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Portfolio management of strategic alliances: An international business perspective

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ABSTRACT

This paper extends the Integration–Responsiveness (Bartlett & Ghoshal, 1989; Prahalad & Doz, 1987) international business framework of multinational companies (MNCs) strategies in order to explain the MNC's various approaches to managing strategic alliance portfolios. Our research shows that the alliance portfolios of MNCs differ significantly with respect to partner integration and partner heterogeneity. We argue that the choice regarding the management of alliance portfolios depends on the MNC's international strategy. The empirical results reveal the impact of local responsiveness through the partner heterogeneity, and the impact of MNC integration on the level of global partner integration respectively.

1. Introduction

The increasing importance of multinational firms (MNC) and strategic alliances on the global business environment leads to the question of how the MNC's choice of international strategy impacts its alliance portfolio management. This paper extends the theory behind international strategy in order to explain why global alliance portfolio management differs from MNC to MNC. More specifically, we extend the understanding of how the needs for local responsiveness and global integration (Ghoshal & Bartlett, 1993; Prahalad & Doz, 1987) lead the MNC to choose different types of partners and different levels of partner integration. The purpose of this paper is to propose a new theoretical approach linking a firm's international strategy and its alliance portfolio management. The study is motivated by three lines of argumentation.

First, globalization is posing new management challenges due to the geographic dispersion of the MNC's value chain. This has resulted in the rise of new organizational structures (Barkema, Baum, & Mannix, 2002), ranging from focused MNCs to global alliance constellations. Leading MNCs are increasingly using alliances in globalizing markets to increase their competitive advantage (Dunning, 2004; Harbinson & Pekar, 1997; Hoffmann, 2007) by cooperating with different types of players such as customers, suppliers, competitors and complementors (Brandenburger & Nalebuff, 1996). As such, the number of firms involved in cooperative relationships and networks has grown. For example, Vapola, Tossavainen, and Gabrielsson (2008) show that firms such as Nokia and Hewlett-Packard have alliance constellations that exceed four hundred members in the application development function alone. Further, given the scale and technology costs associated with global competition, many MNCs have focused on fewer activities internally and outsourced more to their partners (Barkema et al., 2002), thus cooperating *more extensively* with foreign firms. Contractor and Lorange (2002) forecast that alliances will play a major role in complex, interdependent and communicative globalizing markets.

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Second, the MNC's approach to managing geographical and functional differences via strategic alliances affects firm competitiveness, so any decision to partner rather than to develop a particular activity internally (Hennart & Larimo, 1998) is potentially consequential to the future success of the MNC (Dyer, 1996; Gulati, 1998). There are numerous studies exploring the impact of strategic alliances on a MNC's performance, and it has been shown that co-specialization, complementary partnerships and access to knowledge spillovers provide important benefits to the MNC (Dyer, 1996; Gimeno, 2004; Hamel, 1991; Harrigan, 1988; Parkhe, 1993; Sarkar, Echambadi, H, & Jeffrey, 2001; Stuart, 2000; Teece, 1987; Vapola & Seppälä, 2006). However, the focus of prior research in this area has been primarily limited to activity-based motivations, and there has been little research that addresses the impact of a firm's internal strategic orientation on its management of large numbers of external relationships. The MNC's performance regarding alliances is dependent on the overall management of the alliance portfolio rather than the individual alliance, thus placing the structure and strategic orientation of the alliance portfolio management at the center of phenomenon (Hoffmann, 2007).

Third, as alliances have become increasingly central to MNC strategy (Lorange & Roos, 1992), firms have found themselves dealing with issues relating to the management of large alliance portfolios (Gulati, 1998). Consequently, Hoffmann (2007) argues that alliance portfolio management has become an important strategic issue. While there is a wealth of literature both within the international strategy (Bartlett & Ghoshal, 1989; Birkinshaw, Braunderhjelm, Holm, & Terjesen, 2006; Doz, Santos, & Williamson, 2001; Kogut & Zander, 1993; Prahalad & Doz, 1987; Stopford & Wells, 1972) and the strategic alliance (Contractor & Lorange, 2002; Eisenhardt & Schoonhoven, 1996; Gomes-Casseres, 1996; Gulati, 1998; Harrigan, 1988; Khanna, Gulati, & Nohria, 1998; Ohmae, 1989) research streams there is less research explicitly examining the link between the two. Therefore, the theory explaining the phenomenon clearly merits further academic attention, including a strategic perspective drawing on international business theory.

In sum, to investigate different issues related to optimally managing a large number of alliances, this paper asks if and how the MNC's approaches to managing alliance portfolios vary with respect to its international business strategy. The paper develops three propositions and a theoretical framework based upon empirical data collected from five in-depth case studies including extensive archival research. This study addresses the phenomenon from the focal MNC perspective at the corporate level. Corporate strategy defines which business the MNC is engaged in. Thus, research on the MNC's alliances, from a corporate level strategic perspective, allows the research to access questions of boundary setting. Consistent with the corporate level strategy perspective, the case MNC's alliances are analyzed at the portfolio level, aggregating the motive for and purpose of each individual alliance, reflecting the overall strategy of the MNC's alliances. Therefore, the unit of analysis is the MNC's behavior and management characteristics with respect to the alliance portfolio as a whole.

In this paper, the MNC is defined as a multinational firm with significant tangible and intangible assets and hence the capacity to operate widely across the globe, with global learning as a critical source of competitive advantage (Bartlett & Ghoshal, 1989; Doz et al., 2001). We define alliances as all types of cooperative inter-organizational relationships that create and/or protect competitive advantage (Doz & Hamel, 1998; Hagedoorn & Osborn, 1997). An alliance portfolio is the set of all alliances that the focal MNC has with its external partners (Hoffmann, 2007). In this paper, alliances can range from equity-based joint ventures to alliance constellations.[1]

The remainder of the paper is organized as follows. First, we expand the theoretical framework of international business strategy to explain the MNC's alliance portfolio management approach. Second, we describe our data collection and methods. Third, we analyze the empirical findings and put forward three propositions. Finally, conclusions are drawn and future research directions are offered.

