Global purchasing strategy: Conceptualization and measurement

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Abstract

In this paper we introduce Global Purchasing Strategy (GPS) as an explanatory construct of global purchasing performance. GPS is embedded in a contingent resource-based view. The construct is conceived as the driving force behind the strategy-organization alignment. GPS is conceptualized along four dimensions: the configuration of the global purchasing process, the standardization of the global purchasing process, the standardization of product-related characteristics and the standardization of the purchasing staff organization. We develop the GPS scale and test it on a sample of 151 internationally purchasing firms. The analytic results show evidence of both reliability and validity. We propose a general model of global purchasing performance with GPS as a central mediating construct.

Keywords: Global purchasing strategy; Purchasing organization; Centralization; Standardization; Internationalization

1. Introduction

The globalization of competition continues at a relentless pace (Bartlett, Ghoshal & Birkinshaw, 2003; Czinkota & Ronkainen, 2005). While today’s globally operating firms have redefined their production and marketing strategies accordingly, they more or less failed to do so with respect to their cross-border purchasing strategy and activities (Kotabe & Murray, 2004; Trent & Monczka, 2002). This observation stands in sharp contrast to the potential performance leverage purchasing offers. Indeed, in many of today’s globalizing industries, purchasing is one of the strategic functions with the highest potential impact on a firm’s long-term profitability (Eurostat, 2005; Leenders, Fearon, Flynn & Johnson, 2002). Surprisingly, academia too has only recently picked up purchasing strategy as a critical issue (e.g., Caniëls & Gelderman, 2005; Gadde & Häkansson, 2001) and, to date, an explicit international perspective on purchasing strategy remains a fallow field (Kotabe & Murray, 2004; Mol, Pauwels, Matthyssens & Quintens, 2004).

The present paper contributes to the progress in this field. We develop the Global Purchasing Strategy (GPS) construct to translate the central international business ideas of centralization (Porter, 1986), coordination/integration (Birkinshaw, Morrison & Hulland, 1995) and standardization (Levitt, 1983) to the purchasing context. In this respect, GPS is conceived as the driving force behind the alignment across divisions of global purchasing strategy and organization. The construct offers an integrative perspective on the structure, processes and organization of the global purchasing activities that companies undertake to achieve competitive advantage. An integrative perspective on GPS is needed to capture the duality that purchasing managers are increasingly confronted with when buying globally. On the one hand, suppliers are applying global strategies. This forces purchasing managers to increasingly coordinate and centralize their purchasing strategies in order not to weaken their bargaining power. Moreover, purchasing managers are increasingly aware of the opportunity cost of applying local purchasing strategies: volume effects may be limited and incompatibilities between...
purchasing approaches from affiliates may lead to suboptimal solutions. Hence, global standardization and coordination of purchasing should be the default mode.

On the other hand, purchasing managers are regularly confronted with arguments to decentralize and adapt their purchasing process and/or purchasing portfolio. Different customer preferences, which are due to culture, country-of-origin effects, environmental issues, among others, force companies to comply with their customers’ individual demands. Moreover, product-related characteristics (perishability, volume, weight, etc.) often make it simply impossible to buy from foreign suppliers. As a consequence, companies are forced to purchase from local players in the market and/or to adapt their purchasing approach. This paradox lines up with deeply investigated strategic concerns in international business, all converging to the classic centralization/decentralization and standardization/adaptation questions (e.g., Kogut, 1989; Zou & Cavusgil, 2002).

A firms’ strategy is defined as “its theory of how to compete successfully” in pursuit of sustainable competitive advantages (Barney, 2002; p. 8). In this respect, GPS is conceived as a higher order mediating construct, which encompasses a firm’s strategic position vis-à-vis global purchasing management and is a central intermediate between a firm’s resources and capabilities in a certain business context and performance outcomes. GPS focuses on the internal structure and the organizational alignment. The internal global purchasing strategy, in terms of standardized approaches and centralized purchasing, also impacts the relationships with other actors in the network. In this respect, GPS should be seen as an intra-firm perspective that influences inter-firm relations such as buyer–supplier relationships, network dependency and firm interconnectedness.

The paper is structured as follows. First, an overview is presented of the theoretical foundations of global purchasing strategy. Next, the concept of GPS is introduced, followed by a discussion on the nature of GPS. After presenting the methodological approach and the results of an empirical study, the paper will conclude with a discussion of the theoretical and managerial implications of GPS.

