

Determinants of International Purchasing Success: An Analysis of the Status Quo of Research

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Abstract

International purchasing is one of the most important strategic topics for managers, and attracts more and more interest among researchers. The literature review in this article analyzes the status quo of theoretical knowledge and empirical research in international purchasing. We find that, owing to the relatively recent focus on international purchasing as a scientific field, research often still lacks strong theoretical foundations, does not make enough use of advanced empirical methods, and still lacks systematic insights on the intricacies of purchasing success. Building on what progress has been made in past studies, we provide a strategy and structure framework of determinants of international purchasing success that seeks to contribute to clearer theoretical thinking in the discipline and offers a formidable platform for the design of future empirical research.

Keywords: *international purchasing; global sourcing; literature review; organizational structure; purchasing strategy*

1. Introduction

In today's internationalized business world, making use of the best sourcing destinations has become necessary for firms to remain successful in competition (Bygballe, Bø, & Grønland, 2012), and international sourcing is one of the most important issues for purchasing managers (Seifert, 2012). Companies source abroad for various reasons: Reducing total purchasing costs, improving the access to new technologies, to emerging markets, to better qualities, ensuring resource availability, and enhancing the speed and flexibility of sourcing activities are some of the reasons mentioned by scholars and practitioners (Christopher, Mena, Khan, & Yurt, 2011; Schoenherr et al., 2012). Furthermore, there are more purchasing-related motives – such as increasing the competition between a company's suppliers – to fulfill local content requirements or to support the establishment of a foreign presence (Birou & Fawcett, 1993; Petersen, Frayer, & Scannell, 2000).

Especially since the 1990s, international sourcing has come to see significant interest in research (de Beuckelaer & Wagner, 2007), as reflected in an impressive number of articles that appeared in the years after the fall of the Iron Curtain. This multifaceted body of literature “in terms of foci, methods and theories...” (Hultman, Johnsen, Johnsen, & Hertz, 2012: 10) strongly improved our theoretical knowledge of international purchasing: scholars analyze the management and process from local to global purchasing, describe and collect the motives, barriers, or drivers, and in some single cases, investigate sourcing's effect on purchasing and company performance.

However, some issues that offer potential for improving future research: First, “literature [on success factors of international sourcing] remains stuck in a descriptive and premature discourse” (Quintens, Pauwels, & Matthyssens, 2006b: 174-176). It often lacks the implementation of (strong) theoretical foundations as well as the application of advanced empirical methods. Second, surprisingly little is known about the major determinants of international sourcing success as well as of the link between sourcing strategy and performance, even if some authors underline the impact of purchasing on company performance (Murray, Kotabe, & Zhou, 2005; Ruamsook, Russell, & Thomchick, 2007). We still lack a comprehensive framework of the most relevant theoretical and practical impact

factors on international purchasing success.

By updating the status quo of international purchasing research after Quintens et al.'s (2006b) literature review, this paper makes the following contributions: We review the hitherto existing theoretical knowledge and empirical results on the strategy and structure determinants of international purchasing and therewith discuss the progress made since Quintens et al. (2006) published their influential literature review. We analyze whether the implementation of theoretical foundations into research frameworks has improved and whether, over the past seven years, researchers have progressed to more advanced research procedures. Second, from the findings, we derive a strategy and structure framework of determinants of international purchasing success that seeks to contribute to clearer theoretical thinking in the purchasing field and offers a platform for the design of future empirical research.

We review all international purchasing-related articles published in 14 journals in the field over the seven years from 2006 to 2012. We discuss the field's theoretical foundations. We analyze whether the full potential of statistical procedures is tapped and highlight the potential for improving the future quality of empirical research in international purchasing research. We also derive a theory-driven categorization of theoretically and practically relevant factors to be incorporated into future empirical research on international purchasing success. In addition, we try to assess the individual factors' influence on purchasing performance. Hence, this paper provides a complete picture of the progress made in research on success determinants in international purchasing and closes with recommendations for (improving) future theoretical and empirical research. Future studies can build on this state-of-the-art-knowledge and thus contribute to the development of a more profound and theory-driven discipline.

2. The Literature Review Approach

We follow the selection procedure of journals and papers proposed the work of Quintens et al. (2006b), who provide a review of the published literature from 1990 to 2005 in the context of purchasing and update the review for the period from 2006 to 2012 for the categories "theoretical foundations", "research designs" and "content within an international purchasing strategy and structure framework".

2.1 The Selection of Journals

Anchored in the supply chain management (SCM) field, several SCM journals as well as journals related to operations and production management have a special interest in purchasing research, such as *The Journal of Supply Chain Management* (see Carter and Ellram (2003), who reviewed this journal for a period of 35 years and found that five of the 10 most prominent topics published therein relate to purchasing). Besides SCM journals, articles that deal with international purchasing aspects are also often published in journals focusing on (international) marketing or international management issues. In these areas, Quintens et al. (2006b) identified 14 journals with a special interest in international purchasing (see also Glock and Hochrein (2011) and Pagano (2009), who likewise refer to this selection of journals) (see Table 1).

Relevant journals originating from the field of supply chain management are: *The Journal of Supply Chain Management*, *Journal of Purchasing and Supply Management*, *Supply Chain Management*, *International Journal of Physical Distribution and Logistics Management*, and *International Journal of Operations and Production Management*. Furthermore, the following international marketing-related journals are relevant: *Industrial Marketing Management*, *Journal of International Marketing*, *International Marketing Review*, *European Journal of Marketing*, and *Journal of Business and Industrial Marketing*. Finally, the international business literature publishes articles of interest, especially in the following journals: *Journal of International Business Studies*, *International Business Review*, *Management International Review*, and *Journal of Business*. In the following we will refer to this selection of 14 journals.

Table 1. Articles Published on International Purchasing from 1990 to 2012

| Journal | Impact factor* (2012) | 1990 to 2005 | 2006 to 2012 | Total |
|--------------------------------------------------------------------------------|------------------------------|---------------------|---------------------|--------------|
| Supply chain management | | | | |
| <i>The Journal of Supply Chain Management</i> | 3.320 | 15 | 5 | 20 |
| <i>Journal of Purchasing and Supply Management</i> | 1.458 | 6 | 10 | 16 |
| <i>Supply Chain Management: an International Journal</i> | 1.684 | 2 | 3 | 5 |
| <i>International Journal of Physical Distribution and Logistics Management</i> | 1.826 | 13 | 6 | 19 |
| <i>International Journal of Operations and Production Management</i> | 1.252 | 3 | 1 | 4 |
| International marketing management | | | | |
| <i>Industrial Marketing Management</i> | 1.933 | 13 | 9 | 22 |
| <i>European Journal of Marketing</i> | 0.781 | 1 | 0 | 1 |
| <i>International Marketing Review</i> | 1.172 | 6 | 0 | 6 |
| <i>Journal of International Marketing</i> | 2.900 | 6 | 0 | 6 |
| <i>Journal of Business and Industrial Marketing</i> | 1.000 | 7 | 0 | 7 |
| International business | | | | |
| <i>International Business Review</i> | 1.849 | 6 | 1 | 7 |
| <i>Management International Review</i> | 1.043 | 4 | 1 | 5 |
| <i>Journal of Business Research</i> | 1.484 | 4 | 0 | 4 |
| <i>Journal of International Business Studies</i> | 3.026 | 9 | 0 | 9 |
| Other sources | - | 28 | 3 | 31 |
| Total | | 123 | 39 | 162 |

* Source: Thomson Reuters Journal Citation Reports, 2013

2.2 The Selection of Papers

As we are interested in further analyzing international purchasing questions, we systematically reviewed the abovementioned set of 14 journals. We screened all issues in the seven-year period between 2006 and 2012 (i.e. the period tying in with the analysis period of Quintens et al. (2006b)) and considered articles that focus on cross-border purchasing at the level of industry, firm, or business unit, and that work on this issue as a central subject. In addition to this screening, we consulted the EBSCO database using a keyword search referring to the search terms *global*, *international*, *foreign*, *offshore*, *inward*, and *worldwide*, in combination with *purchasing*, *sourcing*, *procurement*, and *import*. Finally, we excluded papers that consider consumer buying behavior and those that do not seek to contribute to the development of international purchasing theory. This approach resulted in 36 relevant articles. We also used a snowball approach based on the literature list of previously identified papers, which led us to identify three further papers on this matter. In sum, 39 papers were found, with the overwhelming majority coming from the SCM field (Table 2).