2. International strategic management perspective to alliance behavior

2.1. International strategic management research

International strategic management addresses a link between international strategy and firm organization. Scholars have sought to explain both why and how firms internationalize and thus differ in their constitution. Extensive research has been conducted addressing the issue from different perspectives. The first literature stream builds upon the internalization model of foreign expansion (Buckley & Casson, 1976) that suggests that MNCs will establish foreign activities in the case of strong ownership, location and internalization advantages (Dunning, 1981). The role of overseas operations is a key construct. This economic theory model assumes that MNCs systematically engage in a cost–benefit calculus of different entry modes (Rugman & Verbeke, 1992). Growth is a core perspective in generating an understanding of why firms internationalize their activities (Dunning, 2004). However, Johanson and Mattson (1988) comment that the internationalization model of foreign expansion "leaves out characteristics of the firm and the market which seem especially important in the case of 'global competition' and cooperation in industrial systems". An alternate approach to explaining MNC international strategy has emerged within the Nordic international business research tradition (Johansson & Vahlne, 1977; Luostarinen, 1979). While it also stems from the concept of the growth of the firm (Penrose, 1959), the behavioral perspective (Cyert & March, 1963) has strongly influenced the theoretical approach underlying the conceptualization of the firm (Johanson & Vahlne, 1990) and has brought attention to the development and diffusion of knowledge, as well as management mentality within the firm.

[1] Alliance constellations are defined as a set of firms linked together through alliances that compete in a particular competitive domain (Gomes-Casseres, 1996).

A complementary research stream has focused on the impact of MNC international strategy on firm structure (Chandler, 1966, 1975; Daniels, Pitts, & Tretter, 1984; Franko, 1976; Stopford & Wells, 1972). Hence, firm structure is clearly seen as a key international management construct. Furthermore, Chandler showed that diversity (1966) and internationalization (1975) also have an impact on firm organization. Stopford and Wells (1972) identify the firm's international strategy, in terms of diversity and foreign involvement, and the resulting division level configuration of the MNC. Therefore, a key emphasis of international strategy is to construct the optimal configuration of assets and capabilities, and impose control over these configurations.

These models, however, have been criticized on the explanatory power of divisional configurations (Bartlett, 1983), and their inability to integrate global strategies and the concept of national responsiveness (Doz, 1980; Egelhoff, 1988). Addressing these issues, the theory underlying international business strategy has resulted in a relatively simple strategic framework (Ricart, Enright, Ghemawat, Hart, & Khanna, 2004). International business strategy research focuses on describing the complexity and opposite forces of global integration and local responsiveness, which are captured in the 'I–R' framework (Doz & Prahalad, 1987; Ghoshal & Bartlett, 1993; Hedlund, 1993; Yip, 2003). The six constructs for managing the portfolio of subsidiaries that underlie the framework consist of: the configuration of assets and capabilities, the role of overseas operations, development and diffusion of knowledge, management mentality, control, and the structure of MNC network (Bartlett & Ghoshal, 1989). This framework has been shown to be empirically testable (Harzing, 2000) and parsimonious while accounting for significant variations across MNCs (Roth & Morrison, 1990). Despite being a simplification of MNC international strategy, the framework's resulting firm typologies can serve as the basis for a more fine-grained evaluation of the MNC's strategic elements.

While it is recognised that long-term partnerships play a significant role in the MNC's international strategy (Björkman & Forsgren, 2000), strategic alliances have generally fallen outside the global strategic management strategy-structure discussion as they lie outside the firm boundary. Nevertheless, any decision to partner rather than to develop a particular activity internally (Hennart & Larimo, 1998) is potentially consequential to the future success of the MNC (Dyer, 1996; Gulati, 1998). Hence, in addition to the research on a firm's internal strategy, further investigation of the management of the MNC's global strategic alliances is clearly warranted.

2.2. Strategic alliance research

Strategic alliances are a popular topic within the strategic management literature (Anh, Baughn, Hang, & Neupert, 2006; Dong & Glaister, 2006; Eisenhardt & Schoonhoven, 1996; Garcia-Canal & Sanchez-Lorda, 2007; Hagedoorn, 1993; Hamel et al., 1989; Harrigan, 1988; Hennart, 1988; Nakamura, 2005; Nielsen, 2007; Parkhe, 1993). As is the case within the internationalization scholarship, the research addressing strategic alliances has approached inter-firm cooperation from different perspectives. Included amongst the numerous strategic objectives for alliancing are economies of scale and scope, limiting transaction costs (Hennart, 1988), getting access to unique and valuable complementary resources (Eisenhardt & Schoonhoven, 1996; Garcia-Canal & Sanchez-Lorda, 2007), learning (Anh et al., 2006; Dong & Glaister, 2006; Hagedoorn, 1993; Hamel et al., 1989; Khanna et al., 1998; Nakamura, 2005), gaining market power (Hagedoorn, 1993), gaining market access (Dong & Glaister, 2006), managing and sharing risk (Hamel et al., 1989; Hennart, 1988; Ohmae, 1989), creating options for future investment (Kogut, 1991) and competitive responses (Gimeno, 2004). Furthermore, the rationales for alliancing can be categorized as being either offensive or defensive (Spekman, Forbes, Isabella, & MacAvoy, 1998). The differing strategic motives have led to multiple descriptions of different rationales behind various types of alliance strategies. However, a comprehensive approach regarding the management of alliance portfolios could further inform the strategic management of the MNC.

Recently, strategic alliance research has emphasized alliance network structure, and the configuration of assets and capabilities across these networks, as key constructs underlying alliance portfolio management (Dhanaraj & Parkhe, 2006; Goerzen, 2005; Gomes-Casseres, 1996; Hoffmann, 2007; Lavie & Rosenkopf, 2006; Rowley, Behrens, & Krackhardt, 2000). The link between alliance network structure and the characteristics of different individual relationships within the networks has received significant attention (Rowley et al., 2000). The network theory (Granovetter, 1973) provides sophisticated models by which to address the structural and relational embeddedness of MNCs, using network density, centrality, strength and redundancy of ties, and various other measures to analyze the alliance network. Different strategic motives, such as exploration or exploitation of opportunities (March, 1991), are each supported using specific alliance configurations. Therefore, MNCs change the balance or orientation of their alliance portfolios over time according to the firm's strategic need (e.g. Lavie & Rosenkopf, 2006). As different objectives are achieved through different partners, the development and diffusion of knowledge resulting from such operations also varies. Subsequently, the needs for different control mechanisms, depending on the strong ties between the networked parties, for example, are important constructs for analyzing the management of alliance portfolios. It is also understood that a firm may require a variety of alliances due to different functional requirements, such as the need for sales and marketing alliances used to respond to the differing needs of local markets. However, when addressing the management of such alliance portfolios, the management of the MNC may still have a global mentality towards its partners, and regard and address the management of diverse partners uniformly across its alliance portfolio. Therefore, in addition to the structural and functional measures, an understanding of the managers' way of doing business and the MNC's strategic orientation demands more subtle constructs such as the general management mentality towards overseas or external partners.