2. Theoretical foundation of global purchasing strategy

While not explicated in most publications, many extant studies (implicitly) rely on a resource-based view to explain how global purchasing enhances sustainable competitive advantage. For instance, Kotabe and Murray (2004) indicate that global sourcing strategy may optimize competitive advantages of the company and its suppliers as well as location advantages of countries. Furthermore, close coordination with other strategic activities (e.g., R&D, manufacturing and marketing) is needed. Hult (2002) suggests that a company should integrate entrepreneurship, innovation and organizational learning to create sustainable competitive advantage in global purchasing. Other studies highlight the idiosyncratic bundle of knowledge and capabilities a firm possesses to determine drivers and barriers to global purchasing. Katsikeas (1998), for instance, reports differences in the way sporadic and regular importers perceived motives for global purchasing with respect to managerial international outlook, supplier relationships and market attractiveness. Lack of knowledge of culture, business practices and foreign markets, limited availability of resources for market research and foreign supplier selection hamper to a certain extent the execution and implementation of global purchasing activities.

In line with a resource-based view (RBV) of the firm (for an overview, see Mahoney & Pandian, 1992), we conceive a global purchasing strategy from an intra-firm perspective, characterized by a combination of purchasing-related knowledge, experience and capability antecedents (Conner & Prahalad, 1996; Farjoun, 2002; Morgan, Zou, Vorhies & Katsikeas, 2003). In a dynamic process, a firm will define the most appropriate—i.e., profit- and growth-generating—global purchasing strategy, given its current stock of purchase-related resources and capabilities. In line with the RBV, resources may be of a different nature: experience, scale, scope, and financial, among others. However, purchase-related knowledge is expected to be a predominant antecedent of global purchasing strategy. This knowledge may be of different natures (e.g., tacit or explicit) and may be market- or procedure-related (e.g., Kogut & Zander, 1992). Purchase-related capabilities are combinations of purchasing routines that are organizational processes by which available resources are combined, transformed and deployed to create valuable purchase-related outcomes (Morgan et al., 2003; Nelson & Winter, 1982; Teece, Pisano & Shuen, 1997). Stocks of resources and capabilities are the inputs of particular strategies (e.g., Morgan, Kaleka & Katsikeas, 2004).

The translation of knowledge and capabilities into a particular strategy is not theoretically idle yet contingent upon several intra-organizational and external factors. Historically defined business practices, industry recipes, current corporate strategy as well as the organizational structure may affect the characterization of a particular global purchasing strategy. From an external perspective, competitive positions, the structure of the supplier’s businesses, the physical characteristics of the purchased goods, and the character of the current inbound supply chain, among others, may have a significant moderating effect.

In sum, a global purchasing strategy is considered as a firm’s functional answer to organizational and external purchase-related challenges and opportunities, while building upon particular stocks of purchase-related resources and capabilities. Together, they leverage to functional and firm performance. Next, we elaborate on the global purchasing construct.

3. Global purchasing strategy: The construct

Global Purchasing Strategy (GPS) is presented here as an integrated vision on global purchasing. It is internal to the company and should not be confused with a global purchasing mode towards a supplier, product or market, which are all three external to the company. GPS refers to the organizational alignment of the purchasing function, not to the way purchasing is executed. In line with global strategy (Levitt, 1983; Porter, 1986) and global marketing literature (e.g., Zou & Cavusgil, 2002), Global Purchasing Strategy (GPS) is manifested in two fundamental facets of strategy: (1) the degree of centralization/configuration of purchasing and (2) the degree of standardization of purchasing. The two facets represent two perspectives
that are common themes in international strategy. A global purchasing strategy indicates how to compete successfully (Peng, 2006) and aims at achieving sustainable competitive advantages for the firm. This pursuit takes shape in the way the company is organized and how it approaches global purchasing activities. We elaborate on these two facets hereafter.

3.1. Configuration of purchasing

The configuration of global purchasing is defined as the degree to which global purchasing takes place in a (de)centralized way. Configuration is a measure of the dispersion of responsibilities and decision authority from top management to lower management levels, including the development and implementation of methods and procedures (Barclay, 1991; Kotteaku, Laios & Moschuris, 1995; Olson, Slater & Hult, 2005). In this context, a process perspective on global purchasing is required (Carter & Narasimhan, 1990). In line with, among others, Van Weele’s (2004) conceptualization of the purchasing process, configuration should be operationalized on four phases: (1) the investigation of purchase markets and the screening of potential suppliers, (2) the selection of supplies, (3) the negotiation and contraction, and (4) supplier evaluation and follow-up.

