Managing distance in international purchasing and supply: a systematic review of literature from the resource-based view perspective

Abstract

The aim of this research is to find out how the extant literature on international purchasing and supply management (PSM) covers the elements of capability from the perspective of distance. *A priori*, we form a framework of capability driving elements and conclude that distance—in its multiple dimensions—is the fundamental management aspect in international PSM. Equipped with analytical frameworks and a bottom–up process for identifying emergent themes, a systematic literature review was conducted on a representative sample of scholarly literature on international PSM, using the NVivo analysis software and a data display as tools. We identify several capability relevant themes from the literature, and provide a distance-based *a posteriori* conceptualisation of international PSM, founded in the information processing theory, with the source-user, user-user and source-source distance types driving the information processing requirements, and loading avoidance, policy-based and enhancement mechanisms determining the information processing capacity.

Keywords: international purchasing, global sourcing, distance, systematic literature review, capability, information processing theory

1. Introduction

Compelling theoretical argumentation has been presented in support of the contribution of purchasing and supply management (PSM) to the competitive advantage of firms (e.g. Barney, 2012). These resource-based view (RBV; e.g. Wernerfelt, 1984; Peteraf, 1993) - grounded perspectives focus on the building and maintaining of heterogeneous PSM capabilities, which should be valuable, rare, inimitable and not easily substitutable (Barney, 1991). Indeed, whether PSM is strategic or not, has been argued to be associated with the function's ability to develop superior capabilities (van Weele & van Raaij, 2014).

According to Peng et al. (2008), informing the strategic task of capability development, requires focusing on the constituent elements of capabilities, such as the dynamic and operational capability components (Helfat & Winter, 2011), as well as their underlying routines (or practices; Wu et al., 2010) and resources (Grant, 1991). We also take an element-level focus in this paper, concentrating our inquiry on the specific capability of managing purchasing and supply in the international context, plagued by various kinds of distances (e.g. Zaheer et al., 2012).

Research focusing on international PSM is timely, as the practice in this area is significant and growing due to the substantial cost, quality and technology related benefits that remain to be achieved through supply from international markets (e.g. Swamidass, 1993; Bozarth et al., 1998; Schiele et al., 2011; Beall et al., 2015). However, the seemingly mature body of literature on the subject also describes several barriers and challenges that are associated with achieving successful international supply, such as unexpected costs, delays and complexities, for example due to geographic and cultural distances (Quintens et al., 2006; Holweg et al., 2011; Subramanian et al., 2015), as well as some remedies for these challenges, such as the international purchasing offices (Jia et al., 2014a; Sartor et al., 2015). Despite these efforts, the international purchasing and supply management (IPSM) literature

seems to lack a theory-based and a unifying conceptualisation, which would focus on managing the inherent distance, and thus on understanding of IPSM from capability perspective. Thus, there are both strong theoretical and practical motivations for synthesising the current state-of-the-art.

We examine the sizeable body of extant research that has been conducted on the topic by means of a systematic literature review (e.g. Tranfield et al., 2003; Denyer & Neely 2004). Our research question is as follows: How does the extant literature on IPSM cover capabilities, routines and resources, particularly from the point of view of managing the inherent distance in IPSM? By answering this research question we aim to understand the types and roles of the capability components as they have appeared in the literature, and the links between these components. We also seek to strengthen the theoretical foundations of this field by providing a distance-based conceptualisation of IPSM, and to contribute to the practical problem of building superior capabilities for IPSM, enabled by the dynamic capability component in the system (Teece et al., 1997; Zollo & Winter, 2002). These aims differentiate the study from previous literature reviews on the topic, such as Quintens et al. (2006), in which the antecedents, consequences and stage models of global purchasing are discussed; Sartor et al. (2014), which is focused on international purchasing offices; and Jia et al. (2016), which suggests an integrated conceptual framework of global sourcing strategy and structure.

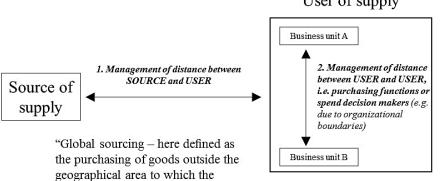
The article is structured as follows. In the following second section, we define and discuss the central constructs of the study, namely PSM, international management as well as capability and its component and underlying elements. The third section describes the methodology of the research, i.e. our procedures for conducting a systematic literature review. The fourth section discusses the IPSM literature from the resource-based view

perspective. Conclusions, which culminate on the proposal of a new distance-based conceptualisation of IPSM, and discussion of further research, bring the article to a close.

2. Key concepts and frameworks

According to van Weele and van Raaij (2014, p. 57), 'PSM is the discipline that is concerned with the management of external resources – goods, services, capabilities, and knowledge – that are necessary for running, maintaining, and managing the primary and support processes of a firm at the most favourable conditions' (see also Van Weele, 2010). Indeed, while many still argue that the main task of PSM lies in leveraging power to achieve cost savings, the literature recognises that the practice of PSM should be moving towards broader value contribution (e.g. Presutti, 2003) and the ideal of managing external resources, which involves, for example, finding the best available external resources that can contribute to the value delivery of the firm (Tanskanen et al., 2014). Broad value contribution should also be at the heart of the motivation for internationalizing purchasing and supply, to which Schiele (2007) refers to as the 'extension of the supplier base' or 'introducing new sources, usually global sourcing effort', meaning 'international sourcing' (Schiele et al., 2011).

In our attempt to understand the factors that determine the IPSM success or failure of firms (cf. Peng, 2004), we benefit from the suggestion that 'international management is the management of distance' (Zaheer et al., 2012), which has several dimensions, such as the cultural and the geographic (Berry et al., 2010). The essence of IPSM capability may thus be inferred to be about the management of distance, at least in two respects (Trent & Monczka, 2003a; Golini & Kalchschmidt, 2011; see Figure 1). First, the international, global, cross-border or offshored nature of supply, in which the source and the user become separated by distance, may, on the one hand, imply several benefits for firms, such as lower cost, higher quality and innovation (Schiele, 2007; Swamidass, 1993; Bozarth et al., 1998). However, on the other hand, reduced supply chain agility (Prater et al., 2001) as well as dynamic and hidden costs to the firm (Holweg et al., 2011) plague firms that have such distant supply sources. Second, in multinational corporations (MNC), spend decision making, which is separated by distance due to organizational boundaries between business units, subsidiaries and functions, may be challenging to coordinate for sourcing synergies, which are also the essential targets for global sourcing efforts (Rozemeijer et al., 2003). For example, such loss of synergy may be due to the different context driven specifications of essentially similar items or services across country subsidiaries (Smart and Dudas, 2007), resulting in the inability to pool orders for market power and quantity discounts globally. Thus, the international aspect of PSM suggests a need for distinct capabilities regarding the management of distance (see Zaheer et al., 2012), for example, between the source and the user (see e.g. Golini & Kalchschmidt, 2011), as well as between a user and another user (Figure 1), i.e. the purchasing functions or budget holders for spend in the business units of an MNC (e.g. Trent & Monczka, 2005; 2003a). In this research, we therefore propose that the component and underlying elements of the IPSM capability of a firm relate to the need to address and manage distance between both the source and the user, as well as the user and another user, giving rise to our *a priori* model of IPSM.



company belongs." (Golini & Kalchschmidt, 2011, p. 86)

User of supply

"Integration and coordination of global sourcing strategies across worldwide buying locations and other functional groups." (Trent & Monczka, 2003, p. 29)

Figure 1 Distance as a fundamental aspect in IPSM (*a priori* model of IPSM)

In order to understand how distance in IPSM should be managed, or what kind of resources, routines or capabilities are required for the task, we need to examine the concept of distance in more detail. In addition to the obvious starting point, i.e. the geographical distance, influential research has introduced concepts such as 'psychic distance' (e.g. Johanson & Vahlne, 1977) and the somewhat related 'cultural distance' (Kogut & Singh, 1988). 'Institutional voids' in e.g. emerging markets also drive the difference or distance between locations and countries in terms of institutions such as markets, regulations and legal systems (Khanna & Palepu, 1997). Much of the subsequent research has made 'ritual cites' on these foundational works or given only a minor role to the concept of distance in the research design and not aimed at improving the theoretical understanding of the concept (see Ambos & Håkanson, 2014). However, exceptions include Shenkar's (2001) critique, as well as the commentary by Zaheer et al. (2012) and the proposal of a multidimensional measure for 'cross-national distance' by Berry et al. (2010). The dimensions of this aggregate measure include economic, financial, political, administrative, cultural, demographic, knowledge and global connectedness as well as geographic distance (Berry et al. 2010).

In the extant IPSM literature, the explicit examination of distance is often limited to the geographic dimension and to the separation of source and user, considering for example implication to JIT manufacturing, transport costs and the management of relationships (e.g. Vickery, 1989; Tyworth & Ruiz-Torres, 2000; Rao, 2004). More recently, also the sustainability of international food sourcing has been examined from the perspective of emissions (Coley et al., 2011). Salmi (2006), however, recognises the key role of distance in IPSM more broadly, as she suggests that in the context of managing relationships with international suppliers, 'several distances' need to be overcome, particularly cultural and psychic distances.

Understanding the distance between user and user, or between purchasing functions or spend decision makers in an MNC, requires additional dimensions that arise due to organizational boundaries. Espinosa et al. (2003) suggest measures for team boundary variables, namely geographic, functional, temporal, identity and organizational. The high level of such boundaries may in the IPSM context imply missed opportunities for purchasing synergy in multiunit and multinational corporations due to for example lack of coordination (Faes et al., 2000; Trautmann et al., 2009a; Trautmann et al., 2009b), different national specifications (Smart & Dudas, 2007), or even non-compliance (Karjalainen et al., 2009).