Table 1
The linkage of international strategy and management characteristics.[a]

Strategic Orientation	→	Management Characteristics
G: Global efficiencies		1. Configuration of assets and capabilities
M: Local Responsiveness		2. Role of overseas operations
T: Both of the above		3. Development and diffusion of knowledge
		4. Mentality
		5. Control
		6. Structure

[a] G, M, and T refer to the global, multi-domestic and transnational strategies of Bartlett and Ghoshal (1989).

Recently, MNCs have found themselves dealing with issues relating to the management of new and complex alliance structures (Barkema et al., 2002) as well as large alliance portfolios (Gulati, 1998) on a global basis. Consequently, the relationship between different strategies and their respective alliance portfolio management approaches is becoming increasingly important (e.g. Hoffmann, 2007). Goerzen (2005) found that although alliance portfolio management was considered critical to the management of the MNC, it was still underdeveloped in most firms. In providing one approach to addressing this challenge, Hoffmann (2007) suggests positioning all alliances of a particular business unit in a portfolio matrix depending on the strategic uncertainty and potential impact on the MNC in that particular area of cooperation. Hoffmann (2007) also suggests that as MNCs systematically access resources outside their boundaries through alliance strategies, further perspectives to alliance portfolio management should be developed.

2.3. International strategy perspective on alliance portfolio management

The international strategic management literature, such as Bartlett and Ghoshal (1989), emphasizes the need for strategic consistency within the MNC in order to accrue the benefits of the selected international strategy and arrive at a position of competitive advantage. Strategically, alliances may serve to reinforce deficiencies in the MNC's internal configuration (Prahalad & Doz, 1987) or exploit strengths. Thus, the international strategy may be important in explaining the formation and development of a particular MNC's strategic alliance portfolio management approach. According to Ghoshal and Bartlett (1993), the MNC's subsidiaries form a certain type of network, a concept similar to that found in strategic alliance research. When reviewing the literature from the two streams above, it was noticed that similar constructs are utilized on both sides. These constructs address the configuration of assets, roles of subsidiaries/partners, diffusion of knowledge between and the management mentality regarding these entities and control and structure of the overall network. Therefore, the I–R framework, which has proven to be useful in the analysis of the management of the MNC, may also be utilized to address the increasing complexity of managing today's MNC as its operations extend beyond its boundaries. As the key functions of the MNC are organized and distributed globally according to the choice of the international strategy (Ricart et al., 2004), the MNC's overall partnering needs, as manifested in the alliance portfolio, may also vary according to the I–R framework. The following table illustrate the linkages between the constructs (Table 1).

3. Research methodology

3.1. Method

The objective of this study is to extend existing theory by drawing on in-depth case studies (Eisenhardt & Graebner, 2007). The research question asks how an established theoretical position may be extended (Lee, Mitchell, & Sablynski, 1999) beyond the initial scope of the theory. While the I–R framework (Bartlett & Ghoshal, 1989; Prahalad & Doz, 1987) serves to explain the strategic management of the multinational corporation with respect to the conditions for integration and local responsiveness, the research is limited to within the boundaries of the MNC. We fill this research gap by extending the theory to external relationships, namely the management of the MNC's strategic alliance portfolio. Based on the collected data we analyze whether there is a pattern and a relationship between the MNC's international strategy and the management characteristics of the partnerships within its alliance portfolios.

The research follows a design suggested by Eisenhardt and Graebner (2007) for building theory from insights developed through a multiple case study. The study utilized theoretical sampling in selecting the five case MNCs. The theoretical sample was based on two criteria. Firstly, the replication logic reinforces the robustness and verification of the findings due to access to multiple case firms (Eisenhardt & Graebner, 2007) of different sizes within different industries. Second, an on-going research project focusing on the leading MNCs in Finland provided the researchers the unusual opportunity of open-access to the case firms' core decision-makers and strategists (Yin, 1994). The theory building was based on pattern recognition (Eisenhardt & Graebner, 2007) building on the central constructs of the theoretical I–R framework.

The data was gathered from a variety of sources (Yin, 1994), including interviews and secondary data including case firm annual reports, corporate websites, and archives of business press articles. Multiple interviews were conducted within each case firm to limit the informant bias (Eisenhardt & Graebner, 2007). The secondary data was collected from a period of over 10 years in order to gain an in-depth longitudinal understanding of the case firms and to mitigate the interview respondents' sense-making and retrospectives on their management decisions (ibid.) and to place the responses in an extra-local and historical context (Burawoy, 1998).

Based on empirical analysis method developed by Harzing (2000), the typology of the international strategy was derived from in-depth interviews of MNC managers responsible for the strategy creation (c.f. Table 2). The data analysis process began during the data collection phase in order to make sense of the insights provided by the interviewees. At this stage we developed the theoretical construct derived from the I–R framework, shown in Fig. 1. Second, with help of the theoretical construct to guide us, we used the data that was derived from the full range of data sources to analyze the alliance portfolio management approach. We collected a large-scale longitudinal secondary database (yielding 9000 individual data points spanning over 10 years). After the data collection it was possible to move forward to more rigorous pattern matching. The raw data was subjected to a key word search. Based upon the keywords hits, a database of categorized quotations was created and verified following multiple iterations and cross-reviews. After the comprehensive analysis, we were in the position to concentrate on each of the theoretical elements within the framework. The strict abidance to multiple case study protocol, the utilization of replication logic and the triangulation of data further increases the reliability of the research findings (Eisenhardt, 1989; Yin, 1994).

Drawing on Eisenhardt and Graebner (2007) this paper is structured around the extension of existing theory. The empirically grounded argumentation supporting each proposed extension to the theory is supported by evidence from the cases demonstrated in summary tables. The empirical support of each proposition emphasizes the methodological rigor and richness of the case studies. The patterns that emerged through the process of the data analysis were matched with the theoretical framework providing a logic-based link between constructs. The summary of the findings is presented in the alliance portfolio management framework providing a basis for further empirical testing of new theoretical insights.

