# PURCHASING STRATEGIES PORTFOLIO: A MULTIFACETED APPROACH IN MEDIUM MULTINATIONALS

by *Maria Rosaria Marcone*

## 1. Introduction

This study investigates whether appropriate management purchasing portfolio design is associated with good performance.

Over recent decades, scholars and practitioners have increasingly recognized that strategic sourcing provides a competitive advantage. Literature broadly defines strategic sourcing as the process of designing and managing supply networks in line with operational and organizational performance objectives (Eltantawy and Giunipero, 2013).

This paper could present a preliminary research of concepts and findings concerning the identification and analysis of risks regarding purchasing decisions in manufacturing firms that belong to an 'interrelated international supply chain'. The research presented here is a part of a more general exploratory research program. As an extension of a previous phase, this paper aims to explore how purchasing strategies may affect a firm's ability to innovate. Given that organization's purchasing departments play critical roles as network managers for suppliers, enhancing linkages and networks with suppliers is part of the path to productivity and innovation.

A developed supplier market is a basic outsourcing requirement. However, supplier markets can be inefficient; for instance, due to oligopolistic or monopolistic market structures, or asset specificity and opportunistic transaction behavior between a buyer and seller (Williamson, 1985). Literature on outsourcing has predominantly assumed the existence of a developed supplier market and has addressed markets that are characterized by dominant supplier opportunism (Holcomb and Hitt, 2007; McIvor, 2008; Eltantawy and Giunipero, 2013). However, a few studies have focused on how firms manage outsourcing in a supplier market that, from the outset, could be regarded as an innovative niche; a market with a low degree of competition between suppliers, which also lacks knowledge and other resources necessary to implement value-added strategies (Walker *et al.*, 2005; Inemek and Matthyssens, 2013; Van de Vijver *et al.*, 2011; Yan and Dooley, 2013).

The aim of this paper is to develop a conceptual model of purchasing strategies in supply relationship management utilizing an integrated approach to value-based performance and risk optimization. We develop a comprehensive approach to capacity management taking into account related purchasing strategies from a value-based perspective (Hahn and Kuhn, 2011; Terpend et al., 2011). The article makes two distinctive contributions to the more general field of purchasing and supply management research. Firstly, with the help of our longitudinal case studies, we illustrate how firms manage outsourcing when they lack an initial supplier market. One could contend that an innovative supplier market niche essentially leaves a company proactively to build a supplier market to which it can outsource. Secondly, we combine the resource-based view (RBV) and transaction cost economics (TCE), and contribute by adding greater depth to the understanding of outsourcing to an ISMN. In particular, the findings increase the understanding of the operational level of outsourcing decisions vs. the strategic level, as well as the value of the traditional core/non-core login in outsourcing strategies.

The remainder of this article is organized as follows. We first provide a literature review on the domains relevant for this research and then we develop hypotheses to explain the moderating effects of environmental uncertainty on 'supply chain integration-performance relationships' and we define the key theoretical constructs. In section 3 we highlight the adopted methodology and in section 4 we outline implications of the approach using a case-oriented example. This is followed by descriptions of the competences and skill profile for the best design of a purchasing portfolio. We conclude the paper in section 5 with a summary of the findings and an outlook for further research.

## 2. Literature review and hypotheses

Increased competition has forced many firms to pursue innovation in products, services and business models using fewer resources and in less time. In this study we investigate the influence of sourcing choices on the efficiency of production activities, and collaboration with supply chain and non supply chain partners (research institutions, other firms belonging to interrelated industries) and on medium sized manufacturing firms' operational innovation.

Outsourcing decision frameworks are most often approached with theoretical starting points taken from transaction cost economics or the resource-based-view, either singularly or combined. While TCE considers economic rationales for companies to organize some transactions in either in-house or external governance (Williamson, 1985), the RBV argues that

firms'specific assets are heterogeneous, meaning they become competitive by focusing on resources that are rare, highly valuable for customers, and imperfectly imitable (Barney, 1991; Peteraf, 1993).

Applying proper organizational control mechanisms is essential for achieving effective inter-firm cooperation as well as for achieving intended organizational goals. Proactivity is an opportunity-seeking, forward-looking managerial perspective (Teece, 2007).

