

Managing the global supply base through purchasing portfolio management

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Abstract

'How to source globally' has become a critical strategic decision for companies competing on a global basis. Despite an increased focus on global sourcing and supply chain management, little is known about the challenges and solutions surrounding such sourcing practices. Extant literature points at the critical importance of developing and sharing knowledge in multinational companies (MNCs). However, little work has been undertaken to examine the organizational mechanisms used by MNC headquarters for knowledge leveraging across subsidiaries, especially in the area of purchasing and supply management. Based on an in-depth case study, focusing on a chemical company, the actual buying systems for managing the global supply base are explored. Kraljic's purchasing portfolio approach appears useful, both for developing effective purchasing strategies as well as for managing a global supply base.

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1. Introduction

Global sourcing was identified as a field of interest for practitioners and as a separate research topic in the late 1980s (Kotabe and Omura, 1989). The catalyst for global sourcing has been the worldwide competitive pressure forcing firms to reduce costs and to improve quality and responsiveness (Birou and Fawcett, 1993). According to many authors (e.g. Womack and Jones, 1996) the ability to move production and sourcing around the globe is a key source of competitive advantage. However, it should be noted that for instance Mol (2002) could not find empirical evidence for a direct relation between global sourcing and economic performance. Nevertheless, many firms are striving for higher levels of global sourcing, although different researchers (e.g. Mol, 2002; Trent and Monczka, 2003) argue that the actual degree of real global sourcing is relatively low. Real global sourcing refers to the integration

and coordination of procurement requirements across worldwide business units (Monczka and Trent, 1991; Rozemeijer, 2000; Faes et al., 2000) and with other functional groups, particularly R&D, manufacturing and marketing, within business units (Kotabe, 1992; Trent and Monczka, 2003). We will refer to these coordination issues as *external* and *internal interfaces*, respectively.

Especially the larger, multinational firms are engaged in global sourcing (e.g. Bozarth et al, 1998). These firms are more likely to have worldwide production facilities, design centres, and marketing and sales activities (Trent and Monczka, 2003). However, the integration and coordination of procurement requirements across business units (external interfaces) is challenging and difficult to master (e.g. Rozemeijer et al., 2003). The same can be said about the internal interfaces within individual business units. Close cooperation inside the firm between purchasing and other departments is needed to facilitate foreign outsourcing (Mol et al., 2004; Quintens et al., 2006). To achieve maximum procurement benefit, firms often have to challenge entrenched systems and behaviours that work against collaborative efforts *between* and *within*

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business units (Ohmae, 1989; Kotabe, 1992). This context raises a variety of questions concerning the nature, the organization and the impact of global sourcing. *How* to source globally and *how* to manage a global supply base (i.e. how to develop effective business relationships with suppliers who are located worldwide) have become critical competences (cf. Kotabe and Murray, 2004). Managing suppliers from a wide range of countries implies operational complexity (Mol et al., 2004) and relatively high learning cost on how to manage intercultural relationships (Andersen and Buvik, 2001).

The critical importance of developing and sharing knowledge in multinational companies (MNCs) has been acknowledged by many researchers (e.g. Adenfelt and Lagerström, 2006; Buckley and Carter, 2004). A related topic is the selection and impact of different control mechanisms on knowledge development and sharing in MNC subsidiaries (e.g. Ghoshal and Bartlett, 1988). We agree with Adenfelt and Lagerström (2006) that little attention has been devoted to examining the organizational mechanisms used by MNC headquarters for knowledge leveraging across subsidiaries. Foss and Pedersen (2004, p. 341) stressed as well, that little work has been undertaken on “how MNC managers could orchestrate knowledge processes by means of designing and implementing mechanisms of organizational control”.

Research findings indicate that successful supply chain management requires the effective and efficient management of a portfolio of relationships (e.g. Bensaou, 1999; Frohlich and Westbrook, 2001). Portfolio models are widely used for management problems in various fields and disciplines, including the management of buyer–supplier relationships. The basic idea is the simplification of a complex problem. A *portfolio model* is “a tool that combines two or more dimensions into a set of heterogeneous categories for which different (strategic) recommendations are provided” (Gelderman and Van Weele, 2003). Evidence from practice (e.g. Gelderman and Van Weele, 2005) supports the use of portfolio models in international settings, while its coverage in the literature is still limited.

