Abstract Number: 007-0360

Integration in Hybrid Global Sourcing Organizations

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POMS 18th Annual Conference

Dallas, Texas, U.S.A.

May 4 to May 7, 2007

Abstract

In this paper, we propose that global sourcing needs to be understood in terms of the implications it has for organization design. Our objective is to increase the understanding of organizational integration of global purchasing activities and we focus on hybrid organization designs. We consider this useful for two reasons. First, it is still very unclear *how* global purchasing activities in global sourcing organizations are integrated and academic articles on integration are extremely scarce (Matthyssens & Faes 1997). Secondly, despite a clear trend towards hybrid global sourcing organizations (Johnson & Leenders 2004), many companies are struggling with the implementation of it (Narasimhan & Carter 1989; Trent & Monczka 2003). We explain how well-established concepts and theoretical ideas from organization theory literature could increase the understanding of integration needs and mechanisms in the global sourcing context.

1 Introduction

In an exploratory study, Trent and Moncka (2003) identified a clear trend towards the adoption of global sourcing activities by Multinational Corporations (MNC) due to for example the growing challenges of globalization. Whereas international purchasing refers to dealing with suppliers located in foreign countries, global sourcing refers to the integration of purchasing requirements across worldwide locations, looking at common items, processes, design, technologies, and suppliers and more advanced forms of it also involve cross-functional integration of purchasing, manufacturing, and logistics (Monczka & Trent 2003). Rather than just looking for cost savings by realizing synergies (Arnold, 1997; Matthysens, 2000) the aim of global sourcing is also to align the goals (March & Simon [1958] 1993) of purchasing units located across the world with the overall goal of the MNC. In this paper we address the question of "*how to effectively integrate global sourcing activities in hybrid purchasing organizations*?"

The focus of the discussion on global sourcing is within the focal MNC organization[1]. We limit our discussion on *hybrid global purchasing organizations* (as opposed to decentralized or centralized organizational structures (c.f. Johnson et al. 2002)) because it is not clear how global purchasing activities in a hybrid organization are integrated and prior literature assessing hybrid models in the global context are extremely scarce (Arnold 1999). Further on, in order to manage the scope of the paper, we focus on *international integration* of global purchasing organizations rather than also including cross-functional aspects because it plays a more important role in implementing global sourcing (Trent & Monczka 2003). We approach the topic by introducing theoretical ideas from organization theory literature, mainly focusing on *contingency theory* (Donaldson 2001; Lawrence & Lorsch [1967] 1986;

[1] We do acknowledge the extensive literature on supplier integration (e.g. Das et al. 2006; Frohlich & Westbrook 2001; Swink et al. 2007) but our focus is *within* the focal MNC.

Thompson [1967] 2003) and *information processing perspective* (Galbraith 1973; 1977). We suggest that incorporating the well-established ideas from organization theory would advance the understanding of integration in hybrid global sourcing organizations.

There are both academic and practical motivations for assessing the organization design implications of global sourcing. First, prior research on global sourcing has mostly focused on the strategic issues related to it ignoring organizational implications even though significant effects on organizational design has been suggested (Quintens et al. 2006). Secondly, many companies are struggling with the implementation of global sourcing and devoting significant time and resources to it (Monczka & Trent 2003; Narasimhan & Carter 1989) and it can even be considered as the major roadblock for most companies (Kaufmann & Hedderich 2004, p. 126). Thus, there remains a clear need for more research in organizational issues related to global sourcing.

The rest of the paper is structured as follows. In the second section, we discuss the contributions of the previous literature on organizational issues related to global sourcing as well as hybrid sourcing organizations. The third section focuses on explaining the most important concepts related to organization design and information-processing perspective. In the fourth and final section we discuss these concepts in the global sourcing context. This allows us to enhance our knowledge on the integration of cross-border purchasing activities. The paper concludes with a discussion on the relevance of the organizational perspective on global sourcing and provides directions for further research.

2 Organizational Design Approach to Global Sourcing – Literature Review

During the past two decades numerous articles have highlighted the importance of strategic perspective to sourcing (Arnold 1989; Kotabe & Murray 2004; Samli & Browning 2003; Samli et al. 1998) as well as the benefits of a global sourcing strategy including cost reductions and increased knowledge sharing (Birou & Fawcett 1993; Faes et al. 2000; Kotabe & Omura 1989; Monczka & Trent 1991). Only recently the claim for more research on the implementation of global sourcing strategies has been initiated (Monczka & Trent 2003; Petersen et al. 2000; Trent & Monczka 2005). In particular, extant research has provided few guidelines on the organizational implications of global sourcing (Arnold 1997; Arnold 1999; Trent 2004).