Tate and Ellram (2009) drew on TCE to develop a supplier selection framework for purchasing offshore products and services. One of their key proposals was that there is a high risk of opportunism and supplier failure if the outsourcing firm's training and investments are inadequate. At the same time, such investments are sunk and increase the risk of supplier dependency and switching cost. Emery and Marques (2011) recently used a lens of transactions costs economics to determine whether a firm will hold raw materials inventories or its supplier will hold the identical intermediate goods as finished goods inventories. Others researchers suggested that considering cost motives alone (TCE) limits outsourcing analysis. Instead, they suggested a theoretical outsourcing model which TCE arguments are complemented by RBV in terms of gaining access to specialized capabilities, which should help firms ensure value beyond efficient cost mechanisms.

Thanks to an increasing focus on strategy in outsourcing decisions, the RBV achieved a more prominent position (McIvor, 2010). Over the next decade, various authors developed different RBV-influenced frameworks to formulate outsourcing strategies (Braziotis et al., 2013; Westphal and Sohal, 2013). Significantly, intangible and hard-to-observe resources such as strategic sourcing are, by definition, inimitable. In the meantime, strategic sourcing practices guided by an integrative centricity enable some businesses to achieve superior performance. Strategic sourcing, therefore, represents an inimitable resource, which, despite its intangibility, nevertheless contributes substantially to a firm's competitive advantage. Outsourcing has continued to be a key theme in the purchasing and supply chain literature. For example, Gottfredson et al. (2005), Aron and Singh (2005) and Ata and Toker (2012) provided outsourcing frameworks with strong RBV influences. While Aron and Singh (2005) emphasised risk evaluation (operational vs. structural) as an important step in the outsourcing strategy analysis, Gottfredson et al. (2005) argued for a focus on capability benchmarking. Baines et al. (2005) argued that many of the earlier outsourcing frameworks focused too much on one individual boundary decision and missed the holistic view of the supply chain network.

Organizational research suggests that firms in dynamic environments with higher levels of information processing, communication and knowledge transfer are more likely to develop competencies which will result in

successful technology innovation than firms in these environments with lower levels of co-operative resources.

As affirmed of previous research, the fact that the firms develop in many diversified areas and follow many diversified paths of expansion, compels, even medium sized multinationals, to use at the same time diversified and sophisticated organizational modalities (mechanisms of organizational coordination, quality of human resources, etc.). As an extension of previous research, this paper aims to investigate how outsourcing strategies are associated with the choice of organizational control mechanisms (Day et al., 2013; Kang et al., 2014). According to the literature, purchasing maturity implies the development of best practices, and best practices lead to superior performance. An organisational purchasing maturity profile is defined in the present research, borrowing some aspects proposed by Schiele (2007) and Úbeda (2015) such as the extent to which purchasing takes a strategic role in an organisation and the quality of the human resources (supply manager, communication practices within the organisation).

The literature (Chen et al., 2004; Broedner et al., 2009; Foerstl et al., 2013) intuitively suggests that as organisations' purchasing functions mature, they develop more complex and sophisticated management methodologies and cost-saving levers. In other words, purchasing maturity is the main reason for the development of cost-saving levers (efficiency seeking purchasing) and thus increases firm performance (innovative seeking purchasing).

As organizations develop these management methodologies, they become more involved in several key strategic activities, implying that they can spend less time on operational activities. The time that they save on operational activities allows them to implement more complex methodologies and advanced cost-saving performances.

**Hypothesis 1.** We assume that higher organisational purchasing maturity is associated with sophisticated methodologies and increased cost-saving performances.

In collaborative supply chains, the supply chains processes such as design, planning and production are executed in coordination with supply chain partners.

The key assumption in this 'value view' of the supply chain is that firms can enhance their competitive position by considering the value streams they are operating in, as well as other parallel ones that use the same supply as a grid in which they operate.

Conceptually we see the 'value chain' as an equivalent to product and process architectures, where such 'purposeful design' has been proposed before (Holweg and Helo, 2014). While both product and process architec-

tures have been widely discussed, the complexity inherent in value chains has so far meant that the structure of a value chain determines its dynamic behavior.