Research on the development and sharing of knowledge in the area of purchasing and supply management has been limited. Our study explores the case of an MNC where headquarters share knowledge and expertise using a purchasing portfolio approach for the development of differentiated purchasing and supplier strategies.

The organization of the paper is as follows. First, we will discuss the issues, concerned with organizing for global sourcing and knowledge development and sharing in MNCs, and give a brief overview of the Kraljic portfolio approach (Section 2). In Section 3, we will present the case study design and the case company. The results of the case study are presented in Section 4. Section 5 relates the findings to the literature, while Sections 6 and 7 provide the implications, limitations and suggestions for further research, respectively.

2. Conceptual background

2.1. Organizing for global supply base management

In an increasingly competitive business world, global competition puts high demand on the flexibility of industrial companies. In many industries, an increased level of outsourcing is a prevailing trend (Monczka et al., 2001). As a result of worldwide competition, firms are combining domestic and international sourcing as a means of achieving a sustainable competitive advantage (e.g. Kotabe and Murray, 1990). Organizations have realized that a world-class global supply base is required in order to meet world-class competition (Hanfield and Nichols, 2004). It is generally agreed that ‘how to source globally’ has become a critical strategic decision for companies competing on a global basis. Real global sourcing refers to the *integration* and *coordination* of procurement requirements across worldwide business units (Monczka and Trent, 1991; Rozemeijer, 2000; Faes et al., 2000) and with other functional groups, particularly R&D, manufacturing and marketing, within business units (Kotabe, 1992; Trent and Monczka, 2003).

Many multiplant and MNCs are faced with the challenging and difficult task of achieving purchasing synergy (Rozemeijer, 2000) and global efficiency and effectiveness (Faes et al., 2000) across worldwide operating business units. One of the main issues is how to manage and organize for purchasing synergy on a corporate level, without losing the benefits of decentralized purchasing. Companies could strive for purchasing synergies from economies of scale, scope, process and learning (Faes et al., 2000; Rozemeijer, 2000). Johnson and Leenders (2004, p. 195) found that former head office purchasers, “once decentralized, saw no need to coordinate their supply initiatives with those of their counterparts with similar requirements in other business units”. Arnold (1999) compared the companies’ pursuit of an optimal organization for purchasing with the swing of a pendulum between full centralization and full decentralization. The traditional debate regarding centralized and decentralized purchasing has been supplemented by the potential benefits of mixed forms (Quintens et al., 2006) and hybrid organizational structures (Leenders and Johnson, 2000). Quintens et al. (2006) introduced the concept of a *Global purchasing strategy* (GPS) which refers to the organizational alignment of the purchasing function. The GPS of a company is reflected by its degree of standardization and centralization of purchasing.

Quintens et al. (2005) pointed at the lack of knowledge on why organizational settings are chosen and how effective they may be. Despite an increased focus on global sourcing and global supply base management, little is known about the actual integration and coordination of procurement across worldwide business units.

2.2. Knowledge development and sharing in MNCs

The interest among scholars on knowledge as a source of competitive advantage has also embraced multinational corporations (e.g. Foss and Pedersen, 2002). The critical importance of developing and sharing knowledge in MNCs has been acknowledged by many researchers (e.g. Adenfelt and Lagerström, 2006; Buckley and Carter, 2004). Moreover, MNCs exist because of their ability to create and transfer knowledge across borders. Over the last years the majority of research focuses on knowledge flows from MNC units to headquarters and to other local units (Foss and Pedersen, 2004). Considerably less attention is devoted to knowledge flows from headquarters to local units and related issues as the selection of mechanisms for knowledge leveraging and control. Our study examines the transfer of purchasing expertise within a MNC, from headquarters to local units, by way of a portfolio model.

2.3. The Kraljic purchasing portfolio matrix

Portfolio models have received considerable attention in the recent literature about professional purchasing. The best known portfolio model was introduced by Kraljic (1983). According to Kraljic a firm's supply strategy depends on two factors: (1) profit impact and (2) supply risk. His model, depicted in Table 1, has had a broad influence on professional purchasing (e.g. Kamann and Bakker, 2004; Gelderman, 2003). Kraljic's seminal paper has started a stream of conceptual and empirical research on the use and possibilities of a portfolio approach in purchasing (e.g. Gelderman and Van Weele, 2002, 2003, 2005; Wagner and Johnson, 2004; Dubois and Pedersen, 2002; Zolkiewski and Turnbull, 2002; Bensaou, 1999; Lilliecreutz and Ydreskog, 1999; Olsen and Ellram, 1997). Other scholars have introduced variations of the original Kraljic matrix (e.g. Elliott-Shircore and Steele, 1985; Syson, 1992; Hadelar and Evans, 1994; Olsen and Ellram, 1997; Van Weele, 2002). The resulting matrices are quite similar to the Kraljic matrix in that they employ comparable dimensions, and derive largely equivalent recommendations. Typically one strategy is recommend for each quadrant. With the help of this matrix, professional purchasers can differentiate between the various supplier relations and choose strategies that are appro-