Table 2. Publications on Global Purchasing from 2006 to 2012

| Supply chain management | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>The Journal of Supply Chain Management</i> Kamann & van Nieulande, 2010 Kusaba, Moser, & Rodrigues, 2011 Reuter, Foerstl, Hartmann, & Blome, 2010 Ruamsook et al., 2007 Trautmann, Turkulainen, Hartmann, & Bals, 2009 | <i>Supply Chain Management: An International Journal</i> Christopher et al., 2011 Platts & Song, 2010 Wang, Singh, Samson, & Power, 2011 |
| <i>Journal of Purchasing & Supply Management</i> Agndal, 2006 Gelderman & Semeijn, 2006 | <i>International Journal of Physical Distribution & Logistics Management</i> Carter, Maltz, Tingting Yan, & Maltz, 2008 Deane, Craighead, & Ragsdale, 2009 Fredriksson & Jonsson, 2009 |

| | |
|-----------------------------------------------|----------------------------------------------------------------------|
| Hartmann, Trautmann, & Jahns, 2008 | Manuj & Mentzer, 2008 |
| Hultman et al., 2012; Knudsen & Servais, 2007 | Schiele, Horn, & Vos, 2011 |
| Knudsen & Servais, 2007 | Young, Swan, Thomchick, & Ruamsook, 2009 |
| Ogden, Rossetti, & Hendrick, 2007 | <i>International Journal of Operations and Production Management</i> |
| Quintens et al., 2006b | Millington, Eberhardt, & Wilkinson, 2006 |
| Salmi, 2006 | |
| Steinle & Schiele, 2008 | |
| Weber, Hiete, Lauer, & Rentz, 2010 | |
| International marketing management | |
| <i>Industrial Marketing Management</i> | |
| Bygballe et al., 2012 | Pagano, 2009 |
| Giannakis, Doran, & Chen, 2012 | Quintens, Pauwels, & Matthyssens, 2006a |
| Gonzalez-Padron, Hult, & Calantone, 2008 | Tunisini & Bocconcelli, 2009 |
| Kotabe, Mol, & Murray, 2008 | Tunisini, Bocconcelli, & Pagano, 2011 |
| Maltz, Carter, & Maltz, 2011 | |
| International business | |
| <i>International Business Review</i> | |
| Tsai, Huang, & Ma, 2009 | <i>Management International Review</i> |
| | Sinkovics, Jean, Roath, & Cavusgil, 2011 |
| Other sources | |
| Chan, Kumar, Tiwari, Lau, & Choy, 2008 | |
| Mohamad, Julien, & Kay, 2009 | |
| Nassimbeni, 2006 | |

Quintens et al. (2006b), who followed the same procedure (i.e. who reviewed the same set of journals along the same research focus) for the period 1990 to 2005, identified 95 papers of relevance in these journals and a further 28 articles by using a snowball approach. Hence, a total of 162 articles form the basis of our literature review. Analyzing the interest in international purchasing topics over time, an overall enhanced focus on international purchasing research during the 1990s is observable, which can be explained by the changing global environment (e.g. the fall of the Iron Curtain in 1989). Several Eastern European states opened up towards the West, and Asian countries became interesting resource markets, so that new opportunities arose for Western companies leading investigators to research this field. These 'new' sourcing markets remain one of the most important topics for international purchasing managers (Seifert, 2012; Christopher et al., 2011), and particularly the SCM journals have in the last few years increased their focus on international purchasing research.

3. Theoretical Foundations in Purchasing and Supply Chain Management

Owing to the multidisciplinary nature of purchasing and supply chain management (P&SCM), there is no one accepted research paradigm to explain aspects of purchasing research; many theories are referred to, including international trade, foreign direct investment, offshore production, product life cycle, and manufacturing theory (Swamidass, 1993). In spite of the variety of theories used, Harland et al. (2006) conclude that there is still a lack of theory in the field, and that purchasing and even SCM as a scientific discipline are still in its infancy (see also Quintens et al., 2006b). The more optimistic view on the situation is that of Chicksand, Watson, Walker, Radnor, and Johnston, who hold that "although a young discipline, P&SCM is also a relatively rich one" (Chicksand et al., 2012: 458).

Chicksand et al. (2012) found that only one-third of the (1,113 P&SCM) articles they reviewed have a theoretical foundation. There is also no visible trend to more theory use over time, even if those theory-based papers achieve a higher number of citations. Defee, Williams, Randall, and Thomas (2010) found that 364 articles published in five important supply management journals between 2004 and 2009 (Note 1) used more than 180 different theoretical approaches to explain logistics and SCM issues. Considering only articles on purchasing research, they conclude that approximately 30% used microeconomic theory (containing, for instance, transaction cost economies, resource dependence theory, and principal-agent theory), followed by competitive theory (16%, including approaches such as the resource-based view, the contingency approach, the knowledge-based view, dynamic capabilities, and cluster theory), systems theory (15%), and social exchange theory (10%). (Note 2) In their literature review on purchasing organizations, Glock and Hochrein (2011) identified only eight theory-based papers out of 85 articles. Pagano's literature review on the organization of international sourcing activities, published in 2009, completely waives an analysis of the applied theoretical underpinnings. Quintens et al. (2006b) did not analyze the particular theoretical

foundations used for the 123 international purchasing articles they reviewed, but conclude that “it is time now to focus on a business paradigms and theories of the firm, which have to be translated into a global purchasing logic” (Quintens et al., 2006b: 175).