Although fully (de)centralized structures do exist, we argue with Fearon (1988) and Arnold (1999) that mixed forms prevail. Investigating these mixed forms, one should understand the underlying coordination mechanisms. Indeed, extant research has reported on how de-centralized purchasing firms make use of coordination mechanisms to benefit from similar advantages as centralized companies. Coordination of purchasing encompasses the creation of purchasing synergies from economies of scale, scope, process, and learning (Faes, Matthysens & Vandenbempt, 2000; Rozemeijer, 2000). Matthysens and Faes (1997) describe four types of purchasing coordination. A first type postulates that purchasing issues are coordinated by the largest user of a specific product or product group or by the user that is located in the supplier’s country of origin. In the second type headquarters coordinate the purchasing activities. The third type prescribes that the company installs different regional purchasing groups to coordinate the purchasing activities. In the fourth type, the company sets up profit-oriented purchasing centers, which sell their services to various customers within the company. The four types are all exponents of an optimization process on the centralization/decentralization duality.

3.2. Standardization of purchasing

A second facet of a global purchasing strategy is the degree of standardization. While the economies that accrue from the standardization of purchasing are apparent (see e.g., Lysons & Gillingham, 2003), adaptation of purchasing may be more adequate in case of, among others, particular products, particular characteristics of the purchase market, and power (im)balance between the supplier and the buyer. In an effort to further specify the character of the standardization of purchasing, we conceptualize three distinct dimensions: purchasing process standardization, product standardization and purchasing personnel standardization.

First, standardization of the global purchasing process is defined as the degree to which global purchasing takes place in a standardized way. This is fully in line with the conceptualization of process standardization that is used in global marketing research (Özsomer, Bodur & Cavusgil, 1991; Walters, 1986). Analogous to the conceptualization of configuration/centralization, the standardization of the purchasing process focuses on four phases: the investigation of the market and screening of suppliers, supplier selection, negotiation and contracting, and supplier evaluation and follow-up.

Secondly, product standardization is defined as the degree to which characteristics of the product that is bought are standardized in the same way throughout the organization. So, it does not refer to the purchase of standardized products. It includes elements of specification settings, quality standards and degree of after-sales service. It is assumable that particular buying situations (Campbell, 1985) and particular types of products (e.g., critical versus non-critical) may require different levels of standardization (Kotabe & Omura, 1989). Moreover, product standardization in purchasing may depend heavily on the marketing strategy of the company (Ryans, Griffith & White, 2003; Theodosiou & Leonidou, 2003).

Thirdly, the standardization of the purchasing staff organization is defined as the degree to which a company organizes and manages its purchasing staff in a standardized way. Staff management (HRM) and staff organization (structure) are seen as key tasks within the control of function managers (Faes, Knight & MatthysSENS, 2001). Purchasing staff is a major actor in the implementation phases of international purchasing programs, since knowledge on foreign cultures and languages as well as typically international habits such as countertrade are important prerequisites for efficient global purchasing (Carter & Narasimhan, 1990; Monczka & Trent, 1992). Trent and Monczka (2002) found that companies with successful global purchasing activities involve their staff throughout the buying process. Although, to the best of our knowledge, no empirical evidence exists concerning the degree of personnel standardization, we expect that the way staff is managed and organized is a critical part of GPS.

In sum, we conceptualize global purchasing strategy as a four-dimensional construct that builds upon (1) centralization/coordination and (2) standardization in the four phases of the purchasing process, (3) standardization of the purchased product and (4) standardization of the purchasing staff organization.

4. Nature of GPS

It is important for the remainder of the article that we clearly define and argue how GPS is perceived. GPS as a construct indicates the degree to which a company takes an active and integrative approach to global purchasing. It refers to the internal integration and adjustment of the company of global purchasing related internal activities. Therefore, a high value to the GPS construct will reflect that a firm integrates and adjusts its activities related to global purchasing more than companies characterized by a low value to GPS.
At the operationalization level, the nature of GPS, which is a latent construct, mainly comes down to the choice between formative and reflective indicators in measurement models. Indicators are called reflective when they are a measurable mirror of the underlying construct. Formative indicators do not reflect an underlying construct. Instead, they build it. As a consequence, item reliability and convergent validity do not have any meaning for formative constructs, since these measures are based on correlations and variances (Hulland, 1999). Formative indicators should be used when calculating an index (Arnett, Laverie & Meiers, 2003; Diamantopoulos & Winklhofer, 2001).