priate for each category and thereby effectively manage suppliers (Nellore and Söderquist, 2000).

The introduction of the Kraljic matrix has inspired academic authors to undertake further research into portfolio models, such as issues of power and dependence (Caniëls and Gelderman, 2005, 2007), purchasing portfolio usage and purchasing sophistication (Gelderman and Van Weele, 2005), the dynamic nature of purchasing strategies in the matrix (Carter, 1997; Gelderman and Van Weele, 2002; Faes et al., 2005), web-based the procurement of MRO-items (Croom, 2000), the link to the specification process (Nellore and Söderquist, 2000), supplier development in product development (Wynstra and Ten Pierick, 2000). However, as mentioned previously, the reported use of portfolio models within an international environment is scarce. Given the added complexity of international sourcing and the established effectiveness of portfolio models to reduce complexity, an explorative study is desired.

3. Methodology

The objective of this study was to gain insight in the organization and development of differentiated purchasing strategies by means of a portfolio approach in a global sourcing context. The case study method was chosen for a number of reasons (Yin, 1994). First, because of the limited number of research articles addressing this issue and their anecdotal nature. Second, case study research is preferable when the research questions focus mainly on 'how' and 'why' questions. The questions in our research deal with exploratory issues, rather than frequencies or incidence. Akzo Nobel Coatings, the actual case company, was invited to participate in the research, because of their extensive experience with global purchasing issues in general and with the portfolio approach in particular.

Akzo Nobel is made up of three business areas: Pharma, Chemicals and Coatings. This case study focuses on Decorative Coatings, a major business unit of the business area Akzo Nobel Coatings. In more than 30 countries comparable portfolio analyses are performed for the different sub-business units (area business units). These national organizations understand their own local markets. Akzo Nobel Coatings is among the world leaders in the development of advanced new coatings. Production is provided by 130 plants across the globe. Akzo Nobel Coatings has annual sales of EUR 5.6 billion, Decorative Coatings accounts for EUR 1.9 billion in 2004, which corresponds to a 37% share of total sales in Coatings. The most important product category is raw materials, the ingredients of coatings. The main ingredients are binders, pigments, extenders, additives and solvents. In financial terms, spendings on raw materials constitute a substantial share of total sales (>40%). Other categories are non-recurring investments and different services and supplies. The central purchasing department is responsible for the procurement of non-production related products. This case

Table 1
The Kraljic purchasing portfolio model (modified from Kraljic, 1983, p. 111)

Profit impact	Risk	
	Low	High
High	<i>Leverage items</i> exploit purchasing power	<i>Strategic items</i> form partnerships
Low	<i>Non-critical items</i> ensure efficient processing	<i>Bottleneck Items</i> assure supply

study is restricted to the procurement of raw materials for Decorative Coatings.

In line with the nature of the exploratory research objectives, data were collected primarily through the use of semi-structured interviews. Interviews lasted between one and two and a half hours and were executed by the same two interviewers. Additional and contextual information was found in written documentary material, such as annual reports, purchasing plans and websites. The case study was based upon a *key-informant method*. A limited number of executives and purchasing professionals was interviewed. The purchasing vice president of a business unit was the first key-informant. The other informants were identified through a snowballing technique whereby the first informant nominated three key-informants: purchasing managers and senior buyers for raw materials and packaging. The informants were not chosen on a random basis, but rather they were considered to be well informed about the issues at hand (judgement sample). Data triangulation was aimed at enhancing the validity and reliability of this study. The interviews were conducted by two researchers to enhance interpretation and understanding of the material. After the first tentative analysis and conclusions from the interviews, respondents were provided with the opportunity to improve the match with the intended information, and to explore issues in more detail.

Obviously, this case study does not allow for statistical generalization. The case study aims to generate a particular set of findings contributing to the research stream on knowledge development and sharing in MNCs.