Combined with the distance measures by Berry et al. (2010), the organizational boundary dimensions of Espinosa et al. (2003) complete the picture for analysing the distance between purchasing teams or spend decision-makers in an MNC. Table 1 defines the discussed dimensions of distance (also due to organizational boundaries), and provides a framework for analysing the literature from the perspective of international distance in its full variety. In essence, we examine which dimensions of distance are addressed and how the literature informs the capability to manage each dimension.

Table 1Dimensions of distance (Berry et al., 2010; Espinosa et al., 2003)

Dimension	Definition
Economic	Differences in economic development and macroeconomic characteristics (Berry et al., 2010; e.g. low-cost
	countries)
Financial	Differences in financial sector development (Berry et al., 2010; also payment terms)
Political	Differences in political stability, democracy and trade bloc membership (Berry et al. 2010; also customs
	procedures, tariffs etc.)
Administrative	Differences in colonial ties, language, religion and legal system (Berry et al., 2010)
Cultural	Differences in attitudes toward authority, trust, individuality and the importance of work and family (Berry et
	al., 2010)
Demographic	Differences in demographic characteristics (Berry et al., 2010)
Knowledge	Differences in patents and scientific production (Berry et al., 2010)
Connectedness	Differences in tourism and Internet use (Berry et al., 2010; also communications and transport infrastructure)
Geographic	Great circle distance between the geographic center of each country (Berry et al., 2010; e.g. lead times, transport
	costs)

	'Geographic boundaries are present in a team when some of its members are separated by distance' (Espinosa et al., 2003, p. 161).
Functional	'Functional boundaries are present when more than one area of functional expertise is represented on a team, such as marketing, engineering, and manufacturing' (Espinosa et al., 2003, p. 165).
Temporal	'Temporal boundaries are present in a team when some of its members are separated by time because of differences in working hours, time zones, or working rhythms that reduce the time available for same-time (i.e., synchronous) interaction' (Espinosa et al., 2003, p. 170).
Identity	'Identity boundaries are present when some members of a team are not fully dedicated to the team, either because they are working on multiple projects with multiple teams or because their teams are nested within larger teams' (Espinosa et al., 2003, p. 174).
Organizational	'Organizational boundaries are present in a team when its members belong to more than one organization' (Espinosa et al., 2003, p. 178).

In order to meet our aim of informing the task of IPSM capability building, a focus on the component and underlying elements of capabilities is needed. Therefore, we base the development of our analytical framework on the work of Peng et al. (2008) and Wu et al. (2010), who suggest a hierarchy of elements that make up an organizational capability for sustainable competitive advantage, based on the established literature (e.g. Dierickx & Cool, 1989; Grant, 1991; Amit & Schoemaker, 1993; Teece et al., 1997; Eisenhardt & Martin, 2000; Zollo & Winter, 2002; see Table 2). This perspective also advocates the definition and operationalization of 'capabilities as bundles of interrelated yet distinct routines' (Peng et al., 2008, p. 731; e.g. Zollo & Winter, 2002), or 'operational practices' in the words of Wu et al. (2010). In more specific terms, bundles of 'operating routines' or patterns of activities for the purpose of generating current revenue and profit, make up the 'operational capabilities' for basic performance, whereas bundles of 'search routines' bring about change or develop new operating routines (Peng et al., 2008; Wu et al., 2010), and make up the dynamic capabilities for the alteration, reconfiguration and the evolution of routines for organizational improvement and renewal (e.g. Teece et al., 1997; see Table 2 for further definitions and references). The starting point of the capability anatomy is comprised of bundles of resources of various kinds (e.g. Grant, 1991).

Table 2Definitions and operationalisations for capabilities, routines and resources

(adapted from Peng et al., 2008; emphasis by authors in bold)

Constructs	Definitions	Operationalizations
Resources	Peng et al. (2008): stocks of available factors that are owned by the firm (Amit & Schoemaker, 1993); stocks of knowledge, physical assets, human capital, and other tangible and intangible factors (Capron & Hulland, 1999); asset stocks, i.e. what a firm has (Dierickx & Cool, 1989). Resources as nouns: financial, physical, human, technological, reputation and organizational resources (Grant, 1991). Relational capital (Kale et al., 2000, p. 218).	E.g. financial assets, stocks, facilities, equipment, information systems, employees, teams, reputation, image, knowledge, mutual trust and respect between partners.
Routines	 "Routines are organizational processes that utilize clusters of resources to achieve desired outcomes" (Grant, 1991; Teece et al., 1997) (see Peng et al., 2008, p. 732). "Routines are broadly defined as regular and predictable patterns of behaviours or the way work is done They encompass both standard operating procedures and patterns of behaviours not explicitly guided by written rules and policies" (Peng et al., 2008). Operating routines: "[The] execution of procedures for the purpose of generating current revenue and profit" vs. Search routines: "execution of procedures that bring about desirable changes in the existing set of operating routines or developing new ones" (Peng et al., 2008, p. 731). 	 Operating routines: e.g. (1) tasks in a purchasing process: define specifications, select supplier, contract agreement, ordering, expediting, evaluation (van Weele, 2010); (2) primary tasks in PSM: secure availability of supply task, spend management task, risk management task, new product development contribution (van Weele, 2010), supply market research. Search routines: e.g. (1) continuous improvement, process management, leadership involvement in quality (Peng et al., 2008); (2) search for new technologies, process development, cross-functional product development (Peng et al., 2008); supplier development.
Capabilities	 "[C]apabilities are described as high-level routines or bundles of routines (Collis, 1994; Winter, 2003; Zollo & Winter, 2002)" (see Peng et al., 2008, p. 732). "A capability is the strength or proficiency of a bundle of interrelated routines for performing specific tasks" (Peng et al., 2008, p. 734). "Operational capabilities are firm-specific sets of skills, processes, and routines, that are regularly used in solving its problems through configuring its operational resources" (Wu et al., 2010, p. 726). "Capabilities can be broadly categorized into those that reflect the ability to perform [1] basic functional activities of the firm and [2] those that guide the improvement and renewal of the existing activities" (Peng et al., 2008, p. 734). Peng et al. (2008, p. 731); dynamic capabilities are organizational routines by which managers alter their resource-base 	 Operational capabilities in IPSM: Management of the international separation of source and user. This separation may be economic, financial, political, administrative, cultural, demographic, knowledge, connectedness, geographic (Berry et al., 2010) and temporal (Espinosa et al., 2003) distance. Management of the international separation of purchasing and spend – separation can be economic, financial, political, administrative, cultural, demographic, knowledge, connectedness, geographic (Berry et al., 2010), functional, temporal, identity, organizational (Espinosa et al., 2003). Dynamic capabilities (Peng et al., 2008; Wu et al., 2003). Improvement capability (exploitation): "Differentiated sets of skills, processes, and routines for incrementally refining and

(Eisenhardt & Martin, 2000); the ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments (Teece et al., 1997); a set of routines guiding the evolution of a firm's resource configuration (Zollo & Winter, 2002). reinforcing existing operations processes" (Wu et al., 2010, p. 731).
Innovation capability (exploration): "Differentiated sets of skills, processes, and routines for radically improving existing operations processes or creating and implementing new and unique operations processes" (Wu et al., 2010, p. 731).

Table 2 serves as a framework for analysing the literature and therefore includes operationalisations that are fairly straightforward for resources, but require some adaptation for the PSM context in terms of routines and capabilities. For operating routines, we rely on the basic tasks of the purchasing process as well as the primary tasks in PSM (van Weele, 2010) in operationalizing this construct. Regarding search routines, we rely on Peng et al. (2008) for those that are shared by PSM and operations management, but additionally augment the set with improvement and change-oriented elements that are PSM specific, such as supplier development.

In operationalizing the operational capabilities of IPSM, we draw on the earlier identified fundamental aspects of IPSM (Figure 1), which mainly result from the need to manage distance (Table 2). In our analysis, an operational capability might be about the management of geographic, administrative or temporal distance between spend decision makers in an MNC, or about the management of geographic or cultural distance between the source and the user. In order to operationalize dynamic capabilities (Eisenhardt & Martin, 2000; Teece et al., 1997), we again draw on the work of Wu et al. (2010), and identify exploitation oriented 'improvement capability' in the PSM function on one hand, and exploration oriented 'innovation capability' on the other hand.

3. Method

Our systematic literature review is conducted according to the guidelines suggested by Tranfield et al. (2003), and further elaborated on by Denyer and Neely (2004) as well as Jones and Gatrell (2014). In the following, for the purpose of review reproducibility, we describe the systematic literature review process in detail, which is similar to that of Nolan and Garavan (2016; see also Jones & Gatrell, 2014).

3.1 Initial sampling

First, we set the conceptual boundaries of the review by limiting our study to the international aspect of PSM, relying on the definitions given above. In summary, if something being international involves distance, then the essential management task becomes the management of the various dimensions of it (Zaheer et al., 2012; Espinosa et al., 2003). Based on an initial scoping review of several relevant studies (similarly to Turner et al., 2013; conducted in the framework of an earlier and more limited version of the current study), we concluded that operationalizing the key constructs with a limited number of search terms would allow us to capture a sample that would most likely cover the intended population of articles to a high degree and to a representative manner. First, as 'international' is a widely used term, it is an obvious starting point and was included as a search term. Second, we included 'global' as the second term for covering the international dimension because several studies attach themselves explicitly to the domain of 'global sourcing' and because influential studies conceptually differentiate 'international purchasing' from 'global sourcing' (Trent & Monczka, 2003a; Trent & Monczka, 2003b). The PSM dimension was covered with terms that appear to be used liberally to cover the various aspects of PSM; however, retaining their special meanings as well (e.g. van Weele, 2010), i.e. purchasing, sourcing and procurement. We deliberately did not include the terms 'supply chain' or 'supply chain management' as

these involve 'a broader perspective than PSM' (van Weele & van Raaij, 2014, p. 57) and would thus distract from the focus of the review.