Jarvis, Mackenzie and Podsakoff (2003) suggest that the decision between reflective and formative constructs should, amongst others, be dependent on the direction of causality, the interchangeability of indicators and the covariance requirement. When a company takes a different stance towards global purchasing, this will have effects on all standardization and configuration dimensions and indicators. Alternatively, a change in the degree of centralization of follow-up activities does not mean that the company’s global purchasing strategy as a whole has changed. Such a change could be expected since a fully optimal adjustment of all kinds of global purchasing-related activities will be impossible and misalignments will always exist to a certain extent. When such misalignments become more prevalent, a company’s reaction is a logical consequence of this. In other words, this supports a reflective vision of GPS above a formative one.

A more difficult question is: do the indicators covary with each other? Theoretically, it is expected that high correlations between the measures are found since GPS measures the internal integration and therefore also mutual adjustments of the global purchasing related activities. This is a necessary condition for a reflective model where it is expected that indicators correlate highly with each other and a change in the construct will cause changes in all the measures (Arnett et al., 2003; Bollen, 1989), but it is also allowed in formative models where a change in the measures should cause a change in the construct, but not necessarily in the other measures. What is against formative models, though, is the direction of causality. GPS is seen as an alignment and integration of activities, but is latent. Therefore, it is measured by indicators that are a reflection of the unobservable construct (reflective) or as an index (formative). So when formative, GPS is a linear combination of its indicators. Removing one of the indicators obviously will cause change in the outcomes, but it does not alter the conceptual domain of the construct. More precisely, if an index would be created (formative model) GPS is defined as dependent on those dimensions and those dimensions alone, in much the same way as a consumer index is calculated. So, GPS would be dependent on four dimensions and exactly those four. This would be a too narrow approach. Contrary, GPS is seen as a mere reflective construct where the alignment and integration is manifested most prominently by configuration and integration aspects, but those aspects are by no means meant to be neither exclusive nor determinant. In this respect, it calls for a reflective approach towards GPS.

In sum, the model presented here is reflective, caused by the firm belief that GPS affects the four dimensions, so the dimensions are the effects (Bollen, 1984).

5. Method

In this section, we elaborate in more detail on the unit of analysis and the development of the measurement instrument. We also explain the data collection procedure that was followed.

5.1. Unit of analysis

In line with studies on global purchasing (Murray, Kotabe & Wildt, 1995) and on global marketing (e.g., Lages, Lages & Lages, 2005), the unit of analysis is the purchase of a single product or product group. It is believed that a single product or product group enables the identification of a strategy which is to a certain degree representative for the company and the sample as a whole. Focusing on a single product or product group is more useful than focusing on the strategic business unit or company as a whole, since multiple global purchasing strategies can be pursued within a business unit or company, depending on the type of product bought and the purpose of the purchase.

5.2. Instrument development

On the basis of a literature review and explorative interviews with global purchasing managers, we developed a set of items to serve as indicators of the four dimensions of GPS. Respondents were asked to assess the items on a 5-point Likert-type scale, ranging from 1 = strongly disagree to 5 = strongly agree. A paper-and-pencil questionnaire was prepared and pre-tested among four global purchase managers and four academics engaged in purchasing research. Further clarification and purification of the questionnaire resulted in 13 items to cover the GPS construct (see Table 1).

The measurement of the items on global purchasing strategy was part of a larger online survey on global purchasing and

<table>
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<tr>
<th>Constructs of GPS</th>
<th>Measurement items</th>
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<tr>
<td>Standardized product characteristics (STZPROD)</td>
<td>Standardization in specifications [STZSPECI], quality standards [STZQUALI], after-sales requirements [STZSERVI]</td>
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<tr>
<td>Standardized personnel characteristics (STZPERS)</td>
<td>Standardization in organization of staff [STZSTAFO] and management of staff [STZSTAFM]</td>
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<td>Standardized buying process (STZPROC)</td>
<td>Standardization in research on potential suppliers [STZRESEA], supplier selection [STZSELEC], negotiation and contracting [STZNEGOT], evaluation and follow-up [STZFOLLO]</td>
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<tr>
<td>Centralization of buying process (CONFIG)</td>
<td>Centralization of research on potential suppliers [CENTRES], centralization of supplier selection [CENTRSEL], centralization of negotiation and contracting [CENTRNEG], centralization of supplier evaluation and follow-up [CENTRFOL]</td>
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purchasing performance. Using the forward translation method, the original English questionnaire was translated into two languages: Dutch and French, allowing the respondent to answer the questionnaire in the language s/he preferred. Significant attention was paid to the appropriate translation of more technical purchase-specific terms. Accordingly, we developed a glossary with the help of purchasing managers. While completing the online questionnaire, respondents could click on these terms to make its definition to pop up on their screen.