One of the first studies to anticipate the organizational design implications of global sourcing were Kotabe and Omura (1989) when predicting a shift from a polycentric to a more internationally coordinated, geocentric sourcing organization. Another stream of global sourcing research has emphasized the importance of cross-functional integration, i.e. managing the interfaces between purchasing, R&D, marketing, and manufacturing for a global sourcing strategy (Kotabe 1992). The most recent research Trent and Monczka (2003; 2005) have analyzed the success factors of global sourcing strategies pointing out that organizational design of global sourcing firms is more complicated than of firms engaged in international sourcing.

Research on global sourcing organizations has identified different organizational structures including centralized, decentralized, coordinated/matrix models and specialized purchasing groups and evaluated advantages and disadvantages of the different structures (Arnold 1999; Guinipero & Monczka 1990; Narasimhan & Carter 1989). Although the few

contributions that explicitly analyzed the organization design used by MNCs to conduct their purchasing activities have led to the same results as the prominent centralization-decentralization debate dominating the purchasing literature during the last decades (Dobler & Burt 1996; Hensel 1980; Lysons 1996), there are two conflicting pressures shaping global purchasing organizations and making them distinct from national ones: (1) globalization, standardization, and efficiency pressures stimulating centralization and (2) customization and responsiveness promoting decentralization (Faes et al. 2000). Further on, despite the advances for example in information technologies, geographical distance still matters in several dimensions (Ghemawat 2001) increasing uncertainty and complexity in all international operations of MNCs.

The results of large-scale studies by the Center of Advanced Purchasing Studies (CAPS) (Fearon & Leenders 1995; Leenders & Johnson 2000) suggest a clear trend towards integrated hybrid organizational structures. Similar results have also been found by Trent (2004) when assessing the future organizational design features in purchasing organizations. This has significant implications for cross-locational and cross-functional integration of purchasing activities. A shift towards centrally-led purchasing organizations is also suggested (Trent 2004) characterized by (1) centrally coordinated commodity teams, (2) formal positions that separate strategic and tactic supply responsibilities, (3) lead buyer to manage non-centrally coordinated items, and (4) strategy review and coordination sessions between functional groups and locations. However, an in-depth discussion of this organizational form is missing. More specifically, very few contributions have pointed out how global sourcing activities are integrated across different subsidiaries in hybrid purchasing organizations.

The common understanding of hybrid models is that the head office assumes responsibility for the negotiation of some long term contracts and subsidiaries issue orders against these contracts (Dobler & Burt 1996; Lysons & Gillingham 2003; Monczka et al.

2002). The most extensive and thorough analysis on the integration of purchasing activities in hybrid models is provided by Matthyssens and Faes (1997). They propose four types of purchasing integration: (1) the largest user of a specific category coordinates the worldwide purchasing requirements of all sites, (2) all activities are coordinated by headquarters, but local sites manage the order processing, (3) regional purchasing groups coordinate purchasing activities without central coordination, and (4) an internal market is established with profit-oriented purchasing centers selling their services to internal customers. Focusing on the realization of purchasing synergies, Rozemeijer (2000) reports how companies try to stimulate intra-company integration through organizational design mechanisms, networks of people and an adequate information and communication infrastructure. While different types of integration mechanisms are identified through exploratory research, it remains unclear when these are used and how companies can achieve integration of purchasing activities through their application.

As a conclusion, research on the integration of purchasing activities in hybrid purchasing models is limited. It remains unclear where the need for cross-border integration stems from in global purchasing organizations. In particular, prior research has not examined how purchasing activities are integrated in the global setting even though it poses new challenges. Additionally, the lack of solid theoretical frameworks in this field of research is clear as the prior research has mainly been exploratory reporting empirical findings.

3 Organization Design

3.1 The task of organization design

The design of organizations includes two fundamental and opposing tasks (Child 1977, p. 10; Katz & Kahn [1966] 1978, p. 104; Mintzberg 1983, p. 2): (1) the division of tasks and (2)

coordination of activities. The *division of tasks* and the resulting efficiency was introduced by Adam Smith in 1776 when discussing the division of labor in the pin factory (Smith [1776] 2005, Ch. 1) and it can be based on different dimensions such as function, process, and knowledge (Mintzberg 1983, p. 48; Simon 1946). *Coordination*, then, is needed to accomplish the overall task of the organization (Child 1977, p. 117; Galbraith 1973, p. 9; Mintzberg 1983, p. 2). The division of task and coordination are related in the sense that even though increased specialization enhances productivity at least to a certain extent, it increases the problems and costs of coordination by increasing the interdependence between units (Galbraith 1977; McCann & Galbraith 1981). Further on, different ways of dividing the task gives rise to different coordination challenges and the task of organization design then is finding a balance between the benefits of specialization and the costs of coordination (Galbraith 1970, pp. 118-119).