In order to conduct a comprehensive search for all potentially relevant articles, we relied on combinations of the earlier suggested operationalisations for search terms, such as phrases like 'international procurement', 'global purchasing' or 'international sourcing' (see search strings below). We conducted the search within two prominent databases for scientific articles, namely ProQuest and Scopus, and together these make up our sampling frame. It is proposed that together these databases comprehensively cover the population of scholarly articles independent of the publisher and for this reason they appear to have been used as sampling frames in several prior reviews (e.g. Pillai et al., 2015; Nolan et al., 2016). The time period covered by ProQuest starts from 1963, whereas Scopus allowed coverage from 1966, allowing us to sample practically the entire body of scientific literature on IPSM, at least in the form that is accepted today as the standard, i.e. the peer-reviewed journal article.

We also set other criteria for the initial sampling of articles for our review. First, we focused our search on the key phrases of the article elements that are generally perceived to describe the essence and main focus of a scholarly article, i.e. the title, abstract and keywords (these were used in Scopus; in ProQuest search targeted 'anywhere except full text'). This allowed us to capture the relevant articles better than with a search for these potentially commonly occurring phrases in the main body of text. We also focused only on scholarly and peer-reviewed articles (similarly to e.g. Nolan et al., 2016; Fayezi et al., 2016), as our intention is to appraise the state-of-the-art, and draw on the evidence-based body of literature (Jones & Gatrell, 2014). For the initial sample, we limited our search for articles published in English, and in terms of discipline, we further limited the search to cover 'business, management and accounting' and 'social sciences' in Scopus. This sampling

procedure resulted in 376 articles from Scopus¹ and 174 articles from ProQuest², i.e. 550 in total.

3.2 Screening for the final sample

In order to ensure quality and relevance of the initial sample, we first checked for duplicates in the initial sample, produced by the two databases, with RefWorks and manual screening. As a result of this duplicate-related screening step, 69 articles were deleted from the sample, leaving us with 481 articles.

Several exclusion criteria were applied in order to conduct quality-related screening of the articles in the initial sample. In this second screening step, we manually screened out those articles that were published in journals without an impact factor, i.e. in journals not listed in the Thomson Reuters Journal Citation Reports. This resulted in us discarding further 134 articles from the sample (sample at 347 articles). Other authors similarly control for quality and the impact of the reviewed work, such as in Turner et al. (2013) and Nolan and Garavan (2016); however, without actually screening.

As the third screening step, we retained only original research articles, by manually screening out systematic literature reviews, errata, book reviews, special issue editorials, debate papers, teaching cases, re-publications and industry and practice notes. Further, we retained only those articles with a primary focus on the international aspect of purchasing and supply (evaluation based on abstract). For example, an article with a phrase

¹ Scopus search string: TITLE-ABS-KEY("global sourcing") OR TITLE-ABS-KEY("global procurement") OR TITLE-ABS-KEY ("global purchasing") OR TITLE-ABS-KEY("international sourcing") OR TITLE-ABS-KEY("international procurement") OR TITLE-ABS-KEY("international purchasing") AND (LIMIT-TO (SRCTYPE,"j ")) AND (LIMIT-TO (SUBJAREA,"BUSI ") OR LIMIT-TO (SUBJAREA,"SOCI ")) AND (LIMIT-TO (LANGUAGE,"English "))

² ProQuest search string: ALL("global sourcing") OR ALL("global procurement") OR ALL("global purchasing") OR ALL("international sourcing") OR ALL("international procurement") OR ALL("international purchasing"); limited to full text, peer reviewed, scholarly journals, articles, English

'international purchasing power parity comparison' appearing in the abstract was discarded. This relevance-related screening step resulted in the discarding of a further 77 articles. Therefore, as a result of the three-step screening process, our final sample consisted of 270 articles (a full list is available online as supporting information).

Observing the final sample articles in terms of the year of publication, Figure 2 shows a positive trend and a few recent peak years. Undoubtedly, there has been an increasing interest in the topic; however, the underlying megatrends, such as an increase in publishing pressure and the launches of new journals, most likely play a role as well. Figure 2 also shows that our final sample covers the period from 1987 to 2016, with 2016 being incomplete because the sample was collected in the spring of that year.

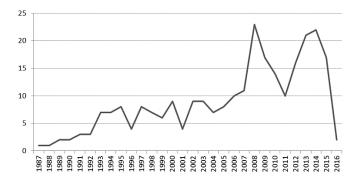


Figure 2 Number of sample articles according to the year of publication

3.3 Analysis procedures

In the analysis and synthesis phase of our review, we used the NVivo software to manage and analyse the sample articles. We assigned each article several 'codes,' allowing us to profile the article in terms of its focus and content. First, using the analytical *a priori* frameworks introduced above (Tables 1 and 2), the articles were analysed and 'coded' in terms of whether they informed IPSM in terms of various resources, routines and/or capabilities.

Second, we followed a process for determining any emergent themes in the literature. In this process, each article was analysed in order to determine one or two detail-level codes describing the essential content of the article. In this process, we asked the following questions: What is the context of the study? What are the key variables of the study? What kinds of causalities or variable associations are studied? What kinds of phenomena or trends are elaborated on? What kinds of practices or behaviours are described? What kind of tools or decision frameworks are developed or have had their use demonstrated? Depending on the nature of each article, some questions were more relevant than others in teasing out the essence of each article into a code. This phase in the NVivo-enabled process resulted in 304 individual codes, or in other words, detail-level themes.

The research team then grouped the resulting detail-level themes into 2^{nd} order themes by iteratively forming 56 groups or clusters of the detail-level themes with commonalities and common denominators. These 2^{nd} order themes were then similarly grouped into twelve 3^{rd} order themes, enabling us to form a hierarchy of themes that emerged from the IPSM literature. Building this hierarchy in the NVivo platform allowed the authors to examine the articles allocated under each theme (or code), and revisit them for content and focus. The software also made it possible to run queries in the form of cross-tabulating the sample, for example according to the *a priori* framework-based codes and the emergent theme-based codes. This facilitated the further analysis of the general patterns but also the easy revisiting of articles pertaining to a certain thematic area. The output from this process serves as the foundation for the subsequent analysis and synthesis of the literature because it allows the selection of themes for more detailed discussion.

4. IPSM literature from the resource-based view perspective

4.1 Overview of the literature

Our analysis of the sample articles from the capability perspective is facilitated by a crosstabulation of the literature in a data display, which is defined by themes emerging from the literature on the y-axis and the *a priori* determined capability elements on the x-axis (Table 3). The data display is populated by the frequencies of the articles in each cell. We present the table in a 'heat map' or 'shading matrix' format for effectively displaying data (Wilkinson & Friendly, 2009), where the highest frequencies are assigned the darkest shade of grey.

The emergent themes on the y-axis reflect the content of the sample literature, with the row frequencies on the right hand side indicating dominance at the second-order level (Table 3). Dominant second-order themes appear to be for example developing, emerging or low-cost countries (LCC) (row 8), barriers, challenges and constraints of international sourcing (row 11), supplier relationship management (row 30), the management of integrated global sourcing (row 47), as well as supplier selection (row 31). At the thirdorder level, the following twelve themes are identified: (1) business process outsourcing (BPO) and service sourcing, (2) IPSM patterns and tendencies (e.g. geography and internationalization), (3) the causal chain of IPSM (i.e. related antecedents, outcomes, moderators), (4) decisions in IPSM, (5) culture in IPSM, (6) international supply base (SB) management, (7) risk in IPSM, (8) logistics of IPSM, (9) technology solutions in IPSM, (10) organization for IPSM, (11) sustainability and IPSM, and finally, (12) wider impact of IPSM (incl. industry and societal perspectives).

The capability elements on the x-axis are drawn from Tables 1 and 2. First, improvement and innovation make up the dynamic capability for IPSM. Second, operational capability coverage by the sample articles is differentiated by the management of various dimensions of distance. Third, routines are differentiated as either search or operational, and

fourth, discussion of resources relevant for IPSM may fall into nine different types. Linking the various capability, routine and resource aspects on the x-axis to each other, and the selected emergent themes on the y-axis, makes it possible to identify the bundles of key capabilities, routines and resources for IPSM from the perspective of the literature.

Despite being based on an pre-defined analytical framework, some elements of operational capability emerged from the sample literature. In terms of the distance between source and user, a new dimension of 'professional' was added (column 28). Grote and Täube (2007, p. 64) suggest that the level of several types of proximities, such as cultural, organizational, spatial and professional, has an impact on whether outsourcing and offshoring is expedient. Professional proximity is defined as a state where actors 'possess an understanding of each other's methods, practices and aims, share similar interests, and professional language'. If professional proximity is high, business processes may be successfully outsource-offshored as it provides a common framework and simplifies knowledge exchange in complex service sourcing across borders. Furthermore, another novel dimension of distance is suggested by Mahnke et al. (2008), namely 'cognitive distance' (column 29), or 'differences in relative skill levels that might prohibit successful communication and common understanding between client and vendor' (Mahnke et al., 2008, p. 22).

Furthermore, we identified an altogether new type of distance relevant for IPSM: the distance between a source and another source, i.e. between suppliers or sourcing areas. Here 'supply chain density' is suggested to connote 'the geographical spacing of nodes within a supply chain', and to serve as a determinant of the severity of supply disruptions (Craighead et al., 2007, p. 139). Density in the supply base should be taken into consideration in international supplier selection decisions by spacing suppliers in a way that mitigates the effects of disruptions that have an impact in a geographic area (Deane et al., 2009). In terms

of the economic distance between source and source, Gutierrez and Kouvelis (1995) point out the benefits of having suppliers in various currency areas or countries, because diversification results in hedging power against real exchange rate changes in the international environment.