3.2. Data

The phenomenon of alliancing behavior was studied within the context of five leading Finnish MNCs in industries described to be both high-tech and knowledge intensive. Alliance activity has significantly increased during the 2000s in the high-tech sector making it a relevant context for the study. The data gathering process comprised of two parts: interviews with firm management and the collection of business media and firm communications archival data. The 34 interviewees at the case firms held positions ranging from Director to Senior Vice President. All of the interviewed managers were directly involved in the MNCs' strategy development. The interviews covered both a structured questionnaire as well as complementary semi-structured questions. The structured interview guide allowed the respondent to answer standardized questions. In addition to the interview guide further questions relevant to each respondent's area of expertise were asked allowing for a deeper understanding of the case. Each interview lasted for an average of 2 h, and each was digitally recorded, transcribed and verified by the respondents for accuracy. Furthermore, a minimum of 2 persons were present at each interview and another 2 persons independently verified that the findings had been correctly interpreted.

The secondary data was collected through an archival review of the national Finnish business press including the leading business newspaper *Kauppalehti* as well as the leading business magazine *Optio*. An exhaustive keyword search from January 1997 to June 2007 was conducted yielding articles regarding at least one of the five case firms and a term describing inter-firm cooperation, strategic alliances, partnerships, etc. Further, archival data collection was also undertaken utilizing the case firms' annual reports from 1997 until 2007 as well as corporate communications and press release archives available through company websites. These corporate communications and their appendices were analyzed with respect to mentions of strategic alliances, partnerships and other keyword terms describing inter-firm cooperation and alliance behavior. The secondary data search yielded over 9000 references that were subsequently analyzed as described in the case study protocol. The following table describes the methodology, data collection process and analysis at each stage of the research.[2]

4. Empirical findings

In this study we develop a theoretical model of the alliance portfolio management approaches applied by MNCs. In particular, we investigate how the different MNC international strategies are reflected in their alliance portfolio management approaches. In line with Eisenhardt and Graebner (2007), we describe the interplay between theoretical constructs and supporting empirical evidence. We present the findings in three parts. First, we identify the international strategy of each case MNC. Second, we analyze whether the MNCs' approaches to alliance portfolio management differ in terms of strategic orientation as measured by integration – local responsiveness and compare each approach with the respective MNC's

[2] In order to keep this paper within an appropriate page length while being able to explore the richness of our findings along the lines of the I–R framework, the main target of this paper, we decided to exclude a detailed cross-referencing to a wealth of prior strategic alliance research focusing on similar or related constructs.

Table 2
Case study stages.

Stage	Focus	Case firms	Method	Data sources	Data types
1	Analysis of the international strategy	5 case MNCs (Honkarakenne, Nokia, Wärtsilä, Perlos, Kone)	Semi-structured interviews	34 senior managers (Director to Sr. VP level)	Cross-sectional data of 65 h of tape-recorded transcripts
2	Analysis of strategic alliance orientation	Same as above	Data from above. Secondary archival research spanning years 1997–2007	Above, plus business journals (Kauppalehti, Optio), websites, press releases, annual reports	Database of 9000 data points inclusive codified primary interview data and longitudinal archival secondary data
3	Analysis of alliance portfolio management characteristics	Same as above	Same as above	Same as above	Same as above

international strategy. Third, we draw upon the rich case data and perform a more fine-grained analysis of the constructs underlying the MNC alliance portfolio management characteristics enabling us to not only theorize along the lines of the I–R parameters but to extend the original framework (Bartlett & Ghoshal, 1989) beyond the boundaries of the firm.

4.1. Classification of international strategies of the case MNCs

The international strategies of the case MNCs are classified (c.f. Harzing, 2000) based on the interviews with senior management. The classification of the MNC international strategies is provided in the table below. As can be seen from the table, the case firms represent three different types of international strategies: global, multi-domestic and transnational (Table 3).

As an example of the type of discussion we had during the interviews, the following quote from a Senior Vice President at Kone explains their international strategy orientation:

> "*If you go around and say, that I'm the global guy, everybody would just say that I don't need global service, I just need service for today, for my situation. I don't really care, whether you create it globally. So that's the kind of thinking behind why we left [moved beyond] globalization or global presence.*"

4.2. Cross case analysis of the alliance portfolio management approaches

The empirical findings summarized in the following table, classify the alliance portfolio management approaches employed by the case MNCs. As can be seen from the Table 4, there are alliance portfolios with a high level of integration, high level of heterogeneity, or a combination of both. Based on the empirical evidence yielded by the cases, the alliance portfolio management approaches of the case MNCs can be seen to be related to the MNCs international strategy.

Table 3
Classification of case MNC's international strategy.

Name of MNC	Industry	Annual sales revenue (2006)	Percentage of international sales (2006)	Type of MNC international strategy
Honkarakenne	Log houses	85 M €	57% outside of Finland	*M: Multi-domestic*
Perlos	Telecommunications	674 M€	50% outside of Europe	*G: Global*
Wärtsilä	Marine engineering	3190 M€	61% outside of Europe	*G: Global*
Nokia	Telecommunications	41 121 M€	62% outside of Europe	*T: Transnational*
Kone	Elevators, escalators, automatic doors and autowalks	3610 M€	40% outside of Europe	*T: Transnational*

Table 4
Alliance portfolio management approaches.

		Partner Heterogeneity	
		Low	**High**
Partner Integration	**High**	Highly Integrated Global Alliance Portfolio Management	Dual-Focused Transnational Alliance Portfolio Management
	Low		Local Demand Oriented Multi-domestic Heterogeneous Alliance Portfolio Management

4.2.1. Highly integrated global alliance portfolio management

A global strategy implies a high level of integration of the MNC's activities (Leong & Tan, 1993) resulting in standardized solutions and processes (Harzing, 2000) driven by rationales such as economies of scale. The case firms that were identified to have a highly integrated portfolio strategy were Wärtsilä and Perlos. Wärtsilä was the purest example, in that it was the firm that most consistently had tightly coupled, integrated alliance relationships. Both firms' alliance portfolio management strategies were consistent in that not only were the partner firms closely integrated to the MNCs' operations on a worldwide basis, they were used to implement the MNC's chosen international strategy. This suggests a relationship between the international strategic orientation and the MNC's choice of alliance portfolio management.

This strategic orientation is clearly reflected at Wärtsilä, where a division Vice President explained the firm's management mentality referring to the firm's many tightly coupled partnerships: ''*We cannot buy those and they are maybe not even for sale. So you need to have cooperation alliances*.'' Hence, a tight alliance portfolio management was often seen as a necessary, but second best option, to the full internalization, and consequent integration, of partners. The other global case firm, Perlos, illustrates a MNC following an 'inverse' global business strategy. Inverse global strategy refers to a MNC that has chosen an international strategy that aims to implement its partner's strategies on a global basis. Interestingly, this inverse global strategy is also reflected with a high level of integration with its partners in terms of the configuration of assets and capabilities. The partners are treated in a unified manner in all markets. However, in contrast to Wärtsilä's tight control and influence over its partners, Perlos' alliance strategy is very much integrated though best described as controlled and coordinated by a major alliance partner. A global strategy, as applied by Wärtsilä and Perlos, not only leads to tight operational control and centralized decision-making internally but also across the alliance portfolio.