5.3. Data collection procedure

Data collection was organized in the Belgian industrial context. Two databases defined the sampling frame: the membership database of the Flemish Organization for Purchasing and Logistics (VIB) and the Trends Top 30,000, a database of the 30,000 largest companies in Belgium. VIB supported this project and stimulated their members to participate in this project. We selected 2020 companies from both databases on the basis of firm size (more than 50 employees) and business activity (manufacturing firms and large service companies such as banks and telecom companies). The selection ensured that the purchasing volume for the respondent companies was substantial and important. First, companies were contacted by telephone and/or e-mail with additional information. The link to the online survey was sent when they agreed to participate. We sent out a reminder between 2 and 3 weeks after the first e-mail. Potential respondents were intrinsically and extrinsically motivated to fill in the online survey. We promised each respondent a customized management report on his/her firm’s purchasing performance vis-à-vis the average of the sample and gave each respondent a voucher for a bottle of wine. Recent findings indicate that business respondents do not differ from consumer populations in their reaction to monetary incentives to fill in surveys (Jobber, Saunders & Mitchell, 2004). Empirical studies that compare on- and offline research confirm the comparability of on- and offline surveys with the advantage that online research minimizes data collection costs and time (Deutskens, De Ruyter, Wetzels & Oosterveld, 2004).

Although we initially identified 2020 eligible firms, this number reduced to 1482 due to various reasons: global purchasing was not practiced, global purchasing was organized and decided upon in another country, telephone numbers were incorrect or companies in the list no longer existed. After the initial telephone or e-mail contact, 1115 (or 75.23%) companies agreed to receive the survey. However, this number should be interpreted with caution. Various purchasing managers were unsure regarding their decision (not) to participate and requested some more information and, therefore, wanted to see the questionnaire first. In other cases, we did not get access to a purchasing manager, but a colleague agreed that the questionnaire would be passed on to the best informed person. In 10 cases, it was not possible to send the e-mail because of problems with the e-mail address, even after a confirmation call. Some companies did not want to or could not participate in our project for diverse reasons. The majority simply indicated that they had no interest in participating, they did not have enough time for filling out the questionnaire or company policy forbade participation in surveys.

Eventually, 264 completed questionnaires were received. This yields an effective response rate of 17.81% (=264/1482). This is in line with other studies on international purchasing (for instance, 14.9% in Birou & Fawcett, 1993; 19.4% in Bozarth, Handfield & Das, 1998; 22% in Murray, Wildt & Kotabe, 1995). The questionnaire was different depending on whether companies had one or more business units. For the present study, we retained only respondents who reported to represent two or more business units, since only these respondents were asked questions on the configuration of the purchasing function. This reduces the effective sample to 151 cases.

Non-response bias was tested in line with Armstrong and Overton (1977). The sample was split in three equal parts, based on the respondents’ speed to complete and return the survey. The underlying idea is that the profiles of the late respondents are likely to be more similar to non-respondents. Independent sample t-tests were performed, both under the assumptions of equal and non-equal group variances between the early and late respondents. None of the firm’s demographic characteristics were found to be significantly different for the subgroups. None of the items measured in our questionnaire showed significant difference on the 1% level. Therefore, we conclude that response bias is likely not an issue in our data collection.

6. Data analysis

In this section, we describe the confirmatory factor analysis on the four dimensions of global purchasing strategy (GPS) and test whether GPS is a higher order factor that encompasses the four dimensions.

6.1. Confirmatory factor analysis

After an exploratory factor analysis (PCA analysis, see Table 2), a confirmatory factor analysis was used to assess the measurement properties of the GPS scale. The Maximum Likelihood method available in LISREL 8.72 (Jöreskog & Sörbom, 1993) was used for this purpose. The model is specified as follows: each item is restricted to load on its pre-specified factor and the factors are