Lawrence and Lorsch ([1967] 1986) suggest that the division of tasks and coordination are more complex than identified by the earlier organization design scholars. They point out that organizations are facing multiple environments and each part of the organization has to deal with and adapt to their particular sub-environment. The division of tasks and sub-units adapting to their sub-environment as well as the need for unified effort lead to a state of differentiation and potential need for integration at several levels of the organization (Lawrence & Lorsch [1967] 1986). *Differentiation* is the state of segmentation of the organizational system into subsystems, which due to the variation in tasks and requirements posed by specific sub-environments, develop different formal structures and orientations (Blau 1970; Lawrence & Lorsch 1967). Even though the focus of Lawrence and Lorsch ([1967] 1986) was in cross-functional context, differentiation can also refer to for example the varying organizational structures of organizational units, such as purchasing units, located in different countries as well as the varying nature of inter-unit relationships

(Ghoshal & Bartlett 1990; Grandori & Soda 1995; Nohria & Ghoshal 1997). *Integration* in the organization design context refers to the search for a unified effort between the differentiated sub-units (Lawrence & Lorsch [1967] 1986). It is a way to solve conflicts between subsidiaries arising from the division of labor (Lawrence & Lorsch [1967] 1986; March & Simon [1958] 1993; McCann & Ferry 1979; Pelled & Adler 1994; Walton & Dutton 1969; Van de Ven et al. 1976) in order to achieve the common task of the whole organization. In the purchasing context, research has mainly focused on different ways of dividing the tasks in centralized, decentralized and hybrid purchasing organizations (Arnold 1999; Johnson et al. 2002; Matthyssens & Faes 1997) with less focus on integration in practice.

3.2 Integration needs

According to the *information-processing perspective* (Egelhoff 1982; 1988; Galbraith 1970; 1972; 1973; 1977; Joyce et al. 1997), integration is a way to both increase the capacity of the organization to process information and a way to reduce the need for information-processing arising from environmental uncertainty. Effectiveness, then, is a result of the information-processing capabilities of the organization. Integration, however, is not cost-free but can be considered as an investment (Ketokivi et al. 2006). Building on bounded rationality (March & Simon [1958] 1993), contingency theory argues that integration is not always required for the success of the organization but rather, there is a specific level of required integration determining the appropriate level of integration (Lawrence & Lorsch [1967] 1986). This is explained in the following.

March and Simon ([1958] 1993) were perhaps the first researchers to introduce the concept of “felt need for joint decision making” and it was later developed to “requisite integration” by Lawrence and Lorsch ([1967] 1986). The previous literature points out that when organizational sub-units are interdependent on one another and require continuous

collaboration, requisite integration is high (Lorsch & Lawrence 1970; 1972; Thompson [1967] 2003). Thompson ([1967] 2003) suggests that there are three basic types of interdependence: pooled (each unit makes a discrete contribution to the whole organization), sequential (interdependence of serial form), and reciprocal (output of each unit becomes an input for another) posing different requirements for integration pooled interdependence being less demanding and reciprocal interdependence most demanding for integration. In this paper we suggest that research on integration in global sourcing organization would benefit from Thompson's pioneering arguments for interdependence: subsidiaries might be interdependent in terms of for example supplies or purchasing practices and different types of interdependence giving rise to various integration needs among the units located across the world.

3.3 Integration mechanisms

Integration mechanisms refer to any management tools for achieving integration (Lawrence & Lorsch [1967] 1986; March & Simon [1958] 1993; Thompson [1967] 2003). Literature review points out a number of mechanisms that can be used to achieve integration mainly arising from the contingency theory-based research on cross-functional integration. The following classification of integration mechanisms is based on Galbraith (1977) when presenting the information-processing approach.

- *Centralization of decision making* refers to the level where the locus of decision making authority is (Bartlett & Ghoshal 1989; Child 1972; Child 1973; Nohria & Ghoshal 1997; Pugh et al. 1968). This is related to whether the unit has autonomy in decisions regarding for example purchasing process, supplier selection and evaluation.
- *Formalization and standardization* include written policies, rules, job descriptions and work processes, and standard procedures (Bartlett & Ghoshal 1989; Hage et al.