We posit that by managing the purchasing portfolio, medium sized firms are able to gain substantive knowledge from its suppliers. Collaboration with new supply chain partners enables a firm to develop its internal capability by being exposed directly to new knowledge and by being connected to a broader landscape of available knowledge. In particular for medium firms, it can improve their knowledge assets, enhancing their understanding of the core technology behind their processing methods which can be of vital importance to operational innovation. Accordingly, we posit the next two research hypotheses.

**Hypothesis 2a.** Collaborative execution of supply chain activities has a significant impact on the success of collaboration.

**Hypothesis 2b.** Collaborative partnerships of a small manufacturing firm with new supply chain partners will be positively associated with the firm's operational innovation.

Researchers have long argued that strategic priorities at the functional level should be aligned with business level strategies. The importance of strategic alignment represents a common ground in the field of strategy: vertical fit has been associated with superior firm performance and may become a source of competitive advantage (Narasimhan and Das, 2001; Baier et al., 2008; Vachon et al., 2009; Rebolledo and Jobin, 2013). However, research on the vertical alignment between supply management and the overall business strategy is more recent: to fit between business strategy, and between purchasing strategy and purchasing practices, is key to achieving superior competitive advantage.

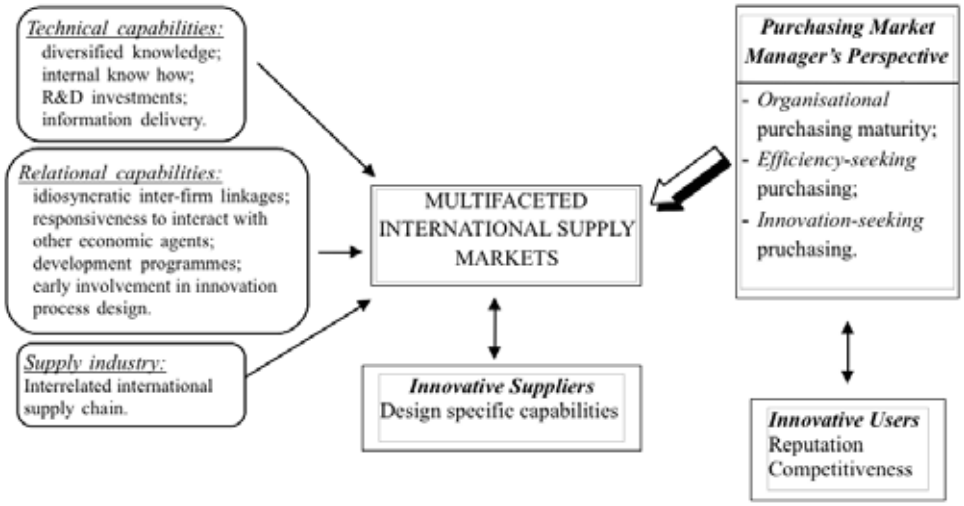
Because purchasing and manufacturing form the core of the supply chain, the consistency between both functional strategies is crucial to support the corporate-level competitive strategy.

Despite the recognized importance of the horizontal fit between purchasing and manufacturing, empirical research in this area is scarce. Because purchasing and manufacturing form the core of the supply chain, the consistency between both functional strategies is crucial to support the corporate-level competitive strategy. The third hypothesis is developed to contribute to this body of research:

**Hypothesis 3.** In this paper, we hypothesize that different manufacturing strategies effect different supply management practices.

The management literature implicitly already classifies 'value chain architectures' by discussing specific aspects in isolation, such as order fulfillment and product customization strategies, sourcing configurations and supplier relations, global sourcing and outsourcing. Furthermore, as outlined above, the need to align product, process and value chain layout has been proposed. Thus the question arises as to whether a more comprehensive classification would contribute to either the academic debate or managerial practices. In this paper we thus define 'value chain architecture' as a design of the inter-firm relationship consisting suppliers, manufacturers, and users, in order to maximise value creation for the focal firm. See figure 1 about our theoretical framework.

*Fig. 1 - A conceptual model of attraction in buyer-supplier relationship*




## 3. Research design and methodology

### *a) Information selection and data collection*

Due to the emerging character of the observed phenomenon, an exploratory study was chosen as a suitable research method.