<table>
<thead>
<tr>
<th>Components after Varimax rotation</th>
<th>1</th>
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<th>4</th>
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<td>.219</td>
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<tr>
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<tr>
<td>STZSPECI</td>
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<td>STZQUALI</td>
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<tr>
<td>STZSERVI</td>
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<td>.689</td>
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<td>CENTREFOF</td>
<td>.110</td>
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<td>.883</td>
<td>.206</td>
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<td>CENTRELCE</td>
<td>.200</td>
<td>.105</td>
<td>.884</td>
<td>.162</td>
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<tr>
<td>STZFOLLO</td>
<td>.277</td>
<td>.116</td>
<td>.183</td>
<td>.714</td>
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<tr>
<td>STZNEGOT</td>
<td>.027</td>
<td>.042</td>
<td>.142</td>
<td>.818</td>
</tr>
<tr>
<td>STZRESE</td>
<td>.142</td>
<td>.025</td>
<td>.231</td>
<td>.850</td>
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<tr>
<td>STZSELECK</td>
<td>.215</td>
<td>.178</td>
<td>.083</td>
<td>.830</td>
</tr>
<tr>
<td>% variance explained</td>
<td>7.65</td>
<td>13.35</td>
<td>40.70</td>
<td>14.18</td>
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</table>
allowed to correlate freely. The chi-square statistic for the model is significant ($\chi^2 = 102.82; df=59; p<0.01$). Since the chi-square statistic is sensitive to sample sizes and departures from normality, additional fit indices were evaluated: the comparative fit index (CFI=0.97), the goodness-of-fit index (GFI=0.90), the non-normed fit index (NNFI=0.96), the incremental fit index (IFI=0.97) the root mean square error of approximation (RMSEA=0.070) and the standardized root mean square residual (SRMR=0.052). Notwithstanding the significant chi-square measure, the additional fit indices indicate that the measurement model has a good fit.

Table 3 shows the Cronbach alpha ($\alpha$), the average variance extracted (AVE) and the composite reliability (CR) for the four dimensions. Table 3 also shows the loading of each item on their predetermined construct. All loadings are statistically significant (average loading size is 0.80), supporting convergent validity. Alpha values are good (all above 0.7), indicating acceptable reliability levels. Similarly, the values for CR (0.82 or higher) and AVE (0.61 or higher) exceed the levels of respectively 0.7 and 0.5 that are generally required in scale development (Fornell & Larcker, 1981). Discriminant validity is supported by the results for the AVE and the fact that the shared variance between any two constructs is less than the average variance that could be extracted from the items (Fornell & Larcker, 1981).

### 6.2. GPS as a higher order factor

To test whether GPS represents one underlying concept, we calculate a second-order factor model of GPS. This model perceives GPS as the higher order construct of the four first-order factors: standardization of the process, standardization in products, standardization of personnel, and configuration. The first-order factors have loadings of, respectively, 0.66, 0.30, 0.79, and 0.72 on the second-order factor. All loadings are significant ($p<0.01$). The chi-square measure for the second order model is significant ($\chi^2 = 103.43; df=61; p<0.05$). Other measures, however, suggest a good fit of the model to the data. The CFI andIFI are 0.97, the NNFI is 0.96 and the GFI is 0.90. The RMSEA has a value of 0.068 and the SRMR is 0.058. The chi-square difference test between the first-order and second-order models is not significant ($\chi^2 = 0.61; df=2; p>0.10$). The goodness-of-fit values of the second-order model are similar to the CFA analysis of the first-order model, indicating that both models are equivalent. This indicates that companies evaluate global purchasing strategy according to four dimensions presented here. Fig. 1 presents the estimation results for the second-order model.

GPS as a higher order construct implies that the dimensions are expected to behave in a somewhat independent way (Lages & Fernandes, 2005). Such a deviant behavior ensures nomological validity and supports that the construct should be seen as a multidimensional construct. Otherwise, a conceptualization of only one dimension may fit as well. Results for such a one-dimensional construct with the 13 items loading directly on GPS offers poor results ($\chi^2 = 565.45; df=65; RMSEA=0.23; SRMR=0.15; NNFI=0.68; CFI and IFI=0.74, and GFI=0.63$), indicating that different dimensions exist. Although each of these dimensions may behave differently, it is expected that the sign of the path coefficients will be similar.

In sum, the results support the validity and reliability of an integrative—i.e., higher order—conceptualization and operationalization of GPS. All four dimensions contribute significantly to a reflective second-order operationalization and accommodate significant explanatory power.

### 7. Towards a conceptual framework of global purchasing performance

Next, we introduce GPS as a prime intermediary construct in an international purchasing performance model. The conceptualization and operationalization of GPS is a crucial step in the development and testing of a resource-based perspective on global purchasing performance. In this section, we initiate the process of the operationalization of the antecedents of GPS and the formalization of the structural relations in the model. Embedded in a resource-based logic, we position GPS as a mediating construct between purchasing-related capabilities and resources antecedents and performance outcomes. In order to evaluate the usefulness of GPS in achieving competitive advantage and better performance outcomes, it is of vital importance to determine the effect of GPS on these performance outcomes. This endeavor is a first step towards formal hypotheses on the effects of the dimensions of GPS on performance.