4. Findings

4.1. Organization and coordination of purchasing

Akzo Nobel is a decentralized company that operates on a worldwide scale. The majority of the purchased ingredients for coatings (paints) can only be bought internationally, illustrating the impact of the global purchasing activities of the company. Only 20% of the ingredients can be purchased locally. For the procurement of raw materials, Akzo Nobel Coatings faces the challenge of finding a balance between global contracting and local opportunities. For certain ingredients the world market is concentrated: five or six suppliers produce and sell 80% of the total world volume. For the buying of raw materials three buying systems are being used: lead buying, main buying and local buying, see Table 2.

The coordination issues regarding the business units (internal and external) are being managed through the interaction of these buying systems. Certain raw materials are needed in different plants worldwide, and can be delivered by local suppliers. For all business units within Coatings, a *lead buying* system is being utilized, in pursuit of cost savings. Some eight lead buyers are responsible for the procurement of critical materials, accounting for 20% of the total purchase volume of materials. A lead buyer has

Table 2
The three buying systems of Akzo Nobel Coatings for raw materials

	Lead buying	Main buying	Local buying
Buys for	All business units	A single business unit	A local plant unit
% of total purchase volume of materials	20	60	20
Classification in the Kraljic matrix	Strategic and leverage items	Strategic and leverage items	Bottleneck and non-critical items
Other product characteristics	Critical materials, Needed in all plants, large volumes	Critical materials, needed in specific business units, large volumes	Other materials, small volumes

the responsibility to develop and implement the overall purchasing strategy for a certain raw material. The lead buyer draws up the central contract, negotiates prices and has control over volumes that are bought from different local suppliers. Users in other business units can be asked to switch to another supplier. The lead buyer needs to prove that the best purchasing strategy is chosen.

The *main buying* system operates at the business unit level. A main buyer is responsible for the procurement of a product (group), within a business unit. A business unit can appoint its own main buyer who cooperates with the main buyer(s) of other business units. Akzo Nobel's system of lead buyers and main buyers is supported by an advanced system that records all purchasing requirements of all business units worldwide. Monczka and Trent (1992) recognized that global sourcing requires an information network that captures and provides material requirements data to all locations on a timely basis.

For other product categories, the purchasing responsibility is assumed by local plant units. *Local buyers* deal with local suppliers. The system supports local buyers, by providing access to purchasing information with respect to all commodities bought within Coatings.

4.2. Purchasing and supply strategies

Akzo Nobel Coatings works with price indices for raw materials. Every year purchasing plans are developed, including specific goals for specific product categories. Targets and goals are formulated in terms of these indices. A critical benchmark concerns the prices that are being paid by competitors. Akzo Nobel Coatings demands prices below the ones that are paid by its competitors. Akzo Nobel Coatings operates on a 'lower' and 'later'-principle: Akzo Nobel Coatings wants prices that are *lower* than the prices paid by competitors, and in case of a price increase Akzo Nobel wants to be subject to that rise at a *later* point in time. Akzo Nobel Coatings is hesitant about being

dependent on suppliers. ‘Dependence costs money’, is the general conviction.

Akzo Nobel Coatings’ positioning in its end markets are an important consideration in creating a logical fit between purchasing strategies and marketing strategies. From a global sourcing perspective the use of the purchasing portfolio tool is a good example of the management of internal interfaces *within* business units.

In a *commodity market*, Akzo Nobel Coatings must deal with low margins and large quantities in aggressive, competitive markets. Specifications are general, resulting in flexibility in switching from one supplier to another. Contracts are on a short-term basis, price negotiations are tough, and the logistic demands on the suppliers are high. In its *niche markets*, Akzo Nobel Coatings exacts relatively high margins. The delivery times and high quality are the main selling points. As a result, these are important criteria for suppliers, too. High product quality in end markets requires high-quality ingredients. In return, high margins in end markets allow for expensive raw materials. Akzo Nobel Coatings is engaged in close relationships with (preferred) suppliers. Switching costs are relatively high. Purchasing’s job is to maintain the required quality. The R&D department is involved in product improvement and is guarding the company’s technological edge.

Crucial is the question: “What is the added value of this supplier to our company?” The criteria for the preferred suppliers are set. They are expected to perform in the areas of product quality, reliability of delivery, price, technical capabilities, and general management. In return, Akzo Nobel Coatings receives volume discounts. Preferred suppliers are expected to have production facilities in several countries, close to Akzo’s plants.

