost approach, changes in internal governance mechanisms are based on efficiency assessments by superiors, while in the revised approach by Rugman and Verbeke (2003a), subsidiary autonomous activities may actually initiate the changes in corporate management context, implying that the “order” achieved, results from mutual alignment (Dermer 1988).

Third, several tools have been suggested in this article to create convergence, especially more selectivity in geographic scope, and changes in the senior, corporate level management team. Yet, it is not clear how the various mechanisms to manage autonomous activities and those to manage induced activities interact, nor how the mechanisms to manage autonomous activities interact among themselves. The conflicts and complementarities among the mechanisms should be considered in future research on governance design (Foss 2001c).

Fourth, the design of any tool to manage autonomous activities is costly, as is the indiscriminate abortion of these activities. MNEs should trade-off eliminating too quickly profitable opportunities proposed by subsidiaries against proceeding with potentially costly and unrewarding autonomous projects, and committing too many resources to them.

Fifth, the encouragement of subsidiary autonomous activities is based on the assumption of high knowledge dispersion in established MNEs and the existence of distinctive competences in subsidiaries. If the knowledge bundles present in MNE subsidiaries do not exhibit a sufficiently high variety, the costs of these autonomous activities may outweigh potential benefits because of the resulting lack of focus, duplication costs, and negative network externalities.

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