#### 7.1. A note on the antecedents of GPS

Extant research on global purchasing has investigated a variety of antecedents to global purchasing strategy. Many of them are connected with the capabilities of and resources available to the company and its purchasing and, often implicitly, their contribution to firm performance and sustainable competitive advantages. Studies on antecedents have typically focused on five groups: (1) the external environment, (2) the firm’s network, (3) the firm, (4) the management and (5) the purchased product. At a first level, antecedents are external to the purchasing organization. Adverse foreign conditions, such
as unfavorable exchange rates and country risks, and home country impediments such as the lack of government support, are two barriers that are likely to affect GPS (Leonidou, 1999). A second group of antecedents consists of network-related variables. Skarmeas and Katsikeas (2001), for instance, point at the potential effect of the degree of interdependence between firms in and across value chains on the global purchasing strategy of individual firms. A third group of variables focuses on the firm level. For instance, the structure of the purchasing function (e.g., international buying groups, lead buyers) is believed to be influenced by the desired degree of international purchasing involvement (Giunipero & Monczka, 1997; Goh & Lau, 1998). Carr and Smeltzer (1999) found a significant relationship between the level of strategic purchasing and firm performance. In an international context, this strategic purchasing is likely to be part of a more formal global purchasing strategy. At the management level, top management commitment to purchasing has received ample attention and is considered as an important prerequisite for effective global purchasing involvement (Birou & Fawcett, 1993; Monczka & Trent, 1992; Petersen, Frayer & Scannell, 2000). Skarmeas, Katsikeas and Schlegelmilch (2002) indicate that the importer’s commitment to an overseas supplier has a positive effect on the importer’s performance in the relationship. Finally, GPS may be dependent upon product-related variables. Mol et al. (2004) found that volume uncertainty about future purchases has a negative impact on the degree of internationalization of purchasing. Technological uncertainty, to the contrary, was positively associated with the scope of international purchasing, indicating that in case of more technological uncertainty, firms search for the best partner worldwide. Lau, Goh and Phua (1999) found a positive relationship between the novelty of the purchase and the degree of centralization. Likewise, it can be suggested that for international purchases, novel products are also bought in a centralized way, so a positive relationship between novelty and GPS is expected. Similarly, constructs such as the availability of alternatives (Cannon & Homburg, 2001) may influence GPS positively, since more alternatives imply more choice, so a better fit between the company and a foreign supplier can be found.

7.2. A resource-based model

Dependent upon the above-mentioned antecedents, GPS is in essence a tool to achieve competitive advantage for the firm. Earlier in this paper, we argued that GPS is a central construct embedded in a contingent resource-based perspective on purchasing and firm performance. We now specify the antecedents of GPS in the same paradigm. Fig. 2 presents a blueprint of an explanatory model that respects this theoretical foundation.

Global purchasing strategy results from the interaction of relevant resources and capabilities in the context of a dynamic environment. The antecedents reported in the extant literature can be classified accordingly. By analogy with global marketing research, research should focus on resources on four dimensions:
tacit and explicit knowledge, financial means, physical characteristics and scale resources (e.g., Morgan et al., 2004). Purchase-related capabilities may be defined on two dimensions: capabilities related to the assimilation and dissemination of information on suppliers and markets and relationship-building capabilities. The latter are relevant for, for instance, close partnerships on joint new product development and purchasing’s role herein (Cavusgil & Zou, 1994; Day, 1994; Kogut & Zander, 1992). Both are believed to affect GPS; e.g., knowledge on foreign markets will direct towards an optimal global purchasing approach. Ways by which information is spread through the company impact especially on the process standardization element of GPS.

Capabilities and resources characterize a particular strategy, which may result in increased efficiency of the purchasing function as well as in a positional advantage with respect to (1) cost advantages due to more effective and efficient purchasing, and (2) product/technological advantages due to, among others, better relationships with better suppliers.

In line with the resource-based view, a firm defines and implements a strategy to reach a sustainable positional advantage vis-à-vis its competitors. GPS is one of the exponents of such a firm strategy. The beneficial effect of GPS on purchasing performance is much more manifest; having an integrative perspective on the organization of global purchasing benefits the firm in terms of inventory control, reduction in delivery times and better internal responsiveness. On their turn, both the performance of the purchasing function and the positional advantages are expected to positively affect firm performance (Cavusgil & Zou, 1994; Morgan et al., 2004). In this way, GPS is believed to indirectly contribute to the performance of the firm.