4.3. Purchasing portfolio analysis

The purchasing managers at Akzo Nobel Decorating Coatings consider the portfolio analysis as an indispensable tool to determine purchasing strategies, differentiated to products and suppliers. The portfolio analysis is used to indicate the importance of a raw material and its suppliers, and to measure the purchasing value. The analysis results in an overview of the own strengths and weaknesses in purchasing markets. The main *purpose* of the portfolio approach is to detect products or product groups that cause problems and risks of dependence: bottleneck and strategic items. The outcome of the portfolio analysis signals the problems and products that need to be tackled, and with which priority. It focuses on the goals and directions of purchasing strategies, and the efforts of R&D departments in their search for alternative solutions. In addition, the purchasing portfolio provides insights into the balance of power: it is of critical importance to recognize and formulate questions with respect to negotiation possibilities.

The portfolio matrix is completed on the level of individual plants. For every plant portfolio analyses are

performed on a yearly basis. Portfolio analyses must be performed in accordance with the strict guidelines set by Akzo Nobel Decorating Coatings, on how to measure dimensions and how to position items in the matrix. The results of the portfolio analyses are sent from the individual plants to headquarters, for standardization and coordination purposes within the business unit. The feedback from headquarters includes specific targets for materials in the (four) quadrants of the matrix. For instance, if the number of items in the right quadrants (strategic and bottleneck) is to be reduced by 5% it is implied that the R&D department should find or develop alternatives for the current chemical composition of some of the materials. A related target could be that the value of all leverage and non-critical purchases should be at a minimum of 65%.

The matrices of the different area/country units are not combined into one joint purchasing portfolio matrix. This lack of integration is understandable, considering the differences in local situations and the intended and actual use of the portfolio tool. Local situations are incomparable with respect to the chemical composition of coatings. An ingredient of coating A may easily be replaced by another, while the same ingredient in coating B can not be replaced by any other ingredient. There is a diversity of significance of the same ingredient for different coatings. Coordinated sourcing is organized by the lead buying system and to a lesser extent by the main buying system. The local buying system for the worldwide plants is being controlled and standardized by the strict guidelines on how to use the portfolio analysis at plant level.

Akzo Nobel Coatings uses a customized version of the Kraljic portfolio approach. All raw materials are categorized into four cells, based on the two axes: the number of suppliers (1), and the value of purchases (2). The number of suppliers is defined as “the number of suppliers that are actually used in the last year for the same item”. The value of purchases is measured in money, reflecting the price and the volume (use) of a raw material. The demarcation line between ‘high’ and ‘low’ is based on a 80–20 rule. This means that the upper half of the matrix contains all purchases that add up to 80% of the total purchase value, while the lower half of the matrix holds the remaining 20%. Any portfolio is seen from the perspective of the individual users. Therefore, the demarcation line is drawn from the user’s perspective. The value of purchases is a relative concept, to be considered from the individual perspective of the *local plant*. The procurement of 5000 tons for a small plant could be positioned as a ‘high value of purchases’, while 30,000 tons of the same commodity for a larger plant could be seen as a ‘low value of purchases’. Otherwise, small plants would only have positions in the lower regions of the matrix.

The completion of the matrix cannot be completed by the local purchasing manager alone (internal coordination). It requires the input of technical and chemical experts (R&D) who provide their expert knowledge of formulas, preparation methods and the properties of

chemical products and materials. In addition, the users of raw materials in the plants have information regarding annual use figures, while financial management provides information regarding the total value. Based on the situations and conditions on the marketing and sales side, purchasing strategies are focused on handling costs and strategic vulnerability (dependence on suppliers). Targets are determined for each product category in each quadrant, dealing with these issues.

Fig. 1 shows an example of a typical portfolio matrix from one of Akzo Nobel Decorating Coatings plants. The strategic category contains 60% of the value of all purchases. This percentage can be interpreted as high dependence on suppliers, which is justified only in case of niche markets for the end products. For commodity markets, a misfit would exist between the actual and expected segmentation in the portfolio matrix. In case of end products for commodity markets, the strategic quadrant should be much smaller. The figure also shows a large number of items with a relatively low value, implying administrative chores for purchasers. One objective would be to lower the number of bottleneck and non-critical items.