In our literature review, which covers 2006 to 2012, the most prominent theories applied were competitive approaches (16 papers), followed by microeconomic and systems theories (five articles each). In the first group, the most cited theories are the resource-based view, including dynamic capabilities. The resource-based view is used to explain the possibility of transferring resources, such as knowledge or technology, from external suppliers to the firm – for instance, by establishing close supplier partnerships – and thus gaining or enhancing a competitive advantage (Shook, Adams, Ketchen, & Craighead, 2009). Seven of the analyzed papers use the resource-based view, especially when dealing with international purchasing management matters (e.g. Gonzalez-Padron et al., 2008; Quintens et al., 2006a; (Kamann & van Nieulande, 2010)). Five articles are based on a contingency approach, focusing on the fit between a firm’s organization and its environment (Glock & Hochrein, 2011). For instance, the authors apply the contingency approach to examine the relationships between organizational culture, learning, entrepreneurial innovation, and purchasing outcomes in different ethical climates (Gonzalez-Padron et al., 2008). Furthermore, a small number of publications is based on a cluster approach that mostly deals with the advantages and disadvantages of having local or global suppliers (e.g. (Steinle & Schiele, 2008)). To explain the firm’s advantages by reducing sourcing costs or revealing better sourcing markets, authors make use of comparative or competitive advantage models (Kamann & van Nieulande, 2010; Ruamsook et al., 2007). The transaction cost approach, which is dominant in microeconomic theories, focuses on a reduction of transaction costs when sourcing abroad (Shook et al., 2009). It is referred to by the authors of four articles to explain the sourcing activities of Western companies in Asia (e.g. Wang et al., 2011)(Wang et al., 2011)(Wang et al., 2011)(Wang et al., 2011); Giannakis et al., 2012). Among systems theories, network theory is most prominent. Network theory draws on the firm’s advantages, which are generated from being a central part of a supplier network and which improve the firm’s purchasing performance. Four of our analyzed articles are based on network theory, especially when dealing with supplier management topics (e.g. Hultman et al., 2012; Tunisini & Bocconcelli, 2009). Besides these most common theories, several authors apply other approaches to explain international sourcing phenomena such as grounded theory, inventory, or social capital theory, fuzzy set theory, or resource dependence theory (e.g. Agndal, 2006; Platts & Song, 2010; Weber et al., 2010; Carter et al., 2008; Chan et al., 2008; Gelderman & Semeijn, 2006, Manuj & Mentzer, 2008; Tsai et al., 2009; Young et al., 2009). We also find an increased usage of “intellectual eclectic” approaches (i.e. combining different, generally incompatible theoretical approaches), which was also highlighted in the review by Chicksand et al. (2012). Nine articles completely lack a clear, strong theoretical foundation (e.g. Kotabe et al., 2008; Maltz et al., 2011; Millington et al., 2006; Knudsen & Servais, 2007). Although scholars mention one of the above popular theoretical approaches, they seem to not link their own research to this theory well (Chicksand et al., 2012; Defee et al., 2010). In sum, also after 2005, there is no major focus visible on single theories, and the use of business paradigms, as called for by Quintens et al. (2006b), is still scarce.

4. Research Designs and Data Analysis Techniques

Earlier papers on international purchasing are mostly anecdotal and enclose descriptive statistics, if any statistics are referred to at all. From 1990 to 2005, the average research design was characterized by a (paper and pencil) survey. Different data analysis techniques were applied to the collected data: factor analysis was the most popular method for bundling the antecedents of international sourcing, such as drivers or barriers. Multiple regression analysis was used by authors focusing on sourcing’s performance effects (Quintens et al., 2006b). Structural equation models came up in the field, but have not been the first choice methodology in purchasing research (e.g. Fawcett & Scully, 1998; Petersen et al., 2000; Hult, Hurley, Giunipero, & Nichols, 2000; Skarmas, Katsikeas, & Schlegelmilch, 2002; Ha, Karande, & Singhapakdi, 2004). Most papers still focused on descriptive analysis techniques. Quintens et al. (2006b) therefore called for more empirical research involving the application of advanced quantitative methods, as found in international marketing and international management research.

Analyzing the articles published between 2006 and 2012, we find that the situation is slowly changing (see Figure 1). Following Glock and Hochrein (2011), we distinguish between three major groups of research methodologies: Quantitative methods, i.e. methods based on the collection and analysis of large-scale empirical data – in the purchasing field, usually survey research. The second group of papers, the qualitative research group, relies on a small set of observations, such as case studies, interviews, or workshops. Papers that only focus on theoretical discussions, describing theories or methods, presenting models without testing with empirical data, and even

literature reviews are categorized in the last group – conceptual research papers. While the number of conceptual papers is low, the overwhelming majority (33 of 39) makes use of empirical research methods. Nearly half of all papers still rely on qualitative methods, whereof 10 focus solely on case studies (mostly based on interviews and secondary data) (e.g. Fredriksson & Jonsson, 2009; Reuter et al., 2010; Young et al., 2009; Trautmann et al., 2009). Three papers use mixed methods by combining case study and/or workshop insights with survey results (e.g. Platts & Song, 2010; Kamann & van Nieulande, 2010; Mohamad et al., 2009). The other half relies on quantitative methods referring to quantitative survey data.

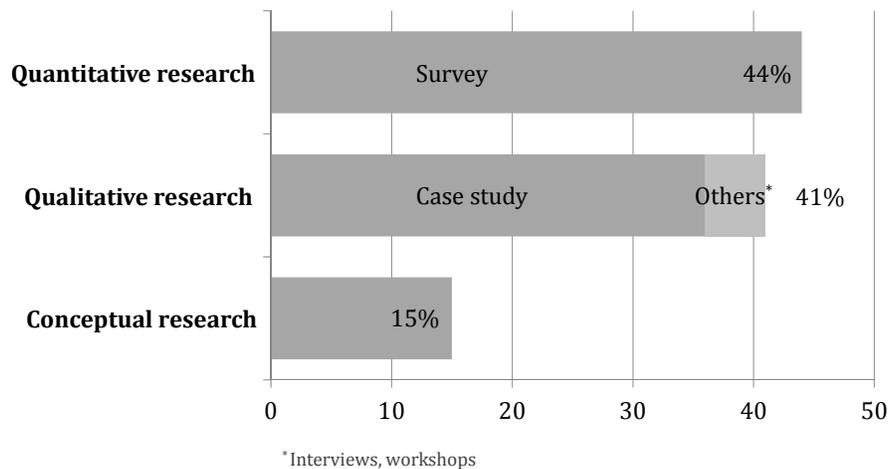


Figure 1. Overview of Research Methodologies in International Purchasing Research

All authors base their survey on a literature review; few make use of a qualitative pre-survey (e.g. Maltz et al., 2011; Ogden et al., 2007; Kusaba et al., 2011). As noted by Quintens et al. (2006b), factor analysis still is one of the most popular methods. Six out of 10 articles that provide information on the method used apply confirmatory factor analysis (e.g. Tsai et al., 2009; Kusaba et al., 2011; Sinkovics et al., 2011). Other methods are rarely used (such as perceptual mapping by Carter, Maltz, Maltz, Goh, and Yan (2010) and Maltz et al. (2011), gap analysis (Mohamad et al., 2009), or analysis of variance (Knudsen & Servais, 2007)). Only one study is based on a multiple linear regression procedure (Giannakis et al., 2012). In sum, there is a shift to more quantitative studies in global sourcing research and the quantitative analyses techniques toolset is slightly increasing. The balanced use of quantitative as well as qualitative methods (or a combination) and the more precise description of the methods' applications shows that research designs and data analysis procedures are becoming more important elements of global sourcing research. However, more advanced quantitative methods, such as multiple regression analyses or even structural equation modeling (SEM) techniques, have to our best knowledge not yet been applied.

In researching the determinants of international purchasing success, multivariate analyses procedures, which are able to explore and test theoretical causal relationships, are valuable, because they provide information on the importance of individual strategy and structure determinants for company performance. In particular, SEM techniques present a promising statistical route, because they enable the simultaneous exploration of causal relationships between various independent (e.g. dimensions of strategy and structure) and various dependent (e.g. performance in terms of time, cost and quality) variables in one research model. For a relatively new theoretical field, where strong theory is lacking and authors are still in the process of theorizing, especially partial least-squares SEM is the method of choice (see Hair, Hult, Ringle, & Sarstedt, 2014; Hair, Sarstedt, Ringle, & Mena, 2012).