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BPO & service	1 BPO and service sourcing outcomes	1	0	0	0	0 0	0 0	0	0	0		0	0 0		0			1 3	3 0	2	0	1	0	0	0	1	0	0	1	eç 3	1	0	0	1	0 () 1	0	0	16
sourcing	2 BPO provider capabilities	0	0	0	-	0 0		0	0	0	0		0 0		0	0		0 0				0	0	0	0				0	3	0	0	1	0	1 (0	0	5
IPSM patterns	3 Internal sourcing in MNCs	ŏ	õ	Ő	õ	0 (0 0	Ő	õ	0	õ	0	0 0	0 0	0	0	,	0 1	0	4	ŏ	0	0	0	0	-	-		0	3	0	Ő	0	0	0 0	5 0	0	Ő	Ő	12
& tendencies	4 International PSM practices	0	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0		2 2	2 3	5	3	0	0	0	0	2	0	0	0	5	1	0	0	1	0 (0 0	0	0	0	24
	5 International sourcing as strategy	0	1	0	0	0 (0 0	0	0	0	0	1	0 0	0 0	0	0		0 0) ()) 1	0	0	0	0	0	2	0	0	0	2	1	0	1	0	0 () C	0	0	0	9
	6 Internationalization of supply	0	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0		2 2	2 3	4	1	0	0	0	0	1	0	0	0	3	1	1	1	2	0 (0 0	0	0	0	21
	7 Comparison of countries and regions	0	0	0	0	0 (00	0	0	0	0	0	0 0	0 0	0	0	_	0 1	1	4	1	2	0	0	0	-	-	0	1	3	0	0	1	0	0 (0 0	0	0	0	14
	8 Developing, emerging or low-cost countries	1	1	0	0	0 (00	0	0	0	0	0	0 0	0 0	0	0		10 1	4 12		11	3	0	1	1	-	-			13	3	-1	3	4	1 (0 0	0	2		93
	9 Geography of international PSM	0	0 0	0	0		0 0	0	0	0	0	0	0 0	5 0	0	0		1 3		25 1		0	0	0	1		-	-	0	2	0	0	0	1	0 0) () (0	0	17 3
Causal chain	10 Geography of service offshoring-outsourcing 11 Barriers, challenges, constraints for int'l sourcing	0	1	0	0		0 0	0	0	0	0	0			0	0		7 9	6		10	1	0	0	0		•			φ 6			2	4	1 0		2	0	0	69
of IPSM	12 Determinants of outsourcing-offshoring patterns	0	0	0	0	0 0	0 0 0	0	0	0	0	0	0 0	, 0 1 0	0	0		1 0			0	6	-0-	0	ň.	<u> </u>	-		3 L 0	0	0	4	0	4	0 0) () (2	0	0	15
	13 Enablers of international sourcing	0	0	õ	õ	0 0	0 0	ő	õ	õ	õ	õ	1 (5 0	0	0		2 2				0	0	0	0				0	2	0	0	2	1	0	3 0	-	1	0	20
	14 General determinants of international sourcing	Ő	0	0	0	0 (0 0	0	0	0	0	0	0 0	- 0 0	0	0		0 1	1	1		0	0	0	0				0	0	0	0	0	0	0 0	5 0		0	0	5
	15 Motives and drivers for international supply	0	1	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	1		3 3	5	4	5	0	0	0	2	1	0	0	0	6	1	0	0	1	1 () C	1	0	0	35
	16 Outcomes of international PSM	0	5	0	0	0 (0 0	0	0	0	0	1	0 0	0 0	0	0)	1 1	2	4	1	0	0	0	1	3	0	0	0	3	1	1	0	2	2	1 0	1	0	1	31
Decisions	17 Assessment of total cost in international sourcing	0	9	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0		4 4	1 7	8	7	-2	0	0	0	1	0	0	1	9	0	0	0	0	0 (0 0	0	0	0	43
in IPSM	18 Balance of domestic and international sourcing	0	•	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0		0 1	1	2		0	0	0	0			0		2	0	0	0	1	0 (0 0	0	0	0	10
	19 Behavioural biases in decision making	1	9	0	0	0 (0 0	0	0	0	0	0	1 (0 0	0	0)	1 3			3	0	0	0	0	0			0	8	2	0	1	1	0 (0 0	0	0	0	27
	20 Decision frameworks and processes for int'l sourcing	0	9	0	0	0 (0 0	0	0	0	0	1	0 0	0 0	0	1		1 1	3		3	0	0	0	1	0	-		0	6	1	0	0	2	0 () C	0	0	0	24
	21 Item and service selection (assessment) for int'l sourcing	0	9	0	0	0 (00	0	0	0	0	0	0 0	0 0	0	0		0 0		-		1	0	0	0				0	2	0	0	0	0	0 (0 0	-	0	0	7
0.4	22 Offshoring-outsourcing decisions and implications	0	g	0	0	0 0	0 0	0	0	0	0	0	0 0	0 0	0	0		2 3		4	2	1	0	0	0	3	•	-	0	3	0	0	0	1	0 0	0 0			0	21
Culture in IPSM	23 Cross-cultural issues and implications in int'l sourcing 24 Role of Guanxi in sourcing from China	0	9	0	0		0 0	0	0	0	0	0	0 0	5 0	0	0		1 E		0	1	0	0	0	0	0	0	0	0	5 2	0	0	0	1	0 0		2	0	0	15 4
International	25 Contract negotiation	0	Å.	0	0		0 0	0	0	0	0	1			0	0		1 1		1	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1 0		0	0	8
supply base	26 Diversification and dispersion of supply base	0	Å	0	0	0 0	0 0	0	0	0	0	0	0 0	5 0 1 0	0	0		0 0		1	0	0	0	0	0	0	•	•	0	0	1	0	1	1	0 0		0	0	0	4
	27 Intermediaries in international sourcing	ŏ	ď	Ő	õ	0 (0 0	Ő	õ	0	õ	0	0 0	0 0	0	0	,	0 3	3 0	0	ŏ	0	0	0	õ	-	- -	_	0	4	0	Ő	0	1	0 0	5 0	0	Ő	Ő	10
	28 Int'l knowledge transfer or sourcing for innovation	0	5	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0		1 0) 0	1	1	0	0	0	4	1			0	1	5	0	1	4	0 () C	0	0	1	25
	29 Supplier development and upgrading	1	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0)	0 0	2	! 1	0	0	0	0	1	0	0	0	0	2	2	0	0	0	0 (0 0	0	1	0	10
	30 Supplier relationship management	1	0	0	0	0 (0 0	0	0	0	0	1	1 (0 C	0	0		3 8	3 4	7	5	0	0	0	1	2	0	0	1	14	2	-0	0	3	1	1 0	5	0	1	61
	31 Supplier selection	0	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	1		2 2	2 7	6	7	1	0	2	0	0	-	-	1	15	1	0	1	1	0 0	0 0	-	1	0	48
	32 Supply network development and management	1	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0)	0 1	2		1	0	0	0	0	1			0	3	3	0	0	0	0	1 0	0	0	0	15
Risk in IPSM	33 Determinants of supply disruption severity	0	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	2		1 0	_			0	0	0	0				0	2	0	0	0	0	0 () C	0	0	0	6
	34 FOREX risk management	0	0	0	0	0 (00	0	0	0	0	1 1	0 0	0 0	1	0		0 0		0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0 (0 0	0	0	0	20
	35 Risk implications of international sourcing	0	1	0	0	0 0	0 0	0	0	0	0	0	0 0	5 0	0	0		1 2		•			-0-	0	0	1	0	0		4	1	1	0	1	0 0		0	0	0	17
Legistics	36 Supply risk management approaches	0	0	0	0		0 0	0	0	0	0	0	0 0	5 0	0	0		4 4 0 0				0	0 0	0 0	0				0	13 7	2	1	0	0	0 0			0	0	36 18
Logistics of IPSM	37 Inventory management in global sourcing context 38 JIT in international sourcing context	0	0	0	0	0 0		0	0	0	0	0) ()) ()	0	0		0 1	1	4	-	2	-0	0	0	0	0	0 0	1	5	1	0	0	1	0 0		1	0	0	19
	39 Transportation and logistics management for int'l sourcing	ŏ	ő	ő	õ	0 0	0 0	ŏ	õ	ŏ	ŏ	0	0 0	5 0	ő	Ő		1 1	0		0	1	0	Ő	õ	0	0	0	0	7	0	ő	1	1	0	1 1	0	ŏ	Ő	20
Technology	40 MNC's implementation of a global procurement platform	0	0	0	1	0	1 0	1	0	0	0	0	0 0	0 0	0	0		0 0) 0	0	0	0	0	0	0				0	1	0	0	0	0	0	1 0	0	0	0	5
solutions in	41 Process and savings potential of IT-enabled GTM	0	0	0	0	0 0	0 0	0	0	0	0	0	0 0	0 0	0	0)	0 0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1 0	0	0	0	3
IPSM	42 Use and implications of e-auctions in int'l sourcing	0	0	0	0	0 (0 0	0	0	0	0	1	0 0	0 0	0	0)	0 0	0	1	0	0	0	0	0	0	0		0	2	0	0	0	0	0 2	2 0	0 0	1	0	7
Organisation	43 Characteristics of integrated global sourcing	1		0	1	0 (0 0	0	0	0	0	5	3 (0	0		0 1	0	0	0	0	0	0	0	0	-		0	3	0	1	3	3	3	1 0		0	0	25
for IPSM	44 Degree of centralization of global sourcing	0	0	0	0	0 (00	0	0	0	0		0 0	0 0	0	0		1 1	1	2	1	0	0	0	0	0	0	0	1	3	2	0			3 (0 0				21
	45 Innovation and learning in the global sourcing function	1	3	0	1	0 (00	-0	-0	0			2 -0) ()	-0	-0		0 1	0	0	0	-0	0	0	0	0	0	0	0	0		0				0 0			0	17
	46 International purchasing offices (IPO) 47 Management of integrated global sourcing	0	0	0	0	0 0	0 0	0	0	0	0	0	0 0	0 0	0	0		0 1		1	0	0	0	0	0	0	0	0	0	0 6	0	0	0	1	5 (0 0	0	0	0	8 59
Sustainability	48 Antecedents of CSR	0	1	0	0	0 1	2 0	0	0	0	0	0	1 (0	0		2 2	2	2	0	0	0	0	0	0	0	0	0	2	4	0	0	4	0 0			0	0	5
and IPSM	49 Codes of conduct for international supply	0	0	0	0	0 0	0 0 0 0	0	0	0	0	0	0 0	5 0	0	0		1 0) ()	, 0 1 0	1	0	0	0	0	0	-		0	2	0	0	0	0	0 0			1	0	5 5
	50 Environmental issues in international sourcing	1	0	õ	0	0 0	0 0	õ	Ő	0	0	0	0 0	0 0	0	0		0 0) 1	2	0	Ő	õ	Ő	0	0	0		0	3	1	õ	ő	0	0 0	5 0		2	0	
	51 Outcomes of CSR	0	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0)	0 1	0	1	0	0	0	0	0	0	0	0	0	5	0	0	1	0	0 () (0	3	0	
	52 Private standards	0	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0)	0 0) ()	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0 (0 0	0		0	
Wider impact	53 Impact of global sourcing on consumers	0	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0)	0 0) ()	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0 (0 0				
of IPSM	54 Impact of global sourcing on networks	0	0	0	0	0 (0 0	0	0	0	0	•	0 0		0	0)	0 0) 1	0	0	0	0	0	0	•	-	-	0	0	0	0	0	0	0 (-	1
	55 Impact of global sourcing on society	0	0	0	0	0 (0 0	0	0	0	0	0	0 0	0 0	0	0)	0 0) 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 () (0	0	0	1
		10	0 19	0	4	0	3	12	0	0	0	27 1	15	1 0		1	5 4	57 9	2 8	8 ##	83	15	0	3	12	35	1	1 1	13	209	44	13	22	50	26 1	6	1 15	5 17	4	