4.4. Portfolio based strategies

Fig. 2 shows the typical purchasing strategies used by Akzo Nobel Decorative Coatings for each of the four quadrants of the purchasing portfolio matrix. Regarding *bottleneck item*, there are concerns with respect to the assurance of supply (forced single sourcing). Contingency plans and emergency stocks are required, negotiating for low prices is not the main focus of purchasing. A search for alternatives only takes place in exceptional cases, since the

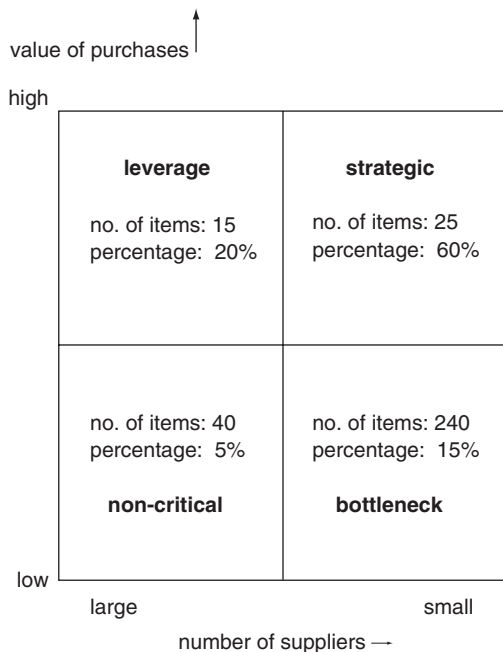


Fig. 1. Example of a raw materials-portfolio.

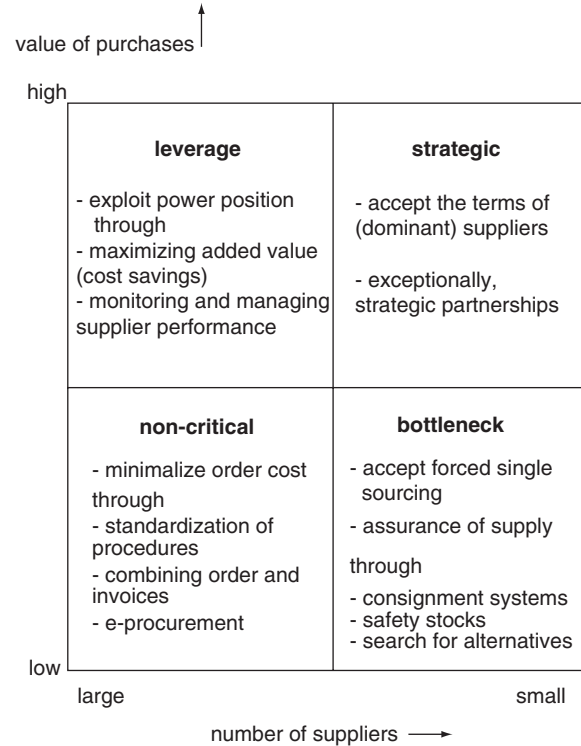


Fig. 2. Purchasing strategies in the quadrants.

cost of developing and finding alternative ingredients are several times higher than the expected results. The strategy for *non-critical items* is aimed at minimizing the cost of preparing and placing purchase orders. Possible options are standardization of procedures, combining of orders and invoices and e-procurement. For *leverage items* purchasing is continuously monitoring the supplier performance and is taking action when a supplier deviates from an agreement. In many cases there is an added value to the products, for instance just-in-time delivery, consignment stocks, or the delivery in a special format or packaging. Supplier selection is often based on the added value in these areas and obviously cost performance. For *strategic items* the supplier usually is the dominant party in the buyer–supplier relationship. In those cases the company has no choice but to accept that a supplier does not add the desired value. The supplier has a strong position when negotiating the quality, the packaging, the moment of delivery, and so on. Strategic partnerships are rarely an option, because the business unit is too small and the risks are too high. Strategic partnerships are only pursued if a competitive advantage in end markets can be gained.

Purchasing strategies in general are aimed at adapting and improving conditions, not so much at changing positions in the portfolio matrix. Few efforts are made to shift suppliers from the left half to the right half of the matrix. In other words, purchasing strategies are generally not aimed at reducing the number of suppliers. Any supplier reduction increases dependence which lead to a vulnerability for price raises. For reasons of flexibility,

Akzo Nobel Coatings stresses the importance of maintaining good relationships with potential suppliers that are not currently contracted. These suppliers may provide alternative arrangements in cases of emergency or problems with the current suppliers.