5. Content Analysis

5.1 Research Streams Identified in Past Reviews

Past literature reviews identify three primary research streams that are of special interest to scholars in international sourcing: process models, management and organizational designs, and motives or drivers of international purchasing (see the overviews by Nassimbeni (2006), Hultman et al. (2012), and Quintens et al. (2006b)). In addition, Quintens et al. (2006b) introduce *consequences of global purchasing* as a fourth study category.

Process models focus on describing the process of incrementally gaining experience in international sourcing. The most influential model is advanced by Monczka & Trent, 1991, 2002, 2005), who define five stages of development: (1) domestic purchasing only, (2) international purchasing based on need, (3) international purchasing as part of a sourcing strategy, (4) integration and coordination of international sourcing strategies across worldwide buying locations, and (5) integration and coordination of international sourcing strategies with other functional groups. Process frameworks are still common today and are, for instance, used in order to analyze the differences in the perception of success drivers at different stages of international purchasing (e.g. Mohamad et al., 2009), and for analyzing the development of supplier relationships (e.g. Hultman et al., 2012; Knudsen & Servais, 2007).

The second research stream pays particular attention to the management of international sourcing activities and the related organizational designs (see the overviews in Nassimbeni (2006) as well as Hultman et al. (2012)): Between 2006 and 2012, 20 publications address either strategy or structure, or individual aspects of both categories simultaneously (this is most common). Authors often discuss topics such as appropriate risk management approaches (e.g. Christopher et al., 2011), international sourcing strategies in general (e.g. Quintens et al., 2006a; Gelderman & Semeijn, 2006), aspects of supplier selection and management (e.g. Carter et al., 2008; Chan et al., 2008; Reuter et al., 2010; Millington et al., 2006; Salmi, 2006; Sinkovics et al., 2011), location choice criteria (e.g. Maltz et al., 2011; Deane et al., 2009), and optimal product characteristics for international sourcing (e.g. Kamann & van Nieulande, 2010). While studies that focus on organizational topics involve research that bundles a variety of organizational variables (e.g. Hartmann et al., 2008; Kusaba et al., 2011), a focus on single organizational aspects (e.g. Trautmann et al., 2009, or Sinkovics et al., 2011) is more common.

A third group of studies looks at the drivers (i.e. elements that favor the decision for international sourcing), facilitators (i.e. conditions that ease the implementation of international sourcing) and barriers (i.e. factors that aggravate the pursuit of international purchasing) to international sourcing. While past research has established comprehensive collections of potential drivers, facilitators, and barriers (see the overviews by Nassimbeni (2006), Hultman et al. (2012), and Quintens et al. (2006b)), authors today involve motives and drivers in their focus studies – for instance, drivers for small and medium sized enterprises (e.g. Agndal, 2006; Knudsen & Servais, 2007), local or global purchasing decisions (e.g. Schiele et al., 2011; Steinle & Schiele, 2008; Tunisini & Bocconcelli, 2009; Tunisini et al., 2011), or specific countries (e.g. Wang et al., 2011).

Quintens et al. (2006b) concluded that, until 2005, only a few studies had investigated the consequences of international sourcing. Consequences are all kinds of *performance outcomes* related to quality, cost, and time. Since 2006, only a few papers have focused on the consequences of global sourcing: two articles dealt with all of the abovementioned performance dimensions (Ruamsook et al., 2007; Giannakis et al., 2012); what is more common is a focus on cost effects (e.g. Fredriksson & Jonsson, 2009; Platts & Song, 2010; Young et al., 2009; Weber et al., 2010), effectiveness (e.g. Hartmann, Bals, & Kaiser, 2008; Hartmann et al., 2008; Trautmann et al., 2009), and profitability (e.g. Kotabe et al., 2008; Platts & Song, 2010). Supplier-relationship-related performance measures, such as responsiveness (e.g. Sinkovics et al., 2011), or sustainability (Reuter et al., 2010) are also found. There is a clear research gap concerning the performance outcomes and on aligning these outcomes with the fundamental strategy and structure choices in international sourcing.

5.2 A Strategy and Structure Framework

We will develop a different framework in order to guide the review's content analysis. We will develop a classification of the success determinants guided by theory that offers mutually exclusive and independent (to analyze) categories defined to cover all issues addressed by the review (e.g. Glock and Hochrein (2011), based on Holsti (1969)). We will conceptualize these determinants into the strategy and structure characteristics that are supposed to affect company performance.

Regarding the organization and design of the international purchasing activities, we will build on the work of Glock and Hochrein (2011). To assess the performance of alternative structural designs, the authors refer to the contingency and configuration approaches as theoretical foundations. Both approaches focus on the interplay of the organization's environment and its structure. The basic idea is that organizations perform better when their structure is properly aligned with the environmental or contextual conditions (Child, 1972), and thus that the appropriate structure positively affects performance.

Glock and Hochrein (2011), who focus on the alignment of structure, identify the following six important elements of purchasing organization structure: (1) (*De-)centralization* refers to the concentration or aggregation of decision-making authority in a single organizational unit, for instance at the headquarters level. (2) *Configuration* is determined by the design of the authority structure in the organization; it involves aspects such as vertical and lateral

spans of control, criteria for segmentation, and numbers of positions in various segments. (3) *Involvement* includes lateral involvement, i.e. the number of departments, divisions, or functions that participate in the sourcing decision, and vertical involvement, i.e. number of hierarchical levels involved, as well as the size of the buying center in terms of the number of people involved in the purchasing process. (4) *Specialization* refers to the way labor is divided within the organization, for instance, either by tasks or functions. (5) *Standardization* is the extent to which activities are precisely defined. (6) *Formalization* describes the extent to which an organization relies on rules and procedures to direct the behavior of its members, for instance, the definition of rules that regulate decision-making processes (see (Glock & Hochrein, 2011)). One important success factor not explicitly included in the classification by Glock and Hochrein (2011), but analyzed by several authors (e.g. (Bygballe et al., 2012); (Kamann & van Nieulande, 2010); (Mohamad et al., 2009)) is the positive impact of top management commitment, which can ensure the availability of the necessary resources, such as personnel, time, and budget. This ensures that the strategic focus becomes visible for all employees involved in the purchasing process, and that international sourcing activities become realizable. We will incorporate the aspect of commitment into the category *involvement*.

The contextual or environmental factors identified by Glock and Hochrein (2011) can to some extent be influenced by a company's strategic choices. For instance, if a company chooses to operate in a certain country, this country's environment is realized by this location choice: "...the business environment is also 'selected' when it [the firm] decides to source parts from that supplier..." (Deane et al., 2009, p. 865). Hence, it is not only about creating a fit between structure and a non-influenceable environment, but to appropriately influence contextual factors by making the right strategic choices. In further conceptualizing strategic options from a sourcing perspective, we will basically follow the approach of Arnold (2002), who identifies the following four relevant sourcing strategy elements which, together, are supposed to form the overall purchasing strategy: (1) supplier management (e.g. single, dual vs. multiple sourcing); (2) sourcing object strategy (e.g. product characteristics), (3) location strategy, (e.g. regional vs. global or specific market, such as emerging market, sourcing strategies); (4) time strategy, (e.g. on stock, demand tailored, and just-in-time strategies) (Arnold, 2002).