1971; Mintzberg 1983; Nohria & Ghoshal 1997; Pugh et al. 1968; Thompson [1967] 2003; Youssef 1975) concerning for example the purchasing process. These procedures limit the subsidiary purchasing team's role.

- *Planning and control.* Planning includes strategic planning and scheduling (Ketokivi & Castañer 2004; March & Simon [1958] 1993; Thompson [1967] 2003) whereas control comprises financial performance control, technical reports, sales and marketing data, and direct supervision (Child 1973; Mintzberg 1983). Planning and control in the context of global sourcing refer to for example centralized purchasing teams planning purchasing strategies for the whole MNC.
- *Investment in vertical information systems* (Galbraith 1977; 1994) includes for example increasing the scope of the data base and degree of formalization of information flows in order to enhance decision frequency or timing of information flows as regards to for example information from lead buyer to corporate level purchasing group.
- *Creation of lateral relations* includes temporary or permanent liaison roles, task forces and teams, integrative departments or integrators, informal communication, which can be enhanced by management trips, meetings, conferences, transfer of managers and reward systems (Galbraith 1977; 1994; Hage et al. 1971; Lawrence & Lorsch [1967] 1986; Mintzberg 1983).
- *Socialization (cultural control)* involves building an organizational culture of known and shared strategic objectives and values to influence their decision-making and judgments and can be achieved for example by such procedures as training, transfer of managers, career path management, measurement and reward systems, and assigning expatriates in plant management positions (Baliga & Jaeger 1984; Bartlett & Ghoshal

1989; Edström & Galbraith 1977; Nohria & Ghoshal 1997; Picard 1980; Welch & Welch 2006).

Integration mechanisms should be implemented to match the need for integration and the context. Early research on integration emphasize that simple devices can be used with less differentiation and interdependence and higher level of differentiation and interdependence requires horizontal mechanisms (Hage et al. 1971; Lawrence & Lorsch [1967] 1986; Thompson [1967] 2003). This however does not mean exclusion of vertical control such as centralization but the mechanisms are implemented simultaneously (Martinez & Jarillo 1989).

4 Synthesis of Global Sourcing and Organizational Design Literature

4.1 The need for integration in global sourcing context

To elucidate the need for integration in the global sourcing context, let us start the discussion with a simple example. As companies adopt a global sourcing perspective, they gain transparency on the local purchasing activities of each subsidiary. As a result, headquarters can identify situations, where a joint effort between the different subsidiaries can lead to more beneficial results (e.g. higher negotiation power) compared to a situation when all subsidiaries act independently on their local sourcing markets. Additionally, the worldwide exploitation of information and the exchange of best practices across global purchasing subsidiaries becomes a competitive advantage of MNCs (Bartlett & Ghoshal 1989). This, however, leads to increased levels of interdependence among the subsidiaries.

Focusing only on interdependencies stemming from attaining higher negotiation power, Matthysens & Faes (1997) assess how strategic and operational purchasing activities are divided across purchasing locations. The reasoning for this is that while centralization of

all purchasing activities allows the MNC to take advantage of economies of scale it simultaneously restricts it from taking advantage of its local markets. By centralizing the strategic purchasing process at one site, cross-border interdependencies emerge because the organizational units given strategic responsibility need information from the other units about local requirement and suppliers to develop global category strategies. Vice versa, the local units purchasing performance is dependent on the quality of the contracts negotiated by the strategic units.

The integration of these interdependent units becomes a major concern for the MNC and was also in the focus of the analysis of Matthysens & Faes (1997). They propose three selection criteria to identify situations in which integration of purchasing activities across sites is beneficial: (1) market related criteria; (2) company related criteria and (3) product related criteria. *Market related criteria* refer to the structure of the supply market including for example market regulations. *Company related factors* refer to commonality of the supply of the MNC including local purchasing volume, geographical distance between organizational units, and the availability of qualified purchasing personnel. And finally, *product related criteria* relate to the willingness of local users to accept a standardized product including ordering patterns, the degree of technicians and engineers involved in the buying process as well as limitations in logistics and transportation.