Table 3 'Heat map' representing the article frequencies in terms of emergent themes and capability elements

4.2 Discussion of the selected themes

By observing Table 3, we identify salient themes for further discussion and synthesis (Jones & Gatrell, 2014). These discussion themes complete the picture on the relevant capability-building aspects in IPSM.

4.2.1 Source-user distance as a challenge

We call the first discussion theme *source-user distance as a challenge* due to a cluster of relatively higher frequencies in the area demarcated approximately by rows 8-13 and columns 18-22 (see Table 3). The literature linked to this cluster informs administrative, cultural, economic, geographic and political distances between source and user by discussing them within such emergent themes as developing, emerging or low-cost countries, the geography of IPSM and service offshoring-outsourcing, as well as in terms of the themes of barriers, challenges, constraints on international sourcing, the determinants of offshoring patterns and the enablers of international sourcing. The dominant tone of discussion in this cluster concerns the difference between the developed and developing countries, the latter often referred to as LCC. For example, Caddick and Dale (1987) suggest that sourcing from less developed countries is considerably more complex. In this vein, Roth et al. (2008) describe the cultural differences in China as a cause of product recalls and Subramanian et al. (2015) describe the intangible and tangible factors that contribute to the complexity of sourcing from China, such as culture, infrastructure and regulation.

The literature also describes the geographic patterns of international sourcing and describes many of the problems experienced, such as delivery, quality, geographic distance, business practices and technical capabilities and various geographical differences (e.g. Frear et al., 1992). Indeed, there are several articles that lament the barriers, challenges and constraints of IPSM, such as those by Birou and Fawcett (1993), Handfield (1994), Murphy and Daley (1994), Liu and McGoldrick (1996), Cho and Kang (2001), Nassimbeni (2006) and Towers and Song (2010). These predominantly early period contributions take a descriptive approach and examine several types of source-user distance related challenges, in addition to benefits and patterns. Perhaps due to the challenges identified, Karjalainen and Salmi (2013) found that majority of purchases take place in home countries and in nearby regions.

A connected sub-theme consists of economic models for explaining outsourcing-offshoring patterns (row 12, column 21 and linking to organizational distance in column 27; see Table 3), suggesting that more productive firms select vertical integration and offshoring (Kohler & Smolka, 2014) and that many firms choose hybrid sourcing with both outsourced and integrated suppliers due to incomplete contracts (Schwarz & Suedekum, 2014), although shared ethnic heritage alleviates this source of complexity (Lo et al., 2014). Also, many factors serve as enablers of the challenging IPSM activity (row 13), such as international language capabilities (related to the administrative distance, Petersen et al., 2000), awareness of national cultures (King, 2007), supply chain and logistics processes (related to the geographic distance; Petersen et al., 2000), information technology (Mol & Koppius, 2002), and macro-level trade facilitation and liberalization (Mann, 2012; Ufkes, 1993).

4.2.2 Requirements for managing source-user distance

Our second discussion theme is linked to a salient topic on operating routines and resources associated with LCCs (row 8, columns 31, 34 and 35; see Table 3) and the barriers,

challenges and constraints of IPSM (row 11, columns 31 and 33-35). We call this second theme the routine and resource *requirements for managing source-user distance*. The key types of operating routines that are associated in the literature with LCCs seem to be the formal approach to the assessment of the feasibility of LCC sourcing (Kamann & van Nieulande, 2010; Caddick & Dale, 1987), as well as assessment of the total cost of such sourcing arrangements (Horn et al., 2013; Platts & Song, 2010; Weber et al., 2010; Zeng & Rossetti, 2003). In general, the operating routines that are linked to the challenges of IPSM, seem to be associated with, for example, such themes as supplier selection (Handfield 1994), managing logistics (Sawhney & Sumukadas, 2005; Murphy & Daley, 1994), development and the management of supplier relationships (Hanna & Jackson, 2015; Kaufmann & Carter, 2006) and the overall sourcing decision making process (Liu & McGoldrick, 1996; Cavusgil et al., 1993).

The resource requirements for the LCC case and the general case seem to be similar. Both require specialized human resources, including sourcing competence (Kusaba et al., 2011), adequate and trained staff (Leonidou, 1999) and accumulated experience in general (Rexha & Miyamoto, 2000). Lack of human capital may also serve as a source of sourcing complexity (Subramanian et al., 2015). Furthermore, knowledge resources appear to have a key role because the requirements for knowledge about exchange rates and foreign business practices have been suggested as being important (Birou & Fawcett, 1993), as has having adequate information for identifying and analysing foreign sources (Leonidou, 1999), based, for example, on macro- and micro-level market studies (Caddick & Dale, 1987). More generally, a firm's knowledge of international supply markets has been suggested as defining the depth of its international sourcing strategy (Rexha & Miyamoto, 2000). In theoretical terms, Søberg (2012) suggests that for the internationalization of purchasing, the characteristics of essential knowledge are explicit rather than tacit and that sources are

typically external or from the new local context and not from inside the MNC. However, international purchasing offices (IPO) serve as important knowledge managers for MNCs because they search for new suppliers, exchange information and transfer know-how from the buyer to the supplier (Nassimbeni & Sartor, 2006; Nassimbeni & Sartor, 2007). A firm's financial resources also play a role in managing the challenge of source-user distance, as firms committed to long international supply pipelines are exposed to financial risks (Hanna & Jackson, 2015), and the capacity of a firm to mitigate offshoring challenges has been said to depend on its level of financial and human resources. We conclude that the challenge of source-user distance in IPSM (motivating the firm to develop operational capabilities) is clearly linked to the routine and resource requirements of firms.

4.2.3 Key routines for IPSM

We call our third discussion theme the *key routines for IPSM*. Pertaining to the third-order level theme 'Decisions in PSM' we note a high-frequency operating routine in row 17, i.e. the assessment of total cost in international sourcing, confirming earlier findings. This routine is associated with several types of distance between the sources and the user, namely administrative, cultural, economic, geographic and political (columns 18-22), which all serve as cost drivers. Some articles point out that the high total cost is a result of using international supply sources. For example, long lead times generate costs in terms of expedited shipping, high inventories and lower fillrate (Levy, 1995), while failed LCC sourcing arrangements often result in them being replaced by expensive alternatives (Horn et al., 2013). At the same time, several contributions have been made in the area of methods for comprehensively assessing and modeling the cost of international supply (e.g. Johnson et al., 2013; Platts & Song, 2010; Weber et al., 2010), with a focus on, for example, the logistics costs (Zeng & Rossetti, 2003), hard and soft transaction costs (den Butter & Linse, 2008) or the static, dynamic or hidden costs of international supply (Holweg et al., 2011).

Nuances of the IPSM decision-making is directly addressed in the literature, as we also note higher frequencies on rows 19 and 20, pertaining to the behavioural biases in decision-making and decision frameworks and processes for IPSM. These themes address many of the distance types (Table 3), as the ensuing discussion will demonstrate. Liu and McGoldrick (1996) identify several driving forces for international retail sourcing, such as exchange rates, economic trading zones, as well as constraints related to political risk, trade barriers and transit time-in the context of which retailers are recommended to use a sourcing process framework that starts with an evaluation of their retail and merchandising strategy, which then has implications for their sourcing strategy (domestic or international). An early decision-making framework for global sourcing is offered by Cavusgil et al. (1993), who identify the relevant 'global sourcing' decisions as 'Where does the company source?' 'What to source?' and 'Which sourcing configuration?' This framework for decision routines may be considered a starting point for decision-making oriented literature in IPSM. The centralization/ decentralization issue is further addressed in the decision-making framework by Trautmann et al. (2009a, p. 198), who coined the term 'purchasing portfolio for global sourcing' in which the strategic importance of a category or item as well as its synergy potentials, determine whether the sourcing authority or lead should be at the corporate or business unit level.