In explaining why and how these strategic choices affect performance, the following theoretical streams can be consulted: Steinle and Schiele (2008) refer to the cluster approach and the resource-based view (RBV). According to the cluster approach, a company can profit from being part of a cluster that provides firms along a value chain with competitive advantages and thus with higher performance or profitability (Porter, 1990). In terms of sourcing, this relates for instance to supplier management in terms of searching suppliers located in a certain local cluster (location strategy). According to the RBV, a firm gains competitive advantages owing to its superior internal resources. Although not incorporated in its pure form (Barney, 1991; Wernerfelt, 1984), several theoretical extensions have been proposed that view the interfirm relationship between the buyer and supplier as part of the company's resources. For instance, there has been a lively discussion of relational competencies anchored in a company's network (e.g. Duschek, 1998; Dyer & Singh, 1998; Mildenerger, 2001) and the extended enterprise (Dyer, 2000; Harland, 1997; Kinder, 2003). Both approaches suppose that an organization can derive a competitive advantage from its relationship to partners, in the form of horizontal alliance partners or vertical supply chain partners. Hence, as argued by Steinle and Schiele (2008), suppliers can be company-addressable resources and can contribute to a sustainable competitive advantage ((Barney, 1991); Steinle, 2005; Steinle & Schiele, 2008) and thus to performance. Theoretical arguments on sourcing object strategy are mainly found in transaction cost approaches, which focus on all facets on the continuum between the make or buy decision. Any sourcing decision involves an evaluation of costs incurred from internally (producing) providing a product vs. purchasing it from an external source (market) (Williamson, 1975, 1979). According to transaction cost approaches, an appropriate sourcing object strategy will reduce costs and therewith increase performance. These approaches also focus on the product characteristics in terms of specificity, uncertainty, and costs in relation to the global sourcing success. Finally, the impact of time strategy on performance and the questions of an ideal sourcing rhythm and lot size have long been in the focus of theorists (see for instance the approaches derived by Harris (1915) and Andler (1929)).

5.3 Strategy Determinants of Global Purchasing Success

The papers analyzed can be classified along both the three research streams identified in past reviews as well as the new strategy and structure framework we derived (see Table 2).

According to our literature review, the majority of authors analyze questions of *supplier management* (see Table 2) when it comes to strategy determinants of global purchasing success. In supplier management, authors mostly concentrate on questions of supplier selection (e.g. (Chan et al., 2008), Deane et al., 2009, Nassimbeni, 2006) and the management of supplier relationships (e.g. Christopher et al., 2011; Giannakis et al., 2012; Knudsen & Servais, 2007;

Millington et al., 2006). Chan et al. (2008) find that the most important criteria for choosing the right suppliers are costs (e.g. logistics management costs, tariffs), supplier quality in terms of capabilities, the delivered product and service, and risk factors such as political stability. The latter – the analysis of global supply chain risks – is addressed by Deane et al. (2009), who propose a complementary supplier selection model in light of mitigating regional risks associated with suppliers' locations and density risks associated with the geographic proximity of the chosen suppliers. International sourcing risks and mitigation strategies are also addressed by Christopher et al. (2011), who identify the major (supply, environmental, process, control, and demand) risks in international sourcing for different industries. For instance, in FMCG, transport risks, a high dependency on low-cost sourcing in combination with a perceived loss of control and corporate social responsibility issues are identified as the major risks. Based on case studies, the authors identify four generic strategies to address such risks (network re-engineering, collaboration, agility, and a risk management culture), including close collaboration between parties involving trust and information transparency. Trust, effective communication, and stable relationships are also among the top mitigation strategies listed by Wang et al. (2011). Overall, the relationship with suppliers either in terms of cooperation modes (governance structures) and relationship characteristics (e.g. trust) is prominent in past research (e.g. Giannakis et al., 2012; Knudsen & Servais, 2007; Millington et al., 2006; Fredriksson & Jonsson, 2009; Mohamad et al., 2009; Salmi 2006, Sinkovics et al. 2011. Gonzalez-Padron et al. (2008) also list relationship quality and focus on the moderating effects of ethical climate, while Reuter et al. (2010) analyze how sustainability issues are incorporated into the buyer-supplier relationship).

Our understanding of supplier strategy concentrates on the number of suppliers in terms of single sourcing vs. multiple sourcing. Gelderman and Semeijn (2006), who refer to this as *purchasing portfolio management*, introduce a purchasing portfolio matrix characterized by the number of suppliers (small to large) and the value of the purchase (low to high), and formulate four purchasing strategies based on the resulting quadrants: *bottleneck* sourcing in the case of a small number of suppliers and a low purchase value; *strategic (partnership) sourcing* for few suppliers with a high purchase value; *noncritical* sourcing for low-value purchases from multiple suppliers (with standardized procedures); and *leverage*, i.e. monitoring and managing supplier performance, for high-value purchases from multiple suppliers. Similarly, Steinle and Schiele (2008) argue that becoming a preferred customer to strategic suppliers is key in international strategic sourcing.

The high number of papers focusing on international supplier relationship management leads to the assumption that supplier management has an important impact on the international purchasing performance.

Furthermore, strategic options regarding the *sourcing object* and *location* are popular (e.g. (Wang et al., 2011); (Quintens et al., 2006a)). The sourcing *object* is issued in two different ways. The major group of authors discusses the product's optimal characteristics in order to source it successfully in the global market (Kamann & van Nieulande, 2010; Nassimbeni, 2006; Quintens et al., 2006a; Steinle & Schiele, 2008; Trautmann et al., 2009; Gelderman & Semeijn, 2006). These characteristics are described in different terms, for instance, regarding a product's specificity, technology, criticality/uncertainty, and costs. Gelderman and Semeijn (2006) consider the value of purchases as the crucial variable. A second group of authors refer to the final product, or specifically to its quality, innovation, or delivery as a result of a sourcing decision and finally as a purchasing performance measure (Quintens et al., 2006b; Ruamsook, Russell, & Thomchick, 2009; Wang et al., 2011).

Table 2. Overview of Major Research Streams in Global Purchasing from 2006 to 2012

| | Process models | Management and organizational designs | Motives or drivers of international purchasing | Consequences or performance outcomes |
|-----------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Strategy | Quintens et al., 2006b | Chan et al., 2008; Deane et al., 2009; Quintens et al., 2006b; Christopher et al., 2011; Gelderman & Semeijn, 2006; Reuter et al., 2010; Salmi, 2006; Carter et al., 2008; Giannakis et al., 2012; Gonzalez-Padron et | Quintens et al., 2006b; Christopher et al., 2011; Salmi, 2006; Steinle & Schiele, 2008; Kamann & van Nieulande, 2010; Nassimbeni, 2006; Quintens et al., 2006a; Tsai et al., 2009; Wang et al., | Fredriksson & Jonsson, 2009; Reuter et al., 2010; Schiele et al., 2011; Steinle & Schiele, 2008; Nassimbeni, 2006; Ruamsook et al., 2009; Giannakis et al., 2012; Gonzalez-Padron et al., 2008; Quintens |