In addition to these criteria, one of Matthysens and Faes' (1997) core conclusion is that integration requirements vary across categories that are purchased. In order to assess differences in integration requirements, two dimensions for analyzing the supply structure of a firm can be identified as is presented in the figure below (Figure 1). On the one hand, standardized and non-standardized (e.g. capital goods) supply can be distinguished, and on the other hand production goods (e.g. research equipment and maintenance and repair products) and non-production goods (e.g. raw materials) can be differentiated.

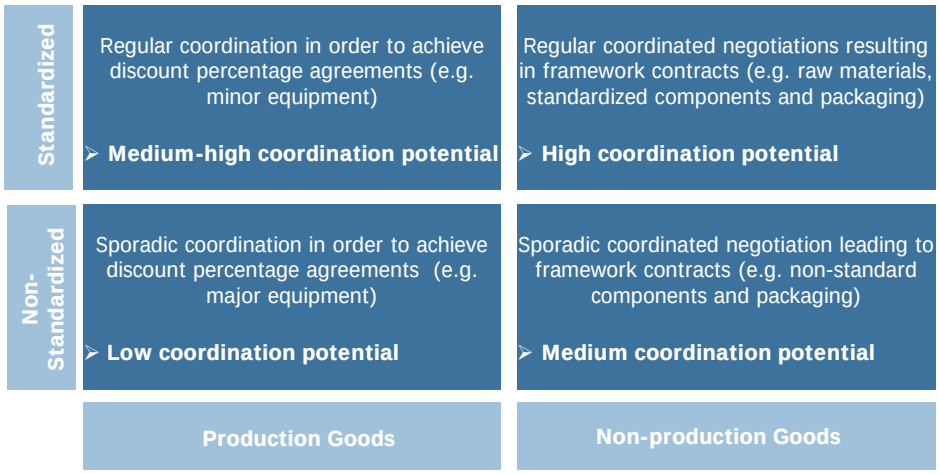

Figure 1. Varying integration needs for different categories (products) (adapted from Matthyssens & Faes (1997), p. 330).

The demand for standardized products can be bundled across units so that orders are placed in local units, while company-wide contracts are negotiated centrally. Non-standardized products typically require a number of investments related to market standards. Both specifications and financing agreements are bound to the particularities of local markets, making global integration rather difficult (Fearon et al. 1993; Matthyssens & Faes 1997). In terms of order frequency, production goods are purchased irregularly, whereas non-production goods are ordered on a regular basis either to stock or just in time. Thus, the sporadic purchasing of production goods makes it hard to negotiate group conditions. Good terms are only negotiable if products are purchased on a regular basis, ensuring a certain turnover for the supplier over an extended period of time, such as non-production units (Matthysens & Faes, 1997). Thus, as the discussion points out, demands and possibilities for different types of purchased goods vary significantly.

One of the major conclusions of this paper is that assessing integration at organizational level does not make sense in the purchasing context like in global manufacturing (c.f. Nohria & Ghoshal 1997) because the division of labor and the respective requisite integration vary across categories. As an example, even though leading to reciprocal

interdependencies and a subsequent high need for integration, the separation into strategic and operational activities to increase purchasing power can be beneficial for categories characterized by a global supply base and possibilities for harmonization of processes across subsidiaries. On the other hand, categories characterized by decentralization of activities due to for example high supply risk, a dispersed supplier base and heterogeneous demands across subsidiaries integration may be limited to knowledge and information exchange between units. As a conclusion, the overall level of interdependencies in a purchasing organization and the concomitant requisite integration is highly related to its category portfolio. As a result, with previously presented information processing theory we can explain the findings of Matthysens & Faes (1997). Following the ideas of Lawrence and Lorsch (1967), integration of purchasing is not always required but rather only in those situations, where interdependencies between units force them to collaborate. As presented in this chapter, this depends strongly on the characteristics of the category under scrutiny. In the next sub-section we discuss how different integration mechanisms are used across different categories to achieve integration of units.

4.2 Integration mechanisms for global sourcing

Previous purchasing literature has exploratively identified a variety of different integration mechanisms (Trent 2004, Monczka & Trent 2003, Rozemeijer 2000). Typical examples include corporate steering committees, commodity teams, cross-functional teams, leadbuyerships, worldwide purchasing databases, regular sourcing strategy review meetings with worldwide purchasing managers, and competence centers. Interestingly, none of the publications refer to the ideas of Galbraith (1973; 1977) (see Section 3). A closer examination illustrates that all integration mechanisms identified in purchasing literature (Trent 2004, Monczka & Trent 2003, Rozemeijer 2000, Matthysens & Faes 1997, Arnold 1997) have also been pointed out in the classification of Galbraith. For example,

leadbuyerships, corporate-steering committees, commodity teams and competence centers can all be considered as instruments to create lateral relations. Similarly the need for worldwide purchasing databases corresponds to Galbraith's investment in vertical information systems. While there are many more similarities, the important point to be concluded is that the very recent publications (Trent & Monczka 2005, Trent 2004) emphasize the importance of these different mechanisms and suggest that their use is expected to grow in the future. However, the more relevant question would be to assess when they are needed in practice and how integration of purchasing activities is actually achieved through these mechanisms.