5. Discussion and conclusion

The success of multinational corporations (MNCs) is considered to be contingent upon the ease and speed by which knowledge is disseminated throughout the organization (Bartlett and Ghoshal, 1989). The dominant conceptualization of the MNC in current research is based on knowledge-based theories of the firm (Tallman, 2003), which considers the MNC as a knowledge sharing network (Foss and Pedersen, 2004). Narasimhan and Carter (1990) suggest that more information is passed through and more knowledge creation will take place in companies where the purchasing department is well integrated with other parts of the firm. Mol et al. (2004) found that the extent of integration between purchasing and other departments is positively associated with the degree and the scope of international outsourcing.

Akzo Nobel Decorative Coatings is an example of a multinational business unit in which the portfolio technique is integrated into the daily practice of purchasing and supply management. The technique appears to provide a ready communication tool for headquarters to infuse the organization with learning and leadership (Hult et al., 2000). Directed by headquarters, with R&D and financial inputs, similar and comparable portfolio analyses are performed by 30 plants worldwide. These 30 affiliates supposedly understand their own local markets. The portfolio analyses are carried out according to strict guidelines. Targets are set based on the outcomes of the portfolio analyses. Apart from the lead buying system, the coordination of procurement is rather limited (see Table 2). Our findings cast doubt on the effectiveness of the organizational settings which were chosen by the case company. As suggested by Quintens et al. (2005), it is difficult to assess the effectiveness of coordination mechanisms and organizational learning. The required portfolio analyses, performed by the local plants in accordance with the set guidelines appear to have stimulated the organizational learning of the affiliates (Hult et al., 2000). The impact on coordination, however, is less evident. The study shows that the portfolio tool forces cross-functional teamwork, which improves the internal coordination within business units, but not across business units. The pursuit of integration and coordination of procurement across worldwide business units is commendable. The daily reality of global purchasing in a MNC shows considerable resistance to giving up autonomy. A critical challenge would be to get the autonomous business units to collaborate more in the area of purchasing and global sourcing.

6. Contribution and implications

Our contribution to the research stream on knowledge development and sharing within MNCs relates to the transfer of knowledge from headquarters to local units. This explorative study details the case of an MNC where headquarters prescribe and control the development and implementation of purchasing strategies by local plants.

The study shows how the purchasing portfolio tool is used as a means for achieving knowledge transfer to local units. Headquarters can function as a catalyst of knowledge leveraging (Adenfelt and Lagerström, 2006). The purchasing portfolio tool appears to facilitate internal coordination, providing a framework for analysing purchasing problems and possibilities. Purchasing goals and purchasing strategies are clearly connected to the results of the different portfolio matrices. The study suggests that the portfolio tool forces cross-functional teamwork, which improves the internal coordination within business units, but not necessarily across business units. Within business units, there are ‘natural’ tensions between functional departments which may inhibit the full execution of a real global sourcing strategy. There is an area of tension between purchasing and marketing departments. Product and marketing managers are always looking for possibilities to differentiate products, whereas purchasing managers are always looking for possibilities to simplify and standardize products. The demands of marketing and customers set boundaries on purchasing’s natural propensity for controlling and reducing cost. Business units are by definition autonomous and empowered. Therefore, tension between the autonomy of business units and the willingness to collaborate and to pursue a drive for synergy and leverage across business units is likely to remain.

7. Limitations and recommendations for further research

The findings are based on a single case study. Generalization of findings is limited by definition. The case study concentrated on the level of a major business unit, whereas a study on the corporate level could provide a more comprehensive view on the coordination of procurement across (autonomous) business units. Another limitation of the study is the “top-down” nature of the knowledge development and sharing process, as initiated and orchestrated by headquarters.

Future research could investigate the gap between the intended and achieved behaviour and performance in the local MNC units. The success of knowledge sharing could be further investigated by including motivational factors (how are individuals motivated to share knowledge within MNCs?) and the division of decision making autonomy between headquarters and local units (how much autonomy is required for the local unit to experiment and make local adaptations?). Another avenue for researchers would be to examine knowledge development and transfer from

local units to headquarters, e.g. in the area of purchasing and supply management.

A better understanding of the potential of a portfolio approach for the management of a global supply base appears warranted. A survey of portfolio practices in purchasing and supply chain management, across companies and countries, and in connection with performance measures, would likely provide useful insights.

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