

THE DIMENSIONS OF PURCHASING COMPETENCE: A SYNTHESIS FROM LITERATURE

Cristina S. Rodrigues¹, Edite M.G.P. Fernandes¹ and F. Vitorino Martins²

¹ University of Minho, PORTUGAL; ² University of Porto, PORTUGAL.

Abstract

Organizational buying behavior has been dramatically changing due to transformations on the nature of industrial competition. This changing environment implies great demands to companies to remain competitive. As firms recognize the purchasing function as an important resource for obtaining high quality levels, fast deliveries and cost savings, it reveals opportunities for the purchasing management to become a business key contributor. This paper presents a critical literature review concerning the new strategic role for purchasing. We develop a construct of purchasing competence using three dimensions identified from literature: purchasing interaction, purchasing importance, and purchasing task execution.

Introduction

Since the development of the first theoretical models, organizational buying behavior has received considerable attention in academic research. One of its main research *focus* of interest was the understanding of buying behavior and its predictors. Nevertheless, organizational buying behavior has been dramatically changing due to transformations on the nature of industrial competition. Global competitiveness, industry restructuring through mergers or alliances, TQM philosophy, and information technologies/ technological advancements demanded firms to search for new competitive advantages (Beal and Lockamy III 1999; Carr and Pearson 2002; Sheth 1996).

As firms recognize the purchasing function as an important resource for obtaining high quality levels, fast deliveries and cost savings (Carr and Pearson 2002), it reveals opportunities for the purchasing management to become a business key contributor. However, the transformation to a more strategic focus assumes that effective management of purchasing decisions provides firms with competitive advantages (Narasinham et al. 2001). It requires the recognition of what are purchasing key elements and to understand which antecedents are necessary to its development. Creating a sustainable competitive advantage through purchasing and supply management depends on the development of competencies that are not easily duplicated by competitors (Carter and Narasimhan 1996b). This is a slow and challenging process.

We are concerned with the development of the purchasing competence construct. More specifically we intend to identify its components (how organization characteristics will affect its purchasing competence?). This paper is organized as follows. First, we present a discussion of the changing role of

purchasing. Next, a review of strategic purchasing literature is made. This is followed by the definition of a construct to purchasing competence. The paper concludes with a discussion of implications and future research.

Purchasing role development

Interactive assessment provided by purchasing managers in the late 1990's, revealed important trends relating to the future of the purchasing function such as "cross-functional teams" or "sourcing teams", "cost avoidance", "supply-base reduction", "purchasing technical qualifications", "total quality management", "supplier integration", "buyer-supplier relationships" or "strategic cost management" (Carter and Narasimhan 1996a, 1996b; Ellram and Pearson 1993). More recently, a purchasing executive research developed by Carter et al. (2000) identified the most important areas of concern in a ten year forecast, including "electronic commerce", "strategic cost management", "strategic sourcing", "relationship management", and "performance measurement".

What is common to all these trends? First, a realization that purchasing affects more than the material flow along the value chain (Carter and Narasimhan 1996b; Carter et al. 2000). Traditionally treated as a lower level operating, purchasing's role is changing due to the increasing emphasis on reduced cost and improved quality, on faster product development through cross-functional teams, and on closer buyer-supplier relationship (Pearson 1999; Watts et al. 1995). Finally, the enunciated trends indicate awareness that purchasing has a role in corporate strategy. Suppliers and supply management can play together a strategic role in achieving sustainable competitive advantage in rapidly changing markets (Carter and Narasimhan 1996b, 1996c).

Strategic nature of purchasing

What is then the difference between implementing strategies and acting strategically? The excessive use of the term "strategic" has created confusion (Noller et al. 2005) and was often misused with firms using the term to mean important rather than the nature of the word itself (Cousins and Spekman 2003). Therefore, the topic of strategic purchasing, and its strategic relevance, is a recurrent topic of discussion among academics (see for instance Ellram and Carr 1994; Mol 2003; Noller et al. 2005; Ramsay 2001).

In developing a framework for linking purchasing to organizational performance, Carter and Narasimhan (1996c) demonstrated empirically that purchasing strategy and tactics are highly correlated with business performance. Other empirical evidences of purchasing impact were found for business performance (Carr and Pearson 2002; Carter and Narasimhan 1996c; Carr and Smeltzer 1999a, 1999b), supply management (Carr and Smeltzer 1999a; Chen et al. 2004; Spekman et al. 1999), external service quality (Stanley and Wisner 2001, 2002), customer satisfaction (Brookshaw and Terziovski 1997; Carter and Narasimhan 1994), and total quality management (Carter and Narasimhan 1994).

At this stage, it is important to distinguish between "strategic function" and "purchasing strategy". Purchasing strategy comprehend the specific actions necessary to support purchasing objectives. Strategic function means that the

purchasing function is considered strategic, and therefore contributes and participates in the firm's strategic planning processes (Carr and Smeltzer 1997; Ellram and Carr 1994).

A purchasing function that is clerical in nature, reactive to others functions, no integrative and focused on short-term issues, is considered a nonstrategic function. Processing orders or expediting purchase order requests from other departments are examples of routine activities performed by purchasing which are not perceived as important or skilled by other functions or by top management (Carr and Pearson 2002).

Purchasing Interaction

Under the pressure to increase competitiveness, many firms have form cross-functional teams in order to speed up the new product development or equipment acquisitions, improving quality or reducing costs. Even in key decision issues of the purchasing function was possible to identify a trend toward team responsibility (Ellram and Pearson 1993; Pearson 1999). Cross-functional teams also engage the purchasing function to becoming increasingly involved in areas out of it previous responsibility like new product development (Carr and Pearson 2002); Di Benedetto et al. 2003; Mendez and Pearson 1994). As Giunepero and Vogt said: *“the strength of cross-functional teams lies in promoting different viewpoints and participation towards a solution of common problems”* (Giunepero and Vogt 1997, p.10).

Empowered teams are a similar concept which has developed by Giunepero and Vogt (1997). Usually categorized as project/task (for example, a capital equipment evaluation team) or ongoing relationship (for example, a sourcing team), the goal of empowered teams is mutual organization and individual success.

For Ellram and Pearson (1993) team participation can contribute to a faster integration of purchasing function, and consequently to an enlargement of the visibility and opportunities of the purchasing contribute. A similar position was taken by Pearson et al. (1996) who stated that the increasing use of cross-functional teams in sourcing and related procurement will help enhance the perception of others about the function. Also Murphy and Heberling (1996) emphasized that team participation will lead to more purchasing influence in the decision-making process, and will increase perceived purchasing status from others functions and top manager. Consequentially, it is expected that being part of a cross-functional team can accomplish several opportunities for purchasing function. As Carr and Pearson stated *“as purchasing becomes involved in strategic planning activities such as product development, it is more capable of making strategic planning activities”* (Carr and Pearson 2002, p.1048).

However, is cross-functional team *per si* the only guarantee of improved performance? Trent and Monczka (1994) studied effective cross-functional sourcing teams and realized that supplier participation and involvement was one of the critical factors to success. Carter and Narasimhan (1996c) also accomplished that suppliers play a very significant role in success of firm's effort at purchasing strategy development. Additionally, Spekman et al. (1999)

recognized on their research that high performing companies managed their supply base as value resource.

Thus, a cooperative relationship with suppliers through integrative strategies is another critical factor in measure of success. Empirical contributions were made by Carr and Pearson (2002); Narasimhan et al. (2001), Ragatz et al. (2002), and Stanley and Wisner (2002, 2001). Therefore, the key challenge of managing supplier involvement is to balance two types of processes: to guarantee the relevant