Organizational design literature emphasize that the use of specific integration mechanisms depends on the need for integration (Lawrence & Lorsch [1967] 1986; Thompson [1967] 2003). As illustrated in the previous sub-section the need for integration varies across categories and thus, we would expect to find the use of integration mechanisms to vary across different categories. To clarify our point let us take a look at the example of the two categories pointed out in the previous chapter and compare the use of integration mechanisms. We expect that for categories that are characterized by a global supply base and where specifications can be harmonized across major subsidiaries, the use of integration mechanisms is different than for categories characterized by high supply risks, a dispersed supplier base, transportation costs and heterogeneous demands across subsidiaries.

For the first category, the unit responsible for the strategic purchasing activities needs to be integrated with those units conducting the local buying. In such a case, the unit responsible for strategic activities assumes the role of the integrator (leadbuyer) who manages the interdependencies between the different units. First, the leadbuyer is responsible for analyzing the volumes, specifications, regional supply structures, and regional order processes of the different local units. In order to get this information efficiently, a global IT

system is of high importance. Based on the data a global strategy is developed by the lead buyer and suitable suppliers need to be identified. With the help of the local buyers, suppliers are identified across the different markets and receive requests for proposals. The lead buyer negotiates a frame contract with the most appropriate supplier and takes care of contract maintenance and that all local buyers are granted the same terms by the supplier (Hausmann & Kaufmann 2002). The operational purchasing process is then conducted by the local units. In cases where the leadbuyer is a subsidiary, it might also be important to provide the necessary incentives by incorporating global targets in the local contracts of lead buyers. Formalization of the global purchasing process is also considered to be extremely important to align the different participants and practices around the globe (Trent & Monczka, 2003). We can conclude that we identified four different types of integration mechanisms for this type of category: (1) integrating role, (2) investment in vertical information systems, (3) socialization measures (incentives and informal communication) and (4) formalization of purchasing processes.

For the second type of category, the interdependencies between the units require information and knowledge exchange. Because for this type of category each unit maintains the full responsibility for the local purchasing process and carries out similar activities, integration is related to the exchange of best practices and the transfer of know-how or information concerning suppliers or local market conditions. The diversity internalized by MNCs provides significant learning opportunities in the form of accumulation and cross-fertilization of know-how and competencies (Bartlett & Ghoshal 1989). Lateral integration is important in this context including conferences, committees and informal communication because the mechanisms need to provide a platform for discussion between individuals of different sites in order to enable learning processes. Thus, two different types of integration

mechanisms can be identified: (1) investment in vertical information systems and (2) creation of lateral relations.

Comparing the two different types of categories and the integration mechanisms used illustrates the relationship proposed by contingency theory literature: different types of categories have different needs for integration and thus also show different means for achieving integration. Based on this observation we can conclude that contingency theoretical ideas can provide insight for the usage of the different integration mechanisms that prior literature identified through explorative analysis.

4.3 Conclusion and future research agenda

In this paper we have emphasized the importance of the organizational perspective to global sourcing. Instead of suggesting that global sourcing is relevant for every firm, we have assessed the organizational implications after the decision towards global sourcing has been made. Due to the trend experienced in practice as well as higher degree of complexity we have focused on hybrid sourcing organizations. As the previous research on organizational issues related to global sourcing has been rather scarce and empirical, we have drawn ideas and concepts from organization literature to serve as a basis for more rigorous research on global sourcing.

The discussion in this paper generates ideas also for future research. It would be interesting to gain deeper understanding on how integration mechanisms that were pointed out in the paper actually work in practice in the global sourcing context. In particular, integration directed towards sub-goal alignment of geographically dispersed subsidiaries seems to become a crucial topic in the global context. Comparing the use of the mechanisms with other contexts (e.g. cross-functional integration) would also provide insight for the organization design literature. Additionally, it is important also from practical perspective to study how the division of tasks affects the level of requisite integration. In general we

encourage the future research on organizational design issues on global sourcing more towards interdisciplinary theory-based research.

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