Relationships in this model may be strengthened or attenuated significantly by contingency factors in the context of the purchasing function. We expect that these contingency factors originate mainly external to the company. Hereby, we think of industry recipes on purchasing, power (im)balances, competitive intensity, but also of corporate and business strategies, business definitions, and types of purchased products.

7.3. Managerial consequences

GPS is the groundwork of an integrative perspective on purchasing strategy in an international environment. To remain competitive and to obtain competitive advantages, firms are believed to jointly align their product, process and personnel policies. Alignment postulates that firms should find a fit between their organizational structure, environment, technology, culture and leadership (Beer, Voelpel, Leibold & Tekie, 2005). In line with the resource-based view, these competitive advantages can be realized in a number of ways from within the firm.

Purchasing managers should realize that global purchasing implies the careful alignment of purchasing-related decisions in the organization. In the frame of global purchasing, the potential benefits of such an approach will be reinforced when program-related aspects are adapted to other organizational issues. These aspects refer to the product dimension (quality, specifications) as well as to the service aspect. Further, buying process procedures must be aligned. In fact, the way international suppliers are selected, opportunities are evaluated, negotiations are undertaken, performance is measured and problems are resolved, will all have to evolve along a dynamic international purchasing environment and managers must continuously question their approach. Thirdly, the international purchasing staff must be monitored and guided in a more consistent way along the internationalization of a firm’s purchasing activity and strategy. Suppliers are also becoming more global players and inconsistent approaches by purchasing organizations will be exploited to the advantage of the supplier. Purchasing staff may benefit from a purchasing information system and a worldwide knowledge sharing system as well as the enrichment of purchasing staff with internationally experienced people. A final point of attention to managers is the configuration of purchasing efforts. A higher degree of centralization and coordination may be recommended. The efficient spread of information and the accumulation of knowledge will simplify the categorization of product items and facilitate standardization and centralization of the buying process. When further research reveals the relationships between GPS, its
antecedents and performance, the managerial consequences of GPS are expected to become more prominent.

8. Conclusion

International purchasing is an important, yet underdeveloped, part of international business activities. While the literature on strategic purchasing and purchasing strategy has revealed a positive impact on purchasing and firm performance (e.g., Carr & Smeltzer, 1999; Carr & Pearson, 2002), the international component has hardly ever been taken into consideration. Therefore, we have conceptualized and measured global purchasing strategy (GPS) as a second-order construct. GPS is operationalized on four dimensions: the configuration of the global purchasing process, the standardization of the global purchasing process, the standardization of product-related characteristics and the standardization of purchasing personnel-related characteristics. The dimensions capture two important dualities in today’s globalizing business: (a) standardize procedures, products and personnel or adapt to plant-, country- or product category-specific circumstances and (b) centralize activities or decentralize them. GPS is conceived as a central mediating construct in a contingent resource-based perspective on global purchasing performance.

Since global purchasing has become a key strategic issue in many industries, firms are looking for a sourcing strategy that could serve in any part of the world (Chung, Yam & Chan, 2004). Such a sourcing strategy is important, since previous studies have indicated that companies that implement global purchasing in their strategic plans achieve better company performance (Samli & Browning, 2003). The operationalization of GPS in the context of a conceptual model of purchase performance is only a first step into a better understanding of the impact that GPS has on performance. More effort is needed in identifying and measuring purchase-related resources and capabilities. Further research is required to understand how these resources and capabilities feed upon GPS and how GPS may contribute to a positional advantage for the firm and, eventually, increased firm performance. Although existing literature has already lifted a veil, additional empirical study is needed to identify contingency factors, both within and outside the firm. Finally, the model may be specified further and a next step in the development of the resource-based model will be the conceptualization of each antecedent and performance consequence. For instance, Bartlett and Ghoshal’s (1989) typology of cross-border firms as well as Kraljic’s (1983) typology of product categories could be internalized to nuance the general model. The link with purchasing internationalization is also an element that could be further developed. The typology by Mol et al. (2004) on the depth and scope in global purchasing could serve for this purpose. Furthermore, joint interaction effects between the dimensions of GPS deserve a closer look.

Although our GPS measure is reliable and internally valid, its external validity needs further scrutiny. Indeed, our findings are based on a single sample of Western European globally purchasing firms. Firms operating in countries with a larger supplier base at home or with a less open economy may perceive global purchasing strategy differently. The conceptualization of GPS could benefit from more research in different international settings and replication of the study would be useful in this stage.

References


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