Our findings are consistent over the period of analysis suggesting that alliance portfolio management matches international strategic orientation. The reasoning behind the first proposition is that in order to achieve a high level of integration internally, the MNC is expected to have the similarly high need for integration of its partners as reflected in its alliance portfolio management. Hence,

Proposition 1. *The stronger the MNC's global strategic orientation favoring global integration, the higher the level of partner integration within the MNC's alliance portfolio.*

4.2.2. Local demand oriented heterogeneous alliance portfolio management

In contrast to the highly integrated alliance portfolio management category, this alliance portfolio management approach aims at matching specific or local needs locally, drawing on diverse partners best suited to a particular role or location. Furthermore, as the local markets are served through differentiated policies and processes the types of partners, and the scope of activities of each, may be rather different across the whole MNC. Hence, the MNC can, for example, differentiate and optimize its activities in each country on a case-by-case basis by choosing most the suitable partner for that particular country. Due to the complexity arising from the multitude of local demands, the decisions to partner are also made on the local level resulting in partner diversity. When assessing the MNC's market countries from a local responsiveness perspective, this pattern matches with the multi-domestic strategy suggesting that markets are treated autonomously.

In the sample of case firms, Honkarakenne represented an example of a local demand orientated firm. Honkarakenne's approach to the management of its alliance portfolio yielded a heterogeneous range of partners that were, on aggregate, not closely integrated to the MNC operations. The R&D Director described Honkarakenne's activities as consisting of, ''*we have our own subsidiary there – and under this subsidiary we have dealers – two different types of dealers, the difference being their competence and related to competence, the obligations*''. When questioned how the MNC controls all of its downstream partners the same interviewee responded by asking, ''*How? . . . there are so many parties that are independent.*''

In contrast to the other case MNCs, Honkarakenne's multi-domestic strategy did not tightly integrate the partners in its alliance portfolio. The configuration of assets and capabilities of the multi-domestic alliance portfolio was typically loose and decentralized, even to the point of partners being nationally self-sufficient. Honkarakenne's alliances were primarily focused on downstream value chain activities, and were involved in sensing and exploiting opportunities as they arose on the local level while applying knowledge or base product developed by the MNC. The MNC management regards these foreign partners as a portfolio of independent relationships managed at a local level. The typically informal relationships with the many different kinds of partners were governed through simple financial controls. The responsiveness oriented MNC alliance portfolio structure thus reflected an aggregate collection of the various different individual alliance structures between the MNC and its differing partners.

In summary, the strategic alliance management that emphasizes a high degree of responsiveness and sensing of local opportunities through loose networks of different partners reflects a multi-domestic alliance portfolio management approach. Hence, the reasoning for the second proposition is straightforward: in order to achieve a high level of local responsiveness the MNC requires high levels of customization in order to serve the local needs, which implies the need to accommodate different types of partners at the local level and different management approaches. Hence, the proposition:

Proposition 2. *The stronger the MNC's multi-domestic strategic orientation favoring local responsiveness, the higher the partner heterogeneity within the MNC's alliance portfolio.*

4.2.3. Dual-focused transnational alliance portfolio management

A strategy characterized by a simultaneous high degree of integration and high heterogeneity, with respect to the management of the MNC alliance portfolio, was found to co-exist in two case MNCs, Nokia and Kone. In both cases the configuration of assets and capabilities of the MNC was predominantly seen as dispersed not only within the MNC but also amongst its partners. The MNCs' partner firm portfolios provided the MNCs with differentiated contributions. Some were involved in sensing and exploiting opportunities as they arose on the local level, while others, contrastingly, fulfilled tightly scoped pre-determined roles in the exploitation of the value chain. Knowledge was not only developed jointly with partners but it was subsequently shared across the MNC on a global level. The management of the alliance portfolio required complex processes of cooperation and coordination resulting in shared decision-making between the MNC and its different partners. These findings showed that both Nokia and Kone followed a transnational strategy not only in their international orientation but also in terms of the management of their alliance portfolios. Each alliance portfolio was characterized by a large flow of information and assets throughout an interdependent network of partnering firms. However, both Nokia and Kone had heterogeneity in terms of the management of partnering firms in addition to the tight integration of their partners within the alliance portfolio. As a MNC following a transnational strategy both case firms have a wide array of specialized subsidiaries, serving as strategic centers for particular activities or product-markets, it follows that each of these may have substantially different partnerships needs. Hence, this suggests the MNC may utilize both types of alliance strategies simultaneously.

Interestingly, it is important to distinguish between the alliance management approaches and the purposes for those alliances. In addition to the expected globally managed manufacturing and sourcing related activities, roles of global alliances also included those with the purpose of influencing local consumers, such as global brand or PR campaigns. For example, marketing alliances, with the objective of local responsiveness, may be primarily centralized and integrated with a few large global partners fulfilling the pre-determined roles and hence doing the localization on behalf of the MNC. Director at Nokia Strategy commented: "*Nokia was quite good in thinking about what's the key we need to focus on and which we can find a partner for*."

Compared to the two previous alliance portfolio management categories, the transnational MNCs showed a much wider range of functions for alliances, ranging from R&D, sourcing, manufacturing to marketing and responding to the local opportunities. Nokia's Head of Insight and Innovation unit commented: *"...we have lot of partnerships. Because there are several standards of solutions that have to be synchronized and we take like universal plug-and-play and those kinds of things. They are joint standards that we are sharing with [partners]..."* The establishment of global innovation constellations was particularly prominent with case MNCs following the transnational strategy. On the other hand, the formation of alliances can also be done when embedded in the local context. For example, Nokia's Head of Insight and Innovation elaborated: *"The Indian national anthem. This is a kind of content localisation ... that we do a lot with a local partners."* Another Nokia example is the presence of manufacturing operations in Manaus, Brazil due to local regulatory needs, specific go-to-market opportunities with local operators, and so forth.

When there are a numerous alliances, which are simultaneously different from each other and yet highly integrated to the MNC, the demarcation between the partners becomes an issue to address in the management approach. The interdependency and blurring organizational boundaries between the MNC and its partners was also often highlighted as described by a Senior Vice President at Kone: "*Then you have to rely more on partners, and how to apply something that maybe the initial idea has been developed somewhere else and how to integrate that into the elevator escalator environment or our technology. Then you normally rely on a partner. So, but where you put the border there, what is ours and what is theirs, that's the tricky one*."