Our methodological choices and theorizing in this paper are characterized by an analytical process of identifying and delineating what falls into the broader gambit of discovery rather than justification. As far as the methodology adopted is concerns I would like to highlight that the research was based both from the literature and empirical reality, combining induction and deduction.

An interpretative, qualitative approach - utilizing selected multi-case study interviews (Yin, 2008) such as the primary data collection method - is chosen because it helps to navigate and understand the complex issues that are associated with the data quality concept, and its relation to the factors involving managerial practices to implement facilities in modern relationships within the international supply chain. 'Oriented case studies' investigate the issue within a real life context, drawing on the reviews of a number of sources, and providing the means to review theory and practice iteratively (Ellram, 1996; Flynn et al., 2010; Hennenberg et al., 2010). Multiple cases ensure that common patterns are identified rather than generalized from what might be chance occurrences (Eisenhardt and Schoonhoven, 1996).

In an effort to study connected systems, as opposed to individual companies and dyads, this research adopted an approach similar to previous multi-tier case studies (Holweg and Pil, 2008), aiming for representing many tiers and their interactions rather than a comprehensive picture of any given tier.

This study, surrounding the relationship-building approach, adopted a multi-phase methodology during the period 2005-2013.

As a check for construct validity, this research used a multitude of data sources. Combining sources of evidence, while shifting between analysis and interpretation, usually denotes triangulation, as an attempt to guard against researcher bias and to establish a line of evidence during within case analysis. Triangulation has been sought both within firms, by comparing the interview responses and field visit observations, and between firms, by comparing the responses of interrelated firms.

*b) Fieldwork protocol*

The exploratory nature of our research was supported by semi-structured interviews with leaders and participants from all the functional areas involved in supply activity improvement processes, as well as with heads of other divisions effected by the process.

In the current stage of this study, the fieldwork protocol leverages a data set of 10 medium-sized multinationals belonging in many mechanics sub-sectors that are localized in central Italy. Therefore, the purpose of the case was not to validate the proposed buyer-supplier relationship framework but rather to support the interpretation and refinement of the framework from within an empirical context.

Our setting is the business or industrial products industry. These companies were chosen as respecting several criteria: 1) the companies interact with suppliers that have a significant impact on their activity and competitiveness; 2) these ten companies were chosen after discussion with their

purchasing managers so as to identify the ones that affirmed that they conducted intensive purchasing activity; 3) given the exploratory nature of this study it was decided to focus on industrial goods production so as to limit contingency phenomena; 4) we also paid attention to the innovativeness in production activities of the companies contacted.

Given the nature of the research, interviewees were not required to stay within the parameters of the standard questions: an interviewee who seemed to be exploring a fruitful avenue was permitted to continue in that direction.

This semi-structured protocol changed over time as each subsequent interview was used to triangulate the responses from previous interviews and expanded the list of questions as we uncovered more elements of the planning process. This continuous expansion and improvement of the protocol after each interview is a normal part of the process of grounded theory development (Makkone and Olkkonen, 2013; Brandenburg et al., 2014).

Finally, part of the protocol also included direct observation of the main planning meetings and extensive debriefing time afterwards conducted with the same managers in order to validate the researchers' results findings and analyses. This was accomplished by showing the data analysis to the participants to allow them to evaluate and provide feedback about the accuracy of the researchers' understanding.

This validation process was performed face to face in the executives' offices. This allowed us to observe the behaviour of the different actors in the planning process and to obtain explanations for observed behaviour during the meetings.

## 4. Purchasing portfolio strategies

*a) Competence and skill profiling*

More generally, consistent with stakeholder theory (Parmar et al., 2010), our findings reinforce the need to take account of external as well as internal stakeholders when considering the drivers of buyer-supplier relationship's structure. In fact, in seeking to understand the drivers of buyer-supplier outcomes, the majority of empirical research has concentrated on the role played by internal firm factors such as strategic relatedness, organisational fit and culture compatibility.

This has generated considerable insights into how buyer-supplier relationship impacts 'internal supply actors', but in comparison relatively less academic attention has been paid as to how external players, such as competitors belonging to diversified but linked (or inter-connected) supply chain, are effected by, and respond to, buyer-supplier relationship activity.