| | | | | |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | al., 2008; Kamann & van Nieulande, 2010; Maltz et al., 2011; Millington et al., 2006; Quintens et al., 2006a; Tsai et al., 2009 | 2011 | et al., 2006a; Ruamsook et al., 2007; Tsai et al., 2009 |
| Structure | Quintens et al., 2006a; Quintens et al., 2006b; Kotabe et al., 2008; Hultman et al., 2012; Mohamad et al., 2009 | Bygballe et al., 2012; Chan et al., 2008; Quintens et al., 2006b; Christopher et al., 2011; Hartmann et al., 2008; Manuj & Mentzer, 2008; Reuter et al., 2010; Salmi, 2006; Trautmann et al., 2009; Carter et al., 2008; Giannakis et al., 2012; Gonzalez-Padron et al., 2008; Kamann & van Nieulande, 2010; Kusaba et al., 2011; Maltz et al., 2011; Millington et al., 2006; Quintens et al., 2006a; Sinkovics et al., 2011; Tsai et al., 2009 | Quintens et al., 2006b; Christopher et al., 2011; Salmi, 2006; Kamann & van Nieulande, 2010; Nassimbeni, 2006; Quintens et al., 2006a; Tsai et al., 2009; Wang et al., 2011 | Kotabe et al., 2008; Bygballe et al., 2012; Fredriksson & Jonsson, 2009; Weber et al., 2010; Young et al., 2009; Hartmann et al., 2008; Reuter et al., 2010; Trautmann et al., 2009; Nassimbeni, 2006; Platts & Song, 2010; Ruamsook et al., 2007; Giannakis et al., 2012; Gonzalez-Padron et al., 2008; Kusaba et al., 2011; Quintens et al., 2006a; Ruamsook et al., 2007; Tsai et al., 2009 |
| Facilitators and barriers | Quintens et al., 2006b; Mohamad et al., 2009 | Bygballe et al., 2012; Quintens et al., 2006b; Kamann & van Nieulande, 2010 | Quintens et al., 2006b; Kamann & van Nieulande, 2010 | Fredriksson & Jonsson, 2009; Weber et al., 2010 |
| Consequences or performance outcomes | Kotabe et al., 2008 | Bygballe et al., 2012; Fredriksson & Jonsson, 2009; Hartmann et al., 2008; Reuter et al., 2010; Trautmann et al., 2009; Giannakis et al., 2012; Gonzalez-Padron et al., 2008; Kusaba et al., 2011; Quintens et al., 2006a; Ruamsook et al., 2007; Tsai et al., 2009 | Schiele et al., 2011; Steinle & Schiele, 2008; Tunisini et al., 2011; Nassimbeni, 2006; Quintens et al., 2006a; Tsai et al., 2009 | |

Location selection criteria are considered by several authors. Fredriksson and Jonsson (2009) group factors into the categories infrastructure, culture, human capital, and policies and regulations, and derive consequences and performance effects from these dimensions. For instance, in their case study of European and Chinese business relationships, they describe communication difficulties relating to varying cultural backgrounds. These involve a low quality of information exchange, which leads to a decreasing product quality or flexibility. Kamann and van

Nieulande (2010) also offer different categories that influence country selection: costs (e.g. wages, customs, tariffs), competence (e.g. industrial performance, education, and training, innovation), quality (ISO ownership ratio), logistics (e.g. lead time, time to export, and infrastructure), and a list of other factors (e.g. intellectual property protection, institutions, macroeconomic stability, technology readiness, corporate responsibility issues such as the use of child labor, safety and pollution, and foreign exchange risks). In contrast, Carter et al. (2008), Maltz et al. (2011), and Nassimbeni (2006) waive categorizing the influencing factors and provide a loose collection of single elements that impact the sourcing country decision, considering for instance labor costs, local market attractiveness, work ethics, delivery, and the political environment. Tsai et al. (2009) include only single factors – cultural differences and regulations – in their study on global responsiveness.

Timing aspects are not frequently researched. In the context of time strategy, Christopher et al. (2011) identify supply chain agility (i.e. the ability to respond swiftly to unpredictable variations in demand or supply) as one of the best practice strategies in global sourcing. (Fredriksson & Jonsson, 2009) distinguish between a short and a long supply chain of casting goods and draw interferences for China; for instance, they find that quality problems and long lead times make it necessary to maintain safety stocks. Finally, Ruamsook et al. (2009) refer to timing aspects, namely on-time receipt, cycle-time consistency and length as performance outcomes of international sourcing. Table 3 lists the authors who are active in each of the above strategy categories.

The number of papers focusing on location, object or timing issues is much lower than those papers considering supplier aspects. But if this fact means that their relative influence (compared to supplier management) on the purchasing performance is significantly lower as well, is not researched so far.

Table 3. Strategy Determinants Referred to from 2006 to 2012

| Strategy dimension* | Publications |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supplier management (17) | Millington et al., 2006; Giannakis et al., 2012; Gonzalez-Padron et al., 2008; Chan et al., 2008; Nassimbeni, 2006; Reuter et al., 2010; Kamann & van Nieulande, 2010; Steinle & Schiele, 2008; Quintens et al., 2006a; Quintens et al., 2006b; Christopher et al., 2011; Mohamad et al., 2009; Fredriksson & Jonsson, 2009; Salmi, 2006; Gelderman & Semeijn, 2006; Sinkovics et al., 2011; Deane et al., 2009; Wang et al., 2011 |
| Sourcing object (9) | Trautmann et al., 2009; Quintens et al., 2006a; Nassimbeni, 2006; Kamann & van Nieulande, 2010; Steinle & Schiele, 2008; Quintens et al., 2006a; Quintens et al., 2006b; Gelderman & Semeijn, 2006; Wang et al., 2011; Ruamsook et al., 2009 |
| Location (10) | Nassimbeni, 2006; Quintens et al., 2006a; Quintens et al., 2006b; Fredriksson & Jonsson, 2009; Maltz et al., 2011; Salmi, 2006; Tsai et al., 2009; Carter et al., 2008; Deane et al., 2009; Wang et al., 2011; Kamann & van Nieulande, 2010 |
| Timing (3) | Christopher et al., 2011; Fredriksson & Jonsson, 2009; Ruamsook et al., 2009 |

() = number of papers published between 2006 and 2012

5.4 Structure Determinants of Global Purchasing Success

According to Glock and Hochrein (2011), *(de-)centralization* is among the most often used structural variables in purchasing research. In the recent past, only a few authors have referred to (de-)centralization (Gonzalez-Padron et al., 2008; Hartmann et al., 2008; Quintens et al., 2006a; Nassimbeni, 2006; Trautmann et al., 2009). For instance, Gonzalez-Padron et al. (2008) analyze the impact of autonomy (operationalized by items such as *We feel that we are our own boss in most purchasing matters*) on a purchasing unit's learning orientation, entrepreneurial innovation, relationship quality with participants, and the purchasing process cycle time. They find support for a positive relationship between autonomy and the latter two. Hartmann et al. (2008) refer to environmental pressures for globalization or standardization and responsiveness, and derive research propositions on the relationships between international strategy, organizational configuration, and the interdependence of activities at the headquarters and subsidiary levels. Seeking to develop a measurement model on global purchasing strategy, Quintens et al. (2006a) refer to four dimensions and analyze whether these dimensions can be summarized to a higher-order factor they call *global purchasing strategy*: standardized product characteristics, standardized personnel characteristics, a standardized buying process, and centralization of the buying process (i.e. the extent to which international responsibilities and decision authority is dispersed from top to lower management levels).