In summary, the elements of the transnational alliance portfolio strategy aim at positioning partner firms in order for the MNC to achieve the benefits of tightly integrated exploitative relationships as well as allowing for the opportunity for explorative partnerships to emerge through loosely coupled alliances. Therefore, the transnational strategy should result high requirements in terms of both partner heterogeneity as well as integration depth. Hence, as described through the cases of Nokia and Kone, the same MNC might have some very tightly integrated partners as well as a number of loosely coupled different partners in its portfolio. Hence;

Proposition 3. The stronger the MNC's transnational strategic orientation favoring both local responsiveness and global integration, the higher the partner heterogeneity and the integration level of partners within the alliance portfolio.

4.3. Analysis of the alliance portfolio configurations

Below we examine the constructs underlying the different management approaches to alliance portfolio in more detail. The evidence presented here shows a summary of cross-case analysis derived from both interview transcripts as well as secondary data of 9000 references. We assess the data from each case MNC on the basis of the six constructs of its alliance portfolio management as extended from the literature: the configuration of assets and capabilities, the role of overseas operations, development and diffusion of knowledge, management mentality, control and the structure of the alliance portfolio. We code each data point with respect to each of the six construct types of alliance portfolio management approach to three categories: highly integrated global alliance portfolio management, local demand oriented multi-domestic heterogeneous alliance portfolio management and dual-focused transnational alliance portfolio management. As we have a large data set, we calculated the frequency percentages of data points coded for the each of the constructs underlying each portfolio management category. Although there are not clear-cut cases of MNCs that would only and always respond to a certain alliance management approach, the tables below illustrate the occurrence of clear patterns across the data set as they apply to each case MNCs portfolio over a period of 10 years.

First, the Table 5 below illustrates the distribution of data with respect to the construct for the configuration of assets and capabilities across the different alliance portfolio management approaches. As can be seen in the table below, 80 and 60% of the data referring to Nokia's and Kone's alliances, respectively, was coded as describing the configuration of assets and capabilities as dispersed and interdependent, consistent with a transnational approach. Especially with Nokia, there was an emphasis on exploration. Similarly, the majority of data from Wärtsilä and Perlos was best categorized according to the integrated global typology of centralized and globally scaled. The main emphasis of these partnerships is in exploitation related to global operations. Honkarakenne was found to use a wide mix of alliance portfolio management approaches, with the highest percentage of references categorized under local demand orientation.

Second, the roles assigned for the overseas partners are illustrated. Table 6 shows that the data from Nokia indicates a mix of roles assigned for its partners, where partners provide differentiated contributions to integrated worldwide operations of the MNC by adapting and leveraging complementary competencies with the MNC. Meanwhile, evidence from Kone's alliance portfolio also indicated differentiated contributions by partners to the integrated worldwide operations of the MNC, with the notable exception of partners in the Japanese market where partners where the partners leveraged the MNC competencies specifically for the Japanese market. Both Wärtsilä and Perlos were consistent within the highly integrated alliance portfolio approach. However, the perspectives were the opposite, since Wärtsilä's partners were implementers of its core business strategies while Perlos was the firm implementing its partner's strategies. Honkarakenne's partners are primarily focusing on local responsiveness, sensing opportunities to exploit its capabilities in the respective markets.

Third, we turn to analyzing the development and diffusion of knowledge, where the patterns become increasingly clear (c.f. Table 7). Evidence from Nokia's coded data demonstrates the joint development and sharing of knowledge with its partners on a global basis, with some mentions of the complementary knowledge developed at the MNC's and partners' center and transferred to the respective partner. Kone is also consistent with a dual-focused transnational alliance portfolio management approach, with the exception of a Greek partner where curiously there is a preference to develop and retain the knowledge at the MNC. Both Wärtsilä and Perlos remain highly consistent each with a highly integrated global alliance portfolio management approach. Finally, Honkarakenne also very consistent in using a local demand oriented heterogeneous alliance portfolio management approach by focusing on the development of knowledge at the MNC and then training its partners.

Fourth, we turn to analyzing the management mentality applied in partner relationships (Table 8). Again, Wärtsilä uses a highly integrated management approach: partners implementing Wärtsilä's strategies are treated on a unified manner in all markets. The exceptions were related to exploratory R&D with institutional partners with a more complex process of shared decision-making. Both Nokia and Kone use dual-focused management approaches emphasizing the complex process of coordination and cooperation in an environment of shared decision-making between the MNC and its partners in developing products. In Nokia's case, it is noticeable that this dual-focused approach was applied when the relationship involved products with network effects. In other cases partners were implementing Nokia's strategies and were treated on a unified manner. Again, Perlos illustrates the inverse case: while its partners are treated on a unified manner, they are not implementing Perlos' strategy but rather Perlos is the receiver of the partner's strategy. Finally, Honkarakenne remains consistent with using local demand oriented heterogeneous alliance portfolio

Table 5
Configuration of assets and capabilities.

	Global (G)	Multinational (M)	Transnational (T)
Configuration of assets and capabilities	G1: Centralized and globally scaled production operations	M1: Decentralized and nationally self-sufficient partnerships	T1: Dispersed, interdependent, and specialized in exploration
Firms	Wärtsilä (70%) Perlos (60%)	Honkarakenne (40%)	Nokia (80%) Kone (60%)

Table 6
Role of overseas partners.

	Global (G)	Multinational (M)	Transnational (T)
Role of overseas partners	G2: Partner implementing MNC strategies on core business operations	M2: Sensing and exploiting local opportunities with partners	T2: Differentiated contributions by partners to integrated worldwide operations of the MNC
Firm	Wärtsilä (65%) Perlos (100%)	Honkarakenne (100%)	Nokia (60%) Kone (90%)

Table 7
Diffusion of knowledge.

	Global (G)	Multinational (M)	Transnational (T)
Diffusion of knowledge	G3: Knowledge developed and retained at the MNC	M3: Development of knowledge at the MNC, diffusion of knowledge though partner training	T3: Knowledge developed jointly with partners and shared worldwide
Firm	Wärtsilä (100%) Perlos (100%)	Honkarakenne (100%)	Nokia (100%) Kone (90%)

Table 8
Mentality.