With the increased importance of procurement as a function, suppliers and their dedicated management have increasingly been seen as a source of value (Schneider and Wallemburg, 2013). The most fundamental distinction here is the relationship type or strategy, which should be seen on a continuum between transactional or competitive on the one extreme and relational or cooperative on the other.

Industrial marketing literature has long recognized the importance of a firm's relationship with suppliers and users as a key driver of firm performance in business-to-business (B2B) markets (Cannon and Perreault, 1999). The buyer-supplier relationship has been shown to be one of the primary determinants of the composition of purchasing portfolio, of the market share and profitability.

'Supply chain relationship formation' is the process to select proper suppliers and the way to reach an agreement between suppliers and users (Petersen *et al.*, 2003). Our research focuses on the exchange relationship between the provider and the user, focusing performance-based relationships as a typical application field for relatively new service dominant logic. This service logic argues for a marketing perspective of user value focus, interaction and relational orientation by no longer distinguishing goods and services. Very often providing an integrated solution will extend beyond the capabilities of an individual provider company. To actually relieve the buyer of the operational responsibility, it is recommended that a system integrator (or solution provider) coordinates the necessary suppliers and bundles their inputs (Ng and Nudurupati, 2010; Kleemann and Essig, 2013). More recently, competency profiling is also commonly carried out during the purchasing portfolio design. More research concentrates on observing the changes in key sets of purchasing skills, developing taxonomies of purchasing skills and focusing on identifying and categorizing skills; very little research addresses skills development (Feisel *et al.*, 2011; Eltantawy and Giunipero, 2013).

The age of globalization is characterized by shared standards and practices across the globe and at the same time enormous complexities and uncertainties. By building supply chain system capabilities in the age of global complexity, firms face both global and local pressures as their value chains are extended from one end to the other end of the world and managing supply chain complexity requires firms and researchers to examine more than the existing theoretical framework (Grogaard, 2012).

Supply chain risk management entails identifying the potential sources of risk and implementing appropriate actions to avoid or contain vulnerability (Srinivasan et al., 2011; Makkone and Olkkonen, 2013; Brandenburg et al., 2014). Hence, in assessing supply-chain vulnerabilities companies need to identify the risks not only to their own operations but also to all other entities, as well as those caused by linkages between organisations.

Jüttner et al. (2003) define supply chain vulnerability as the propensity of risk sources and risk drivers to outweigh risk mitigating strategies, thus causing adverse consequences and favouring the supply chain's ability to effectively serve all tiers of users and the end-customer.

Supply chain management entails proactive relationship formation and integration among various tiers in the chain (Trkman et al., 2007; Vilko and Hallikas, 2012).

*b) Purchasing strategy in ISMN*

Innovation processes are recognized to have both a technological and a market dimension. The technological dimension of innovation is typically seen as primary and external to market processes and the challenge is to adapt to or create markets for it. In this respect, the research on market devices has directed attention to new objects and means of market innovation (Kjellberg et al., 2015). A central driving force in this process is the wish to create transitory market power by exploiting the relationship between innovative effort and market power.

Given that the question is no longer one of whether or not to innovate but rather how to strategize for innovation in order to achieve competitive advantage for organisations, it has emerged that the roles of external constituents, in particular those of suppliers, are vital to the success of the focal firm's innovation strategy. Purchasing strategy and its potential contribution to the firm's objectives has attracted considerable attention. The present article deals with the so-called innovative supplier market niche (ISMN), which is defined as being the context in which it is possible to find suppliers with developed production systems and experience of the components considered for outsourcing (Azadegan, 2011; Holmen et al., 2013; Rehme et al., 2013).

This situation differs from the traditional view of a few dominant suppliers controlling elements such as market conduct and prices. Most of the research in the area has focused on the strategic nature of purchasing and the importance of linking purchasing to corporate strategy.

Research on the vertical alignment between supply management and the overall business strategy found that arm's length interactions, traditionally associated with cost-reduction strategies, were superseded by cooperative interactions in diversified and strongly interrelated international supply chains.