The 'What to source?' question (see row 21, columns 20-22 for item selection; Table 3) was comprehensively tackled first by Smith (1999), who defines several dimensions for an assessment routine, i.e. item characteristics and determining the most appropriate sourcing area, such as whether the source should be local, national / within a trade block, international (via intermediary or direct). Kamann and van Nieulande (2010) built on the

work of Smith (1999) and proposed a four filter assessment routine for outsourcing to LCCs. From the perspective of offshoring–outsourcing (row 22, column 21), which often concerns the international sourcing of services or entire business processes, guidance on decisionmaking is offered by, for example, Grote and Täube (2007), with focus on the embeddedness of processes in relation to other actors and various proximities for analysing the expediency of offshoring–outsourcing. Kotabe et al. (2008) propose that decision-makers should assess the role of the to-be-outsourced–offshored processes in the future growth and innovation potential of the firm because outsourcing vital processes may result in a vicious cycle of competence destruction.

The decision-making frameworks implicitly address biases that may plague IPSM decision-making routines as they attempt to bring structure and rigor to the making of decisions. More explicitly (row 19, columns 19-22), Thorelli and Glowacka (1995) show that purchasers use country stereotyping, rely on personal experience and comply with top management perceived interests in IPSM. Carter et al. (2008) also find that the decision behind the sourcing location is often biased by managers' faulty cultural stereotypes. Culture plays a significant role in post-purchase behaviours and that modification and withdrawal become more probable the greater the cultural divergence (Lucero, 2008). In order to avoid costly trials in, for example, LCC sourcing, Horn et al. (2013) suggest raising the awareness of this potentially biased decision-making among purchasing personnel.

Three other operating routines are relatively more broadly associated with the various dimensions of source-user distance, namely supplier relationship management (row 30), supplier selection (row 31) and supply risk management approaches (row 36). All these appear to be marked as high frequency operating routines in column 31. Early work on supplier relationship management focuses on the nature and importance of this routine (Ellram, 1992; Herbig & O'Hara, 1995; 1996; Sheth & Sharma, 1997) and suggests that

partnerships are developed in an international context, even when highly specific assets are involved (Murray, 2001). For example, product adaptation is suggested as being a significant motivation for relationship formation between importers and suppliers (Overby & Servais, 2005). In global supply chains, unethical supplier behaviour affects a buyer's perception of supplier performance (Carter, 2000), while responsible supply chain management by the buyer enhances a supplier's relationship commitment and sustainability performance (Lee, 2016).

Indeed, diverging beliefs and expectations held by the exchange parties due to different institutional contexts often lead to only marginal performance contributions from partnerships (Andersen et al., 2009). Due to the many challenges of IPSM, Schneider et al. (2013) found that high performers implement governance structures in international relationships that are over-integrated, but perplexingly, over-integration decreases with increasing geographical distance (Schneider et al., 2013), perhaps due to sourcing from distance being more of the risk-seeking type by default. Finally, geographic distance plays a role in supplier relationships and performance; Steinle and Schiele (2008) suggest that buyers may be unable to become preferred customers if located outside the regional or national clusters in which suppliers operate. The routine of supplier relationship management is also logically linked to relational resources (column 39; Table 3). Literature suggests that 'external integration with suppliers is a consequence of internal cross-functional integration and is influenced by the social capital between the two organizations' (Horn et al., 2014). Trust as a relationship factor moderates the negative effect of asset specificity on partnership-based global sourcing (Murray, 2001) and mutual trust plays a role in inter-partner learning in global supply (Andersen & Christensen, 2000).

Selecting suppliers for partnerships or arm's length relationships is also a source-user distance driven key routine. This seemingly mature literature covers a variety of

methodologies for the task (Min, 1994; Choy & Lee, 2003; Chan et al., 2008; Nepal & Yadav, 2015). We find that the supplier selection-focused literature covers the various dimensions of distance broadly with the inclusion of several related criteria in the selection models, but also by offering different perspectives on the matter, emphasizing, for example, local content rules (Munson & Rosenblatt, 1997), just-in-time logistics (Humphreys et al., 1998), environmental and density risk mitigation (Deane et al., 2009), social sustainability (Ehrgott et al., 2011), inventory and transportation management (Hammami et al., 2012), security (Voss, 2013) and currency fluctuation uncertainties (Hammami et al., 2014).

The IPSM literature on risk (row 36; Table 3) also covers the dimensions of distance between source and user in a broad way because many risk factors or drivers of disruptions are included in the risk management models and frameworks (e.g. Canbolat et al., 2008; Schoenherr et al., 2008). For example, geographic distance, in the form of long and variable lead times, is considered to be a driver of risk by Colicchia et al. (2010). The approaches to risk management in IPSM are comprehensively covered by Christopher et al. (2011) and more specifically by Son and Orchard (2013), who focus on inventory management policies, while Vedel and Ellegaard (2013) focus on sourcing intermediaries as performers of risk management functions. Here the discussion on risk is linked to relationship management or, more generally, international supply base management because intermediaries offer an indirect alternative for international sourcing (Quintens et al., 2005) and for mitigating risks and other challenges related to international supply due to their broad boundary and distance spanning capabilities (Mahnke et al., 2008). Here, the literature introduces a new type of distance to our analytical framework, i.e. cognitive distance (see row 27, column 29), which consists of 'differences in relative skill levels that might prohibit successful communication and common understanding between client and vendor' (Mahnke et al., 2008, p. 22).

Several other emergent key routines can be identified, as relatively high frequencies in Table 3 link single distance dimensions in terms of the separation between source and user with single operating routines. First, cross-cultural issues in international sourcing are logically connected with cultural distance (row 23, column 19). Aquilon (1997) suggests that suppliers from different cultural clusters behave differently in contractual relationships, thus increasing cultural competence is important for successfully managing processes and for relation-oriented logistics. Furthermore, national culture affects the degree of sustainable practices employed in corporations, suggesting the importance of taking culture into consideration when selecting suppliers for sustainable supply (Vachon, 2010). Somewhat counterintuitively, such cultural differences—often seen in only in negative light—may also serve as 'attention stimuli' for decision-makers to 'thoroughly gather and process information on the costs and benefits of global sourcing, thereby reducing the risk of cost estimation errors' (Peeters et al., 2015).

The management of foreign exchange risk is associated with economic distance under the separation of source and user (row 34, column 20), and shows itself as a prominent operating routine in IPSM. The extant literature covers the issues (Carter & Vickery, 1988), strategies (Carter & Vickery, 1989; Vickery et al., 1993), risk management guidelines (Carter et al., 1993; Arcelus et al., 2002; Hu & Motwani, 2014), location strategies (Lowe et al., 2002) and source currency area diversification (Gutierrez & Kouvelis, 1995) for managing forex risk.

A prominent routine appears to be also the management of the logistics of IPSM, including inventories, transport and logistics in general (rows 37-39), which are associated saliently with the geographic distance between the source and the user (column 21). In terms of inventories, Jain et al. (2010, p. 1202) show that 'a 10% shift in sourcing from domestic to global suppliers increases the inventory investment by 8.8% for an average

firm', while increasing the number of suppliers may mitigate the effect (see also Han et al., 2008). However, Golini and Kalchschmidt (2015) show that the relationships between global sourcing, supply chain management investments and material inventory level are not straightforward and depend on several contingency variables, such as firm and supply base size as well as manufacturing strategy. Geographic distance appears to be a major driver for the inventory penalty, as well as being a factor in the difficulty of reconciling international supply with just-in-time strategies, which was a major theme in early research due to its critical role in enabling some international sourcing arrangements (Fawcett & Birou, 1992; Das & Handfield, 1997; Humphreys et al., 1998). In particular, price-based purchasing has been shown to have a negative effect on lean supply, including just-in-time delivery (Nellore et al., 2001). Logistics processes play a significant role in 'global sourcing strategy effectiveness' (Petersen et al., 2000) and quite appropriately, research has addressed, for example, the logistics issues related to LCC sourcing (Ruamsook et al., 2009), logistics-based criteria for effective network design (Zeng, 2003) and supplier selection from a logistics perspective (Hammami et al., 2012). Creazza et al. (2010) propose 'a taxonomy for selecting the most suitable international logistics network configurations, with respect to some key logistics factors and purchasing strategies,' which represents perhaps the most normativelyoriented contribution under the emerged logistics theme.

4.2.4 Synergy as a challenge

Our fourth discussion theme is defined by the relatively higher frequencies in Table 3, in the area demarcated by rows 43-47 and columns 12-13, linking the third-order emergent theme of 'Organization for IPSM' with organizational and functional boundaries between the purchasing functions or spend decision-makers, or simply the user-user distance. We call this

discussion theme synergy as a challenge. The characteristics of integrated global sourcing have been discussed by some of the classic work in this field, by considering the difference between international purchasing and global sourcing, and suggesting a four or eventually a five-stage model for the internationalization of procurement (Monczka & Trent, 1991; Trent & Monczka, 2003a; Trent & Monczka, 2003b). This body of literature also characterizes global sourcing excellence (Trent & Monczka, 2005), thus addressing both the routine and the resource issues of global sourcing. From a methodological point of view, a global purchasing strategy has been defined with measurement items relating to standardized product, personnel and buying process characteristics as well as the centralization of the buying process (Quintens et al., 2006). Giunipero and Monczka (1997) suggest four basic approaches for managing international sourcing (see also Narasimhan & Carter, 1990), ranging from totally decentralized to totally centralized, and even separate purchasing groups (i.e. IPO). More normatively, Arnold (1999) proposes three ideal organizational types for global sourcing in order to reach an optimal degree of centralization, and Trautmann et al. (2009a) have designed a portfolio approach for determining the categories or items which should be sourced centrally at the corporate level. Contributing to the evidence-base, Jallier et al. (2013) describe a case where significant savings were achieved with a global and centralized sourcing approach.