	Global (G)	Multinational (M)	Transnational (T)
Mentality towards its partners	G4: Partners implementing MNC strategies are treated on a unified manner in all markets	M4: Management regards foreign partnerships as a portfolio of independent relationships managed locally	T4: Complex process of coordination and cooperation in an environment of shared decision-making between the MNC and its partners
Firm	Wärtsilä (75%) Perlos (100%)	Honkarakenne (75%)	Nokia (65%) Kone (100%)

management approach, but it was also sometimes treating its foreign partners as appendages to a central domestic corporation.

Fifth, we turn to analyzing the control of decisions, resources and information regarding partners (Table 9). As expected, Nokia and Kone behave according to the dual-focused approach, characterized by large flows of components, products, resources, people, and information between interdependent MNC and its partners. The data on Nokia emphasizes the context of creating standards for networked products. In addition to the more interdependent approach, towards selected integrated partners or partners becoming acquired, Kone also applied tight central control of decisions, resources and information. Wärtsilä was again consistent with highly integrated management approach suggesting tight control, with only few exceptional references to large information flows among its suppliers. While Perlos and Honkarakenne are both using local demand oriented approaches with an emphasis on financial controls, Perlos's rationale is more on long-term experience with its partners, which differs from the simple informal control approach applied by Honkarakenne. Perlos's case could be explained through its role as an implementer of its partners' strategies. Therefore, in the context of exploitation, we do not see that this is necessarily inconsistent with the global strategy orientation.

Finally, we turn to analyzing the structure of the network with partners (Table 10 below). As anticipated, Wärtsilä is using a highly integrated global alliance portfolio management approach emphasizing the tight integration of its partners into the MNC's centralized hub function. While the data suggest a difference between the portfolio management approaches of MNCs following global or transnational strategies, the results in both categories also show that Nokia and Kone have a strong tendency to centralize the structure around their core activities. In contrast to Wärtsilä, however, Nokia and Kone distributed more specialized resources and capabilities across their partners in terms of complementary and non-core capabilities, as can be expected from transnational MNCs. Further, Honkarakenne consistently uses a combination of international and local demand oriented heterogeneous alliance portfolio management approaches, having many assets, responsibilities and decisions decentralized between the MNC and its partners, but often controlled from Honkarakenne. In contrast to the expectations, Perlos was more aligned with the responsiveness approach where many key assets, responsibilities and decisions were decentralized between the MNC and its partners. This could be again an indication of its dependency on its strong partners.

5. Results

This research addresses the question of how alliance portfolio management types differ in global markets. The patterns that emerged from the empirical findings revealed that alliances were managed in terms of the impact on local

Table 9
Operational control.

	Global (G)	Multinational (M)	Transnational (T)
Operational control	G5: Tight central control of decisions, resources and information towards partners	M5: MNC-partner relationships overlaid with financial controls	T5: Large flows of components, products, resources, people, and information among interdependent MNC and its partners
Firm	Wärtsilä (90%)	Perlos (100%) Honkarakenne (100%)	Nokia (100%) Kone (80%)

Table 10
Structure of the network with partners.

	Global (G)	Multinational (M)	Transnational (T)
Structure of the network with partners	G6: Partners are integrated tightly into the MNC's centralized hub function	M6: Many key assets, responsibilities and decisions decentralized between the MNC and its partners	T6: Distributed, specialized resources and capabilities between the MNC and its complementary and non-core partners
Firm	Wärtsilä (100%)	Perlos (100%) Honkarakenne (100%)	Nokia (65%) Kone (80%)

Table 11
Theoretical propositions.

Proposition	Explanation
1: The stronger the MNC's global strategic orientation favoring global integration, the higher the level of partner integration within the alliance portfolio	Need for partner integration leading to highly integrated alliance portfolio management
2: The stronger the MNC's multi-domestic strategic orientation favoring local responsiveness, the higher the partner heterogeneity within the alliance portfolio	Need for partner heterogeneity leading to local demand oriented heterogeneous alliance portfolio management
3: The stronger the MNC's transnational strategic orientation favoring both local responsiveness and global integration, the higher the partner heterogeneity and the integration level of partners within the alliance portfolio	Need for partner heterogeneity and partner integration leading to dual-focused transnational alliance portfolio management

Table 12
Match between international strategy and alliance portfolio management.

International strategy	Alliance portfolio management		
	(G): Highly integrated global alliance portfolio management	(M): Local demand oriented heterogeneous alliance portfolio management	(T): Dual-focused transnational alliance portfolio management
Global strategy	Wärtsilä (6/6) Perlos (4/6)		
Multinational strategy		Honkarakenne (6/6)	
Transnational strategy			Kone (6/6) Nokia (6/6)
Result	Match	Match	Match

responsiveness or the use of the different types of alliance partners, and by the means by which partners were integrated into MNC respectively. The summary of the main theoretical propositions emerging from the empirical data is presented in the following table (Table 11).

Second, the evidence from this research supports the argument that the alliance portfolio management approaches of MNCs vary according to their international strategies.[3] This is illustrated in Table 12. The evidence from 9000 data points shows strong support that the international strategy and the alliance portfolio management correlated across each of the theoretical constructs for five case MNCs, and even the last case MNC showed consistency across four constructs. The inconsistent MNC surfaced and interesting suggestion that the original I–R framework has assumed that the focal hub is more powerful actor than its nodes. However, when expanding the concept beyond the boundaries of the MNC, the Perlos case shows that the focal MNC can also take an implementer's perspective to its partnering nodes. Hence, this appears to be an interesting extension to the current theoretical I–R framework.

Taken as a whole, we find a clear theoretical framework emerging from our empirical case data. The emergent pattern suggests that the Integration–Responsiveness axes are a powerful explanatory paradigm by which to explain the alliance portfolio management of the case MNCs. The following figure presents the 'I–R' framework including the underlying constructs describing alliance portfolio management characteristics. This extends the original framework beyond the boundaries of the firm. The alliance portfolio characteristics regarding the configuration of assets and capabilities, the role of overseas operations, the development and diffusion of knowledge, management mentality, and the alliance network structure are described for each strategic orientation.

[3] This research suggests the extension of a theoretical perspective and an empirical link between the international strategy and the alliance portfolio management. Hence it adds to our understanding of this important phenomenon. It is not the intention to claim that this would be the only link and rationale, as there is a wealth of research addressing the issue from other theoretical perspectives. It should also be noted that the analysis addressed alliance on a portfolio level and as such the link between the MNC's international strategy and its respective portfolio management does not imply that all of its alliances were managed in a similar fashion.