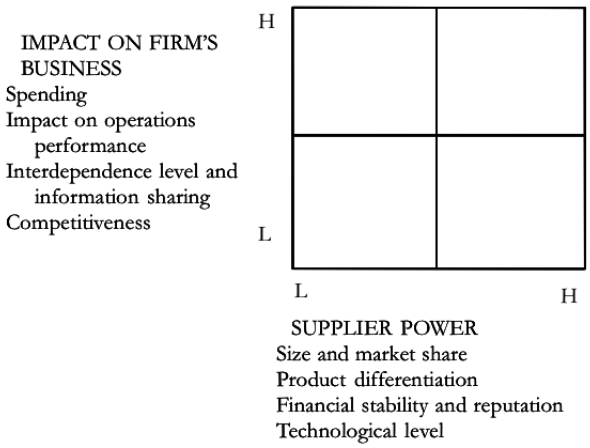
We find that collaborative decision making has a positive significant impact on long-term future collaboration. Overall, results do not show a strong link between manufacturing and purchasing strategies. Manufacturing plants in our sample do not align their manufacturing strategy with dissimilar purchasing practices.

Supply chain formation has become a crucial problem in supply chain, because each participant, i.e. users as well as suppliers, needs to determine its partners as soon as possible in order to maximize its profits. Then, the goal of supply chain management is to plan production to meet requirements of users in order to minimize inventory in the supply chain.

To allow providers to identify the efficiency potential and to amortize the respective investments to leverage them, a long-term perspective is usually necessary for performance-based relationships. It may therefore be assumed that performance-based relationship is applied to complex product-service systems with a long life-cycle, which require considerable efforts to maintain the systems. (Knight et al., 2014). In this sense the matrix below (see figure 2) is the guide structure to develop a segmentation of the firm's supplier base according to the categories' list. Portfolio models are widely used for management problems in various fields and disciplines, including the management of buyer–supplier relationships. The basic idea is the simplification of a complex problem. A portfolio model is "a tool that combines two or more dimensions into a set of heterogeneous categories for which different (strategic) recommendations are provided" (Gelderman and Semeijn, 2006).

The purpose is to find the best way to manage the purchasing relationship (see figure 2).

*Fig. 2 - Supply segmentation within purchasing relationship*




*Source: our elaboration*

*c) Methodologies of purchasing negotiation strategy*

The stream of literature, based on TCE, argues that firms attempt to maximize their flexibility in uncertain environments by reducing their reliance on inter-firm relationships. TCE-based reasoning suggests that under uncertain circumstances, ex post performance evaluation of the exchange partner is difficult when transactions derivate from expectations. Ex ante, in an environment fraught with uncertainty the parties to the exchange find it difficult to develop long lasting and trusting relationships as such relationships involve mutual commitment and drafting, negotiating and monitoring complex contracts. Social relationships are formed and maintained because the partner firms offer reciprocal benefits to one another over time (Eisenhardt and Schoonhoven, 1996). Although there has been considerable academic progress on supply chain flexibility (SCF), most of the previous studies on this topic have been confined to a single firm, thereby neglecting other important aspects of a supply chain. Therefore, the development of empirical multi-tier studies capable of investing the inter-organisational components of SCF is required (Stevenson and Spring, 2009; Liao et al., 2014). Within this context, this paper has the purpose of exploring the main effects of flexible supply chain capabilities, especially in upstream relationships to provide products to business-customers.

In this context, supply chain planning is a cross-functional effort within a firm: this multifaceted activities identify social elements that influence the performance of the planning process within the firm and place the information processing attributes within a broader social and organizational context. Then, the successive step is to identify a process (or metrics) as a mediator that can affect organizational outcomes. In this sense we have proposed that more mature organisational purchasing functions use a greater number of cost-saving levers (efficiency saving strategies). Moreover, the use of complex methodologies should be correlated with high cost savings. Effectively, we find that our firms, characterised by complex management methodologies, can devote themselves to strategic activities, which require greater and more and more specialised skills.

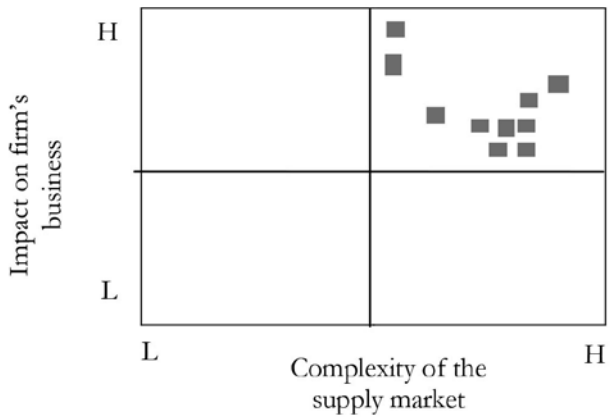
Herein, the cross case analysis is presented (see figure 3). A graphical cross case synthesis is provided in Fig. 3, where the supply chain constraints have been categorized by the factors that represent supply market complexity and by the impact on firms.