The management of integrated global sourcing focuses on the pursuit of synergies through centralization and coordination. Faes et al. (2000) provide implementation guidelines for such efforts, whereas Hartmann et al. (2008) suggest that 'variations in control mechanisms can be explained by two contingencies: (1) corporate organisational structure and (2) the distribution of purchasing expertise among subsidiaries'. Gelderman and Semeijn (2006) describe such a mechanism for purchasing knowledge leveraging across subsidiaries, i.e. the Kraljic's (1983) purchasing portfolio approach. Spanning both organizational and

functional boundaries, a motivated commodity team is an important factor in realizing sourcing synergies, depending on, for example rewards, leadership behaviours, goal setting and career goals (Englyst et al., 2008; Hult & Nichols, 1999). The strategy for offshore-outsourcing services has been shown to lead to structural adaptations in terms of more centralized, team-based structures, more formalized processes and more complex structures (Tate & Ellram, 2012). The decision-making biases have also been investigated from the organizational perspective, as Stanczyk et al. (2015) shed light on the politics, intuition and procedural rationality of cross-functional, global-sourcing decision-making.

4.2.5 Requirements for managing the user-user distance for synergy

The previously discussed theme about synergy appears to have a horizontal link with higher frequencies in both the operating and search routines (columns 31-32), as well as several resources, namely human, knowledge, organizational and technological (columns 34-37). A horizontal link may also be established to the left, i.e. the dynamic innovation capability may be linked with the emergent theme of innovation and learning at the global sourcing function (row 45, column 2). Therefore, we identify and name this horizontally spanning fifth discussion theme as capability, routine and resource *requirements for managing user-user distance for synergy*.

Based on the previous discussion it is clear that managing the distance causing boundaries for synergy requires operating routines related to standardization, coordination, control, organization and the structuring of decision-making processes. However, the examination of improvement and innovation capabilities and search routines may offer new perspectives to managing synergy, as innovativeness and learning have been linked to sustainable competitive advantage in global sourcing (Hult, 2002). In addition, organizational

learning in the purchasing process is influenced by organizational culture, which affects performance via information processing in the purchasing system (Hult et al., 2000). Andersen and Christensen (2000) extend learning to the inter-partner context in global supply chains and suggest that the process of developing shared skills is impeded by inter-partner diversity. On the innovation side, entrepreneurial innovation in purchasing contributes to the quality of relationships among sourcing participants; however, an ethical climate is a precondition for such an association (Gonzalez-Padron et al., 2008). Furthermore, Peeters et al. (2014) demonstrate the role of absorptive capacity routines for the efficient management of innovation in the purchasing function, an example of which is the sourcing of business services from offshore countries. This single reference to absorptive capacity in the sample literature suggests opportunities for further research in terms of understanding how innovation and learning may enable greater PSM synergies in MNCs (see Schiele, 2007).

In terms of resources, the discussion in the sample articles revolves around the availability of information and data as a critical success factor for global sourcing (role increases with the level of the internationalization of procurement, Monczka & Trent, 1991; Trent & Monczka, 2003a), the amount of able participants with a global perspective (Trent & Monczka, 2005) as well as co-located support personnel linked to teams (Trent & Monczka, 2002), all of which can be viewed as organizational resources per se (e.g. Englyst et al., 2008). IPOs may serve as an important or even as a strategic organizational resource for IPSM (e.g. Jia et al., 2014a; Jia et al., 2014b; Nassimbeni & Sartor, 2006) and may have their own respective resource and capability requirements for fulfilling their many roles (Sartor et al., 2015).

Underscoring the critical role of knowledge in IPSM, it has been suggested that the opportunity to leverage information and knowledge for synergy in a category determines the level of centralization of purchasing that should be sought after, and that global companies

rely on information systems to integrate cross-national purchasing activities (Trautmann et al., 2009a; Trautmann et al., 2009b). The lessons learned from using such technological resources or global procurement platforms, for example for pooling and auctions, are elaborated on by Standing et al. (2007), who suggest that savings can be obtained but that service contracts should be sourced locally and procurement staff and local suppliers must be trained and assisted in using such solutions.

4.2.6 Reputation as an IPSM challenge

In identifying the sixth discussion theme, we note the relatively higher frequencies in rows 51 and 53 of column 40 (Table 3), i.e. a topic that discusses the outcomes of corporate social responsibility (CSR) in IPSM and the impact of global sourcing on consumers, from the perspective of managing firm's reputation resource. We call this theme *reputation as an IPSM challenge*. The work of Ehrgott et al. (2011) suggests that socially sustainable supplier selection is driven by the intensity of social pressures on middle management and that such a selection has a significant impact on the buying firm's reputation. The findings of Joo et al. (2010, p. 504) are aligned as they suggest that 'cost increase resulting from socially responsible business conducts might have been offset by the revenue increase resulting from favourable brand recognition attached to social responsibility'. Further insight is given by Bregman et al. (2015), as they establish a strong relationship between ethical judgment on a firm's global sourcing practices and the intention of consumers to alter their consumption of a firm's products.

In addition to a firm's practices, the origin of the sourced product may affect the reputation of a firm. However, the work of Li et al. (2000) shows that consumers may have difficulties in evaluating products with complex country-of-origin (COO) information when

COO of design and assembly are different. Chu et al. (2010) also show that 'COO effect plays an equally important role in consumer product evaluation for both strong and weak brands'. In other words, a strong brand image cannot overcome the negative effects of COO. In conclusion, routines and capabilities need to be in place in order to manage the particularly vulnerable reputation resource in the context of IPSM.

4.2.7 Innovation as a challenge for IPSM

Finally, we focus on the dynamic innovation capability in column 2, through the lenses of two second-order topics, namely the outcomes of IPSM (row 16) and international knowledge transfer or sourcing for innovation (row 28; Table 3). We call this seventh discussion theme *innovation as a challenge for IPSM*. The early results of Kotable and Murray (1990; also Murray et al., 1995) seem to suggest that international outsourcing and innovation do not travel well together. Hanna and Jackson (2015) suggest global sourcing constrains innovation in the case of SMEs. However, other results show that 'global purchasing has no direct impact on product innovation performance' (von Haartman & Bengtson, 2015, p. 1295). Indeed, a greater degree of supplier integration may be required for achieving product innovation performance with global purchasing, suggesting a need for 'a highly developed purchasing function'. Regarding the outsourcing context, Dankbaar (2007, p. 286) proposes that 'outsourcing of manufacturing will lead to outsourcing of development for the product involved' when both organizational and geographic proximities are lost. Clearly, various dimensions of distance imply challenges for the innovation capability, although some of it is remediable with a competent IPSM team.

Another perspective on innovation is provided by the literature that portrays firms as seeking foreign knowledge in the form of innovation, technology and patents

(Plechero & Chaminade, 2013). For this there is evidence showing that knowledge sourcing is followed by product sourcing (co-location) and that knowledge intensive tasks are more likely to be integrated instead of being outsourced due to monitoring and expropriation challenges (Berry & Kaul 2015). Haakonsson et al. (2013) note that host-country institutional evolution—regarding intellectual property rights and education—plays a significant role as the drivers of the international sourcing for R&D. The extent of such international knowledge sourcing and transfer are associated with the innovative performance of a firm in an inverted U-shaped fashion, i.e. there are diminishing marginal returns from foreign knowledge sourcing because the need to adopt costly integrating techniques increases with the addition of unfamiliar locations (Kotabe et al., 2007). Thus the distance between source and user, in many of its dimensions, such as the institutional, plays a role in international knowledge seeking and transfer, and further in the innovation capability of the PSM.

5. Conclusions and further research

5.1 Theoretical and practical contributions

By building on the logical arguments that suggest PSM function to be more strategic the better it is able to develop superior capabilities (van Weele & van Raaij, 2014), and that informing the strategic task of capability building requires focus on the elements of capabilities (Peng et al., 2008), we set out to find out how the extant literature on IPSM cover such capability elements from the point of view of distance (see RQ).

Based on our analysis, we conclude that distance is the fundamental management aspect of IPSM (cf. Salmi, 2006); first, between the source and the user; second, between user and user, or purchasing functions or spend decision makers, and third, between

source and source, this final aspect emerging *a posteriori* from the literature (Figure 3). Therefore, the management of distance serves as the key driver of operational capability development for IPSM. Additionally, international distance also affects PSM function's ability to contribute to the dynamic capability of the firm, as both innovation and international knowledge seeking and transfer become more challenging. In other words, distance requires the development of certain operational capabilities and makes the renewal of the organisation through dynamic capabilities more difficult.

We also find that distance in IPSM is a multidimensional construct, the capturing of which requires adequate operationalisations and measurement instruments. In addition to using the distance dimensions by Berry et al. (2010) and Espinosa et al. (2003), two additional dimensions of distance between the source and the user emerged from the literature, namely the professional (Grote & Täube, 2007) and the cognitive distances (Mahnke et al., 2008), which further enhance our understanding of the nature of distance characterising the core of IPSM.

Furthermore, we identified several second-order and third-order emergent themes that characterize the content of the sample literature (see Table 3). These themes reflect the nature of issues and key routines and resources for IPSM (i.e. for managing distance)—if we assume that the content of the academic literature is to a large extent representative of the demand for knowledge in IPSM practice. Cross-tabulating these themes with the component and underlying elements of capability (driven by distance), we also identified and selected the following capability-relevant themes for discussion: source-user distance as a challenge, the requirements for managing source-user distance, key routines for IPSM, synergy as a challenge, the requirements for managing the user-user distance for synergy, reputation as an IPSM challenge and innovation as a challenge for IPSM. These themes complete the picture on the important capability-building relevant issues in IPSM.