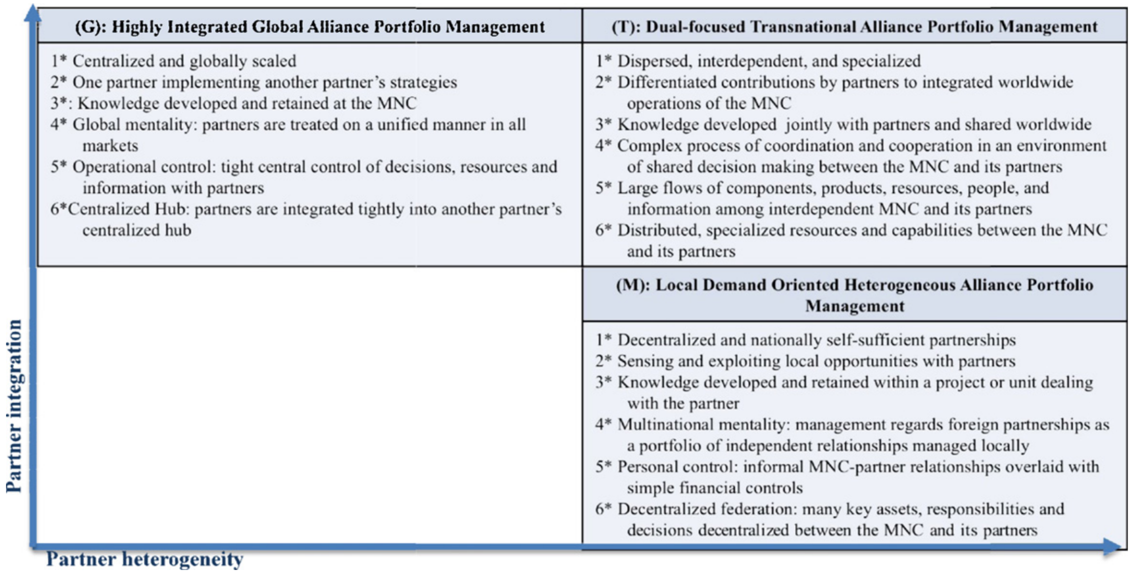

Fig. 1. Alliance portfolio management characteristics*.
Characteristics: 1 Configuration of assets and capabilities, 2* Role of overseas operations, 3* Development and diffusion of knowledge, 4* Mentality, 5* Control, 6* Structure.

6. Discussion

When examining the results across the cases, four key insights emerge. First, a pattern was observed within the alliances characterized by the exploitation, such as those with the purpose of production or sourcing for example, being integrated and managed through a global strategy, while alliances described as exploratory were often managed according to a transnational strategy. This is in line with prior research (Rowley et al., 2000).

Second, there are some similarities between the framework's categories for strategy and those applied by Hoffmann (2007). For example, the multi-domestic strategy shares some characteristics with Hoffmann's adapting strategy, where the heterogeneity (i.e. dispersion) and the number of alliances is high. In contrast to Hoffmann (2007), however, our 10-year longitudinal study did not support that this alliance portfolio approach would be evolving towards a shaping or stabilizing strategy. Furthermore, while Hoffmann (2007) was primarily described adapting strategy on the basis of serving exploration, our evidence diverges by suggesting that the MNC also uses its partners to exploit the local needs in a given country. This is in line with Rowley et al.'s (2000) discussion of the use of external ties for the purposes of exploiting existing capabilities.

Third, the identification of a transnational alliance management approach, as exemplified by Nokia and Kone, breaks from the extant literature. While the integrated partnerships within the alliance portfolios were consistent with Rowley et al. (2000) in that they allowed for a large flow of information and assets throughout an interdependent network, both Nokia and Kone also demonstrated evidence of partner heterogeneity in addition to the tight integration of their partners within the alliance portfolio. Hence, comparing to Hoffmann (2007), this suggests the MNC may utilize all of the alliance strategy types simultaneously. However, our findings are not necessarily in contrast with Hoffmann (2007) as he is primarily focusing on the alliance portfolio in a given business unit, whilst we are addressing the MNC as a whole.

Fourth, while the existing international management literature assumes that global strategy emanates from the MNC, our analysis revealed an interesting case of an inverse pattern. The current view of global strategy is built on the assumption that the MNC is driving its own strategic agenda, in which the subsidiaries take on the 'implementer' role as dictated by headquarters' strategic orientation. However, our evidence suggests an inverse global strategy, where the high integration strategy of the MNC is the result of the partners' strategic agenda rather than its own. This suggests that the relationships supporting global strategy can in fact be driven from either direction: the focal MNC or its partner(s). Thus, the extension of the current I–R framework beyond firm boundaries can further inform and contextualize the strategic decision-making within the MNC.

7. Conclusions

The aim of this research was to answer the questions whether and how MNC strategic alliance portfolio behaviors differ as a function of international strategy? Abiding to the empirical research design put forward by Eisenhardt and Graebner (2007), the emergent patterns in the data pointed at the significance of the MNC's international strategy in explaining the differences in alliance portfolio management approaches. Drawing on the international business management literature the study sought to extend the theory through the development of the Integration–Responsiveness framework beyond the confines of the boundaries of the MNC. The empirical study proposes that the I–R framework has explanatory power in describing the alliance portfolio management approaches.

The theory development put forward in this paper is in line with the earlier research on the I–R framework (Bartlett & Ghoshal, 1989; Prahalad & Doz, 1987). The development of alliance portfolio categories and the supporting characteristics of respective management approaches allow the extended I–R framework to cover the MNC network beyond its boundaries. A further contribution to the theory is the inverse global portfolio management case, a type not explained by the previous framework.

The high operationalization of the constructs allows managers to assess their managerial approach with respect to their alliance portfolios. While it seems that there are clear benefits in mastering a transnational alliance portfolio management in that it allows for both integrated and responsive partnerships, it is also more demanding in terms of management competences and may require additional resources in order to be managed effectively. Subsequently, this paper suggests consistency between the MNCs' alliance portfolio management approach and their overall strategic orientation.

The study is subject to certain limitations. The theoretical sampling of case firms did not account for firm size or industry and focused solely on the case firm acting according to the demonstrated international strategy with respect to its alliance portfolio management. Thus the MNC's environment, and its position within it, can be put forward as further control variables in future research. The generalizability of the findings is subject to the constraints of multiple case based research. However, the overarching aim of the study is to build theory, a fact reflected by the selected methodology and its rigorous application. The resulting framework is a new extension to the theory that bridges rich in-depth case evidence with mainstream research. Hence, with future research the framework's propositions can now be deductively tested.

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