As analysed firms develop organisational purchasing functions, they become more involved in several purchasing strategic activities, implying that they can spend less time on operational activities. They are aware of the necessity of organisational design, contractural procedures, and of vendor rating based on a rigorous segmentation or the categorization of the client portfolio. It is exactly catgory segmentation that puts them at

a crossroads: to initiate multiple and differentiated supply strategies that depend on a variety of factors: the location of the production plant both of the purchaser and the buyer, the type of product purchased, the phase of the life cycle of the product, that is supplied and of the product that is made by the purchaser.

However, despite the fact that all the multinationals observed should change the way we relate to the markets upstream with new forms of relations-contracting, the empirical survey shows that many are struggling to redefine (re-engineering) purchasing processes, pursuing traditional forms of bargaining based on institutional procedures of enterprises consolidated over time.

*Fig. 3 - Complexity of the purchasing relationships*




## 5. Concluding observations

There is now an important set of work promoting the idea of stability and partnerships between companies and their suppliers. Exchanges between buying firms and suppliers have largely been presented through their evolution from adversarial/transactional/ competitive exchanges to collaborative/relational/cooperative ones. In an age of strongly increasing focus on core competencies, the inputs of external suppliers and providers play a major role in a firm's success. Outsourcing to innovative suppliers allows medium sized firms to learn from suppliers' knowledge about specific components to enhance their manufacturing processes. Our analysed user no longer specifies the individual components of a solution but rather the desired outcome (as the value expected from the solution) whereas the supplier' compensation is tied to successfully achieving this outcome.

A systematic review of pertinent literature to identify the dimensions of strategic sourcing was conducted. The central research problem of this study was the conceptualization and operationalization of the second-order construct strategic sourcing centricity underpinned by the RBV.

This study refers to strategic sourcing dominant logic as strategic sourcing centricity and describes it as a sourcing management's mindset based on learning, performance, planning, and relational orientations and manifests itself in the implementation of strategic sourcing to meet supply management objectives and satisfy stakeholder requirements.

Our qualitative findings present an empirical contribution to organizational control literature and purchasing strategies theory, and illustrate that specific types of organizational control are necessary for the effective operation of both efficiency-seeking outsourcing and innovation-seeking outsourcing.

Over time, purchasing has evolved to play a more strategic and less operational role in organisations.

This study examines existing organisational purchasing in medium-sized manufacturing firms, that present the specific purchasing tools and management methodologies. Further, this study explores hypotheses based on current theory to empirically examine the new purchasing strategic segmentation choices.

The first hypothesis focused on organisational purchasing maturity. The empirical research indicates that firms with an organisational purchasing function have for some time developed managerial tools which are a part of the organisational structure of the firm. These tools are sophisticated but at the same time it is difficult to develop management methodologies that are based more on key strategic activities rather than on operational activities.

Contrary to our prediction, our results reveal that firms with organisational stuctures, that are well oriented towards the management of supply activities find it difficult to manage the global supply market in a multifaceted manner. They identify from time to time, the way to relate in ways that are different both with consolidated and with new suppliers.

The factors considered as potential influencers in the collaboration process competencies of medium enterprises can be divided into the following ways: idiosyncratic inter-firm linkages, meeting frequently, international purchasing activities, negotiating functional transfer, joint operational planning, and early involvement in the innovation or engineering processes design. The importance of product design as a main determinant of process design has been emphasized in operations management literature for decades, but the direct and indirect impacts of product design on process and supply chain activities is a research area that has received less attention to date.