Table 4. Structure Determinants Referred to from 2006 to 2012

| Structure | Publications |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (De-)centralization (5) | Gonzalez-Padron et al., 2008; Hartmann et al., 2008; Quintens et al., 2006a; Nassimbeni, 2006; Trautmann et al., 2009 |
| Involvement (12) | Giannakis et al., 2012; Gonzalez-Padron et al., 2008; Trautmann et al., 2009; Kamann & van Nieulande, 2010; Manuj & Mentzer, 2008; Bygballe et al., 2012; Quintens, Matthyssens, & Faes, 2005; Quintens et al., 2006b; Mohamad et al., 2009; Kusaba et al., 2011; Hultman et al., 2012; Sinkovics et al., 2011; Wang et al., 2011 |
| Specialization (11) | Gonzalez-Padron et al., 2008; Hartmann et al., 2008; Nassimbeni, 2006; Reuter et al., 2010; Bygballe et al., 2012; Quintens et al., 2005; Quintens et al., 2006b; Mohamad et al., 2009; Fredriksson & Jonsson, 2009; Salmi, 2006; Kusaba et al., 2011; Wang et al., 2011 |
| Configuration (3) | Hartmann et al., 2008; Bygballe et al., 2012; Mohamad et al., 2009 |
| Standardization (21) | Bygballe et al., 2012; Carter et al., 2008; Chan et al., 2008; Christopher et al., 2011; Fredriksson & Jonsson, 2009; Giannakis et al., 2012; Kamann & van Nieulande, 2010; Kotabe et al., 2008; Kusaba et al., 2011; Manuj & Mentzer, 2008; Mohamad et al., 2009; Maltz et al., 2011; Platts & Song, 2010; Quintens et al., 2006a; Reuter et al., 2010; Salmi, 2006; Sinkovics et al., 2011; Tsai et al., 2009; Wang et al., 2011; Weber et al., 2010; Young et al., 2009 |
| Formalization (4) | Gonzalez-Padron et al., 2008; Hartmann et al., 2008; Tsai et al., 2009; Trautmann et al., 2009 |

* () = number of papers published between 2006 and 2012.

In contrast to the literature review of Glock and Hochrein (2011), we count more articles that consider aspects of *involvement*, i.e. the number of players and hierarchical levels participating in sourcing decisions than (de-)centralization (see the overview in Table 4). Authors mostly focus on the effects of involving suppliers and building close relationships (Giannakis et al., 2012; Mohamad et al., 2009; Quintens et al., 2006b; Sinkovics et al., 2011), and supply networks (Wang et al., 2011; Hultman et al., 2012) on different purchasing performance levels. Other researchers discuss aspects of purchasing team composition (Bygballe et al., 2012; (Manuj & Mentzer, 2008); (Gonzalez-Padron et al., 2008)), for instance, regarding its effect on the quality of early risk identification (Manuj & Mentzer, 2008), or on purchasing's learning orientation (Gonzalez-Padron et al., 2008). Even if this is not central to the analyzed articles, executive support as a critical factor of global purchasing success is mentioned several times (Kamann & van Nieulande, 2010; Kusaba et al., 2011; Mohamad et al., 2009; Weber et al., 2010).

Glock and Hochrein (2011) defined *specialization* as the division of labor in an organization and as task repetitiveness levels; none of the papers we reviewed incorporate specialization as such. Instead, authors refer to specialization in the context of capabilities, skills, and knowledge. The most prominent aspects are the need for personnel skills, knowledge, and abilities in relation to successfully sourcing abroad (Bygballe et al., 2012; Mohamad et al., 2009; Fredriksson & Jonsson, 2009; Kusaba et al., 2011; Quintens et al., 2006b; Wang et al., 2011; Salmi, 2006; Nassimbeni, 2006). A few authors focus on the skills needed for sourcing in special regions or countries, for instance low-cost countries, or China in particular ((Kusaba et al., 2011); (Fredriksson & Jonsson, 2009); (Salmi, 2006); (Wang et al., 2011)). These articles emphasize the importance of certain skills or competencies such as an understanding and interest in culture. Further papers have a more general view of the role of expertise concerning performance measures, such as (Reuter et al., 2010), who examine the role of dynamic capabilities on supplier evaluation and development and, finally, in achieving competitive advantage, or (Hartmann et al., 2008), who research the dominance of headquarters in organizations owing to a lack of expertise in subsidiaries. The impact of developing skills in terms of organizational learning on purchasing outcomes is also discussed (Gonzalez-Padron et al., 2008).

Originally closely related to specialization is *configuration*, i.e. authority structures, segmentation criteria, and the number of positions in various segments enabling skills building in terms of business functions or objects. Only a few authors consider the impact of configuration aspects on international sourcing topics, such as different types of configuration or special logistics solutions types between producers and retailers (Hartmann et al., 2008; Bygballe et al., 2012). Mohamad et al. (2009) focus on the hierarchical position of the purchasing department and therewith the access to better opportunities to attain resources needed.

Based on our literature review, we find that especially *standardization* has seen attention in recent years, either regarding sourcing a standardized product that can be critical to success, for instance, if sourcing from China (Salmi, 2006; Fredriksson & Jonsson, 2009; Kamann & van Nieulande, 2010), or regarding the standardization of purchasing processes, the latter being the more prominent category. In doing so, authors investigate a variety of different aspects, for instance, process standardization of supplier selection, evaluation, and development (e.g. (Chan et al., 2008); Kusaba et al., 2011; Reuter et al., 2010; Bygballe et al., 2012; Giannakis et al., 2012), decision-making guidelines for country selection (Maltz et al., 2011; Carter et al., 2008), or the availability and form of required information and IT integration ((Bygballe et al., 2012); Mohamad et al., 2009; Sinkovics et al., 2011; Kotabe et al., 2008). Articles also deal with the importance of a more precise planning when sourcing abroad (Mohamad et al., 2009; Wang et al., 2011; Young et al., 2009; Giannakis et al., 2012; Kamann & van Nieulande, 2010), systematic performance tracking ((Mohamad et al., 2009); (Wang et al., 2011)), and risk management (Manuj & Mentzer, 2008; Tsai et al., 2009; Christopher et al., 2011), and the need for precise sourcing cost analysis (Platts & Song, 2010; Weber et al., 2010).

Matters of formalization have received less attention in recent years. Only four articles directly consider the role of *formalization* in the purchasing context ((Gonzalez-Padron et al., 2008); (Hartmann et al., 2008); (Tsai et al., 2009); (Trautmann et al., 2009)). For instance, Gonzalez-Padron et al. (2008) test if autonomy and therewith the absence of formalization in the purchasing process has a positive impact on organizational learning and innovation as well as on the participant's relationship quality and the sourcing process' cycle time. Hartmann et al. (2008) seek to find out whether there is an optimal degree of formalization when sourcing internationally.

This overview on the use of structural dimensions in the context of international purchasing articles reveals some interesting insights: the number of papers focusing in centralization aspects is much lower as expected after the study by Glock and Hochrein (2011). In contrast, involvement and specialization play an important role and the by far most prominent organizational dimension is standardization.

5.5 International Purchasing Success

Ultimately, these strategy and structure options are the determinants of increased performance, which is the major target variable of all sourcing activities. The content analysis of the papers shows that there is much valuable research in each of the strategy and structure categories. However, no author addresses the overall set of identified strategy and structure elements, which means that the comparative importance of the individual elements cannot be evaluated.

According to Murray, Kotabe, & Wildt, 1995), performance be interpreted as strategic (e.g. measured as market share) and financial performance (e.g. return on sales). Previous studies showed that direct retrieval of performance data is not useful owing to the very small respondent group. Therefore, Murray et al. (1995) used these performance indicators in relation to the three largest competitors. They rely on Dawes (1999), who states that there is a high correlation between the respondent's subjective performance perception in relation to the competitors and objective performance. Yet, if international sourcing really leads to an increased economic performance is poorly proved (Gelderman and Semeijn, 2006; Bygballe et al., 2012). The effect of international sourcing on overall firm performance is usually blurred by the variety of its determinants and therewith sometimes hard to measure. International sourcing performance should therefore be considered separately.