In more detail, we conclude that distance between source and user in its various forms may have such a powerful effect on supply in terms of e.g. inventories and logistics (Jain et al., 2010; Han et al., 2008; Humphreys et al., 1998), innovation (Murray et al., 1995; Hanna & Jackson, 2015) and reputation (Chu et al., 2010), that firms may to a dominant degree prefer domestic or trade area based sourcing (Karjalainen & Salmi, 2013), unless the negative effect of a particular of type of distance can be mitigated with a matching remedy. For example, administrative or cultural distance may be remedied with e.g. shared ethnic heritage (Lo et al., 2014), awareness of national cultures (King, 2007), language capabilities (Petersen et al., 2000) or over-integration in supplier relationships (Schneider et al., 2013). Furthermore, political distance may be remedied with government led trade facilitation and liberalization (e.g. Mann, 2012). In this distance-remedy matching effort that is at the heart of IPSM, human and knowledge resources are crucial, deployed in such key IPSM routines as location decision making and supplier selection, logistics management, supplier relationship management and risk management. However, biases and limited cognition plague this IPSM related decision making, as has been shown by for example Carter et al. (2008).

Furthermore, distance between user and user, or spend decision makers in an MNC, obstruct the achievement of synergies in its various forms (Trautmann et al., 2009). In addition to organisational politics (Stanczyk et al., 2015), inter-partner diversity due to for example cultural distance may stand in the way of coordinating and standardising for synergies. It seems that the latter might be mitigated by reducing other kinds of distances, such as professional (Grote & Täube, 2007) and cognitive distances (Mahnke et al., 2008), as a shared professional world-view would increase the absorptive capacity of the diverse purchasing functions in an MNC (cf. Schiele, 2007), and allow alignment of goals for synergistic coordination. This suggests the benefits of fostering innovation and learning, or indeed dynamic capabilities, in the purchasing functions of an MNC (Peeters et al., 2014).

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It is clear that in engaging in international sourcing, firms seek to exploit country specific advantages and firm specific advantages of suppliers. LCCs would attract efficiency-seeking sourcing (e.g. Ghauri et al., 2008), thanks to economic, and despite cultural and geographic distances from the perspective of the buyer, whereas technology clusters would attract knowledge sourcing thanks to their greater level of knowledge distance (Berry et al., 2010). As international business research has come to recognise also the value of cultural distance or diversity (Reus & Lamont, 2009; de Jong & van Houten, 2014), we may ask whether the literature on IPSM has identified any additional kinds of benefits from distance? Interestingly, Peeters et al. (2015) suggest the role of buyer-supplier cultural differences as 'attention stimuli', which sharpen the focus of the IPSM decision makers, pointing out the value of diversity in IPSM.

Finally, our analysis suggests that many of the dimensions of distance may serve as drivers of uncertainty, as for example cognitive distance may prohibit successful communication and common understanding (Mahnke et al., 2008), cultural distance may cause uncertainty about the costs and benefits of global sourcing (Peeters et al., 2015) and geographic distance implies long and variable lead times (Colicchia et al., 2010). From here it may be extrapolated that international distance in general drives uncertainty, as the discrepancy between information possessed and information required to complete IPSM related tasks may in most of the cases become greater the greater the distance (cf. Tushman & Nadler, 1978). This proposition on the relationship between distance and uncertainty is supported for example by the extant literature on the effects of cultural and political (or governance) distance on external uncertainty and further on international business decisions (López-Duarte & Vidal-Suárez, 2010; Slangen & van Tulder, 2009). Further, it is not difficult to see that uncertainty due to the distance-determined task characteristics and environment of IPSM results into a need to gather, interpret and synthesise, or simply, process information

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(Tushman & Nadler, 1978). Indeed, our analysis seems to emphasise the role of information and knowledge in successful IPSM (e.g. Trent & Monczka, 2003a; Leonidou, 1999; Birou & Fawcett, 1993; Monczka & Trent, 1991; Caddick & Dale, 1987), and in defining the depth of firm's international sourcing strategy (Rexha & Miyamoto, 2000).

These findings, and the earlier discussion about distance-remedy matching, lead us to refine our *a priori* model of IPSM (Figure 1), by applying the perspective of information processing theory (e.g. Galbraith, 1974; Tushman & Nadler, 1978) to the general problem of IPSM. The resulting theoretically grounded *a posteriori* model, depicted in Figure 3, provides a novel perspective on IPSM and may thus stimulate further research efforts in the area of IPSM.

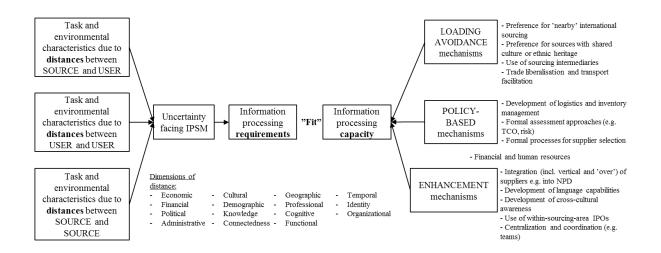


Figure 3 Information processing theory –based model of IPSM (*a posteriori*)

The information processing theory is based on the idea of achieving a fit between the information processing requirements and capacity in organizations. Uncertainty drives requirements, and is defined as the difference between information possessed and information required 'to complete a task' (Tushman & Nadler, 1978, p. 615). In our research context, the task to be completed is IPSM, which faces uncertainty due to the variety of distances between

source and user, user and user, as well as source and source (Figure 3). For example, political source-user distance may cause uncertainty in terms of the customs procedures and other foreign trade related regulatory requirements, organisational user-user distance may cause uncertainty in terms of the potential for pooling spend or other synergies, whereas geographic source-source distance, or the inverse of it (proximity), may cause uncertainty in terms of availability risk due to for example natural disasters. Clearly, the dimensions of distance vary in relevance regarding the type of distance.

Organizations must develop and regulate information processing capacity by the means of certain mechanisms, which facilitate the gathering, interpreting and synthesising, or simply processing of information, such as coordination and control mechanisms (Tushman & Nadler, 1978; Trautmann et al., 2009). Based on our analysis, we identify three broad categories of mechanisms from the literature for the IPSM context, namely loading avoidance, policy-based and enhancement mechanisms (Figure 3). The underlying elements of these mechanisms were identified earlier as the key IPSM capability elements.

Loading avoidance mechanisms are more about reducing the demand, or loading, for information processing capacity than enhancing it. For example, the literature suggests that companies may altogether limit the scope and extent of international supply due to the distance and the ensuing uncertainty (e.g. Karjalainen & Salmi, 2013). They may also prefer sources where some dimensions of distance, such as in terms of culture, are less salient (Lo et al., 2014), compensating the uncertainty effect of the other distance dimensions. Use of specialist international sourcing intermediaries also to some degree insulates companies from the distance and uncertainty that plagues the international context of supply (e.g. Vedel & Ellegaard, 2013; Quintens et al., 2005). Finally, governments may reduce capacity loading through the facilitation of trade and transport (Mann, 2012).

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Policy-based mechanisms seek to facilitate information processing capacity by for example taking better control or adapting inventory and logistics processes (Golini & Kalchschmidt, 2015), by the means of formal policies. Facilitation of the use of scarce capacity may also be achieved through formalising the assessment and analysis approaches for LCC sourcing decision-making (Kamann & van Nieulande, 2010), as well as formalisation of risk management or international supplier selection decision processes (e.g. Deane et al., 2009; see Trautmann et al., 2009).

Further, through the use of enhancement mechanisms, a firm may take an active approach and regulate the capacity through for example a variety of types of integration with suppliers, including collaboration in new product development projects (von Haartman & Bengtson, 2015) and over integrated governance structures (Schneider et al., 2013), including vertical integration (Kohler & Smolka, 2014), where information processing would be easier. Similarly oriented information processing capacity increasing mechanisms include for example the development of language capabilities and cross-cultural awareness (King, 2007; Petersen et al., 2000), as well as using within-sourcing-area IPOs (e.g. Jia et al., 2014a; Jia et al., 2014b) for facilitating information processing. Centralization and coordination allows for information processing in a distributed MNC (Trautmann et al., 2009a). Finally, as IPSM is relatively more resource intensive mode of PSM, financial and human resources enable the use of the previously discussed mechanisms (e.g. Hanna and Jackson, 2015; Figure 3).

5.2 Limitations and suggestion for further research

Our work has some limitations. First, the use of a limited amount of search phrases narrowed down the literature, and we deliberately limited the sample by focusing on journals with impact factors and by focusing our search on title, abstract and keywords. As a result,

however, we suggest that the sampled work captures the most essential and high-quality body of literature in manageable proportions and in a representative manner. Second, the analysis and synthesis of a large sample of literature is necessarily liable to some degree of subjective interpretations. By describing our analysis procedures and summarising the content of the literature, we think to have achieved a necessary level of trustworthiness for our results.

Regarding further research, we suggest that IPSM scholars should use the multidimensional constructs of distance more rigorously. Research needs to integrate the accumulated knowledge in the field of international business, where it has been recognized that the essence of international management is the management of distance (Zaheer et al., 2012). This construct must be defined, operationalized and placed at the centre of studies that seek to advance the IPSM literature further.

Second, IPSM scholars should attempt to cover distance between the purchasing functions and spend decision-makers more completely (user and user), i.e. expand beyond the focus on what appears to be the core distance driving boundaries, such as the organizational and functional. Based on our analysis in Table 3, there is relevant uncharted space to be explored. For example, how should an MNC take into account the various distance dimensions, such as from administrative to knowledge, as well as from temporal to identity, in its effort to achieve global sourcing synergies? And what might be the role of professional and cognitive distances in such a context?

In terms of the value of distance for IPSM, an interesting research topic might be the benefits of multicultural sourcing and category teams. Such efforts will bring about a higher level of understanding of the variety of contingencies and mechanisms that affect the sustainable competitive advantage of MNCs and other types of firms, in their attempt to draw on international supply markets. Finally, the proposed information processing theory –based conceptualization of IPSM may be refined and tested.

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