This paper, examining the influence among product design, process and supply activities, determines how these influences develop and evolve, and in particular, explores how these changes influence global supply chain behavior and capabilities. A key point to note in our finding is that, one of the motivations for engaging in these types of relationships is to share and gain complementary skills and assets to enable the development of innovations. Medium manufacturing firms are likely to choose and collaborate with specific partners and types of networks and relationships that will enhance their innovative manufacturing operations. Supplying 'innovative core components' can be criticized: on the one hand, the buyer firm can find more difficulties to distinguish between the company's present and future core competencies; on the other hand, from this supply activity arises the risk that companies may outsource the more problematic activities.

Regarding the hypotheses in 2a e 2b, research on the development and sharing of knowledge in the area of purchasing and supply management has been limited. Our study explores the case of a medium sized multinational enterprise where headquarters share knowledge and expertise using a purchasing portfolio approach for the development of differentiated purchasing and supplier strategies.

The study shows that the portfolio tool forces cross-functional teamwork, which improves the internal coordination within business units, but not across business units. The pursuit of integration and coordination of procurement across worldwide business units is commendable. Purchasing portfolio management is positively related to operational performance and to product innovation performance too. Overall, our results do not show a strong link between manufacturing and purchasing strategies. A possible explanation could be that the purchasing practices reported in this study are best practices that can support any type of manufacturing strategy. Manufacturing plants in our sample do not align their manufacturing strategy with dissimilar purchasing practices. Collaboration, focuses on supplier quality, delivery, price, and supplier potential; and the adoption of coordination mechanisms with suppliers has been associated with superior manufacturing performance. This study suggests that this finding is true for firms that have different manufacturing priorities.

Future research seeking to develop more fully specified models should embrace a stakeholder approach, including specific considerations of the outcome of a purchaser's strategy regarding direct competitors.

As far as hypothesis 3 is concerned, the difficulty in designing the implementation of such relationships with suppliers can also be considered relative to the existence of a real "supplier orientation" within firms. Indeed, the purchasing function appears as mainly focusing on problems of connection between the suppliers' activities (providing raw materials and components) and the buyer firm's activities. We can observe the rela-

tionships between the purchasing function of a company and its suppliers more as manipulation of "activity links".

A suggested avenue for further research might be to design a real-time longitudinal case study, rather than a retrospective one as was employed here. Although finding access to study contingency changes, 'purchasing design portfolio', and potential operational difficulties as they occur will probably be quite a challenge, the advantage is clear. Real-time data, especially from interviews, are more accurate.

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## Abstract

Environmental uncertainty is a fact in today's supply markets. In this paper we develop a model of managing purchasing markets through a building of a global purchasing portfolio, finalized to improve both supply chain relationship quality and supply chain performance. The research design was a multiple case study with internal and external validity checks, within case analysis and cross-case comparisons, based on a research framework that scrutinises the relationships between supply chain contextual constraints and supplier's segmentation processes. Our analysis yields several interesting findings. First of all empirical evidence indicates the factors considered as potential influencers on the collaboration process competencies of medium enterprises. Our results demonstrate that important resources for innovation may be accessible through innovative supply relationships.

## Riassunto

I contesti economici e competitive internazionali caratterizzati da incertezza e dinamicità impongono alle imprese multinazionali di medie dimensioni di modificare le strategie internazionali di fornitura e di ridisegnare i processi per la gestione dei mercati di fornitura.

Il paper presenta un modello di gestione dei mercati di fornitura basato sulla progettazione di un "portafoglio di fornitura", allo scopo di migliorare non soltanto le "relazioni di fornitura", ma anche le performance degli attori economici appartenenti a tutti gli stadi della catena di fornitura. La ricerca utilizza un approccio interpretativo-qualitativo e si avvale dello studio di casi aziendali che, pur presentando da tempo un'area degli approvvigionamenti ben strutturata in senso organizzativo, devono rivedere le modalità di relazionarsi con i mercati di fornitura in seguito sia all'emergere di nuovi vincoli sia alla necessità di segmentare in modo nuovo i mercati "a monte". Uno degli obiettivi conoscitivi è l'individuazione delle nuove competenze che le imprese di media dimensione dovrebbero accrescere, al fine di gestire processi collaborativi di filiera generatori di valore.

**JEL Classification:** L6, M11, M 21

**Keywords (Parole chiave):** mercati di fornitura, segmentazione dei fornitori, relazioni innovative di filiera (supplier markets, purchasing segmentation, innovative supply chain relationships)

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