In current research papers, this performance measurement often lacks a clear operationalization. Articles that concentrate on other (non-globally) strategic sourcing aspects and their effects on sourcing performance often work on one of the facets involved in the triangle of cost, quality, and time factors (including flexibility and delivery time) (e.g. Carter, Monczka, & Mosconi, 2005; Krause, Pagell, & Curkovic, 2001; González-Benito, 2007, 2010). Of the reviewed papers, only Giannakis et al. (2012), based on Chen and Paulraj (2004), and Ruamsook et al. (2007) use this full classification of performance. We would therefore appreciate a stronger focus on multidimensional sourcing performance measures in future research.

6. Conclusion and Future Research Directions

Building on former literature reviews, we updated the status quo of theory and research in international purchasing by screening the relevant literature and analyzing 39 found papers. We find that, while much progress has been made in the field, theoretical implications and essential insights for practitioners are still lacking.

Authors have identified a lack of structured theory-testing and theory-building in global purchasing research. Current literature reviews on purchasing and supply chain management report that only 10% to 30% of reviewed articles have a theoretical foundation (Chicksand et al., 2012; Glock & Hochrein, 2011). In our review of the literature, 66%

of papers refer to a theory and establish a theoretical foundation for their research objective. Hence, in contrast to others, our analysis points to an upward trend in terms of theory use over time. Nonetheless, 34% of studies do not relate to theory at all or insufficiently link theoretical thinking to their research designs. Where theory is used, the most prominent theories applied derive from competitive approaches (41%), followed by microeconomic and systems theories (13% each). This corresponds approximately to the shares of dominant theories used, as identified in other literature reviews from supply chain management (Defee et al., 2010). However, we cannot identify a true focus on any single theory to be applied to global sourcing studies; the use of business paradigms, as called for by Quintens et al. (2006b), is still scarce. The situation can be characterized by various theoretical streams: Most cited is the resource-based view, including dynamic capabilities, followed by the contingency and cluster approaches. Other prominent theories are transaction cost and network thinking. A further trend that has evolved is that many authors follow an intellectually eclectic approach (Chicksand et al., 2012). Still, our review leads us to conclude that theoretical underpinnings are not satisfactorily applied to empirical research.

Empirical research designs have in the past few years shifted towards more quantitative approaches, and data analysis procedures are becoming more important elements of global sourcing research. Yet these designs do not make use of the full potential offered by modern research procedures. Factor analysis still is the most popular tool, while techniques such as regression analysis and structural equation modeling, which are common in other disciplines, are rarely or never used. However, these more advanced multivariate procedures would enable insights into the complex causal relationships between different facets of global purchasing and global purchasing success.

In terms of research content, former literature reviews outlined three major streams: research on process models, on management and organizational designs, and on motives or drivers of international purchasing. While process models are not often found in the reviewed period, most published papers do study management and organizational designs. This is a promising route, in light of identifying norm strategies to purchasing success. However, future research urgently needs to increase the systematic application and testing of different theoretical streams to purchasing performance in order to contribute to theory-building or to the identification of theories that best apply to the challenges of global sourcing. While more studies are analyzing the performance outcomes of different purchasing decisions, few concentrate on this research question. To disentangle the determinants of purchasing success, studies are needed that systematically analyze the major strategy and structure options that managers can pursue in order to enhance performance.

Our study contributes to this field by developing a framework of the basic strategy and structure dimensions to be incorporated into a research approach that focuses on international purchasing success. In terms of strategy, these are supplier management, sourcing object strategy, location, and time strategy. Regarding structure, aspects of (de-)centralization, configuration, involvement, specialization, standardization, and formalization are the key elements. All these dimensions are represented in the analyzed articles; specialized insights into these single aspects are often provided. Lately, supplier management was the most prominent topic of the strategy dimension, with 44% of articles offering implications on successful supplier management strategies in an international sourcing environment. In contrast, timing strategy is a neglected aspect (8% of studies). In sum, the extent of supplier management topics in relation to topics of other purchasing strategy dimensions is much higher. This can be seen as expression of higher researcher interest and managerial relevance. Nevertheless, it is questionable, if location choice, object, and timing topics really have a lower influence of international purchasing performance. Regarding the structure determinants, most articles (54%) we reviewed deal with standardization aspects, followed by involvement (31%) and specialization (28%). Considering the high research interest, these dimensions can be considered as most influential organizational dimensions on international purchasing performance. The latter three structure aspects – (de-)centralization, formalization, and configuration – play a fairly minor role in current research: Not more than 13% of papers look at these elements. This is in strong contradiction to the use of structural variables in research on purchasing organizations identified by Glock and Hochrein (2011), who reported the highest interest in aspects of (de-)centralization, formalization, and involvement. Due to a lack of a simultaneous examination either of all organizational determinants, or the strategy dimensions, or both, it remains unclear, if the importance and influence on purchasing performance of less considered aspects is really as low as assumed here.

Two important conclusions need to be highlighted from our content analysis: First, even if many articles consider more than one of the presented determinants, a comprehensive approach of all strategy and structure variables is still missing. Second, articles are often very specific in nature. For instance, the papers on supplier management mostly do not investigate the overall supplier management options. In contrast, they focus on individual aspects in the supplier management process, such as supplier selection, evaluation, or supplier (relationship) development.

The implications for future research evolving from the insights gained herein are: First, we encourage authors to make use of the theory-driven framework of strategy and structure determinants of global purchasing. This will lead to a more structured view on the strategic option, a purchasing department is faced to when sourcing internationally. Besides advantages for theory development, this approach allows deriving more profound managerial recommendations. Second, we identify the need to apply more advanced multivariate analysis procedures in global purchasing research that are able to explore and test multiple theoretical causal relationships. Third, authors are encouraged to test more comprehensive theoretical models of the strategy and structure determinants of purchasing performance. Fourth, there is a need to research the impact on specific facets of purchasing success – here we call for the simultaneous incorporation of time, cost, and quality aspects of purchasing performance – in addition to drawing implications for the overall performance outcomes. These might be important steps toward leading international purchasing research in a direction of focusing on actually relevant topics, as well as toward theory-building and maturing purchasing & supply chain research as a scientific discipline.

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Notes

Note 1. Defee, Williams, Randall, and Thomas (2010) analyzed 681 articles, published in *Journal of Business Logistics* (JBL), *Transportation Journal* (TJ), *Journal of Supply Chain Management* (JSCM), *International Journal of Physical Distribution & Logistics Management* (IJPDLM), and *International Journal of Logistics Management* (IJLM). Only 364 of 683 articles (53.3%) are theory-based.

Note 2. Microeconomic theories comprise, for instance, transaction cost economics, resource dependence theory, agency theory, game theory, principal-agent theory, fuzzy set theory, and utility theory. Competitive theories involve approaches such as the RBV, Porter's framework, contingency theory, core competency, the knowledge-based view, the relational view, dynamic capabilities, resource advantage theory, supply chain orientation, structure-conduct-performance, the natural resource-based view, strategy-structure-performance, and competitive advantage. Systems theories include, for instance, the bullwhip effect, general system theory, risk management, network theory, and total cost of ownership. Social exchange approaches involve social exchange theory, social network theory, social capital, and balance theory (Defee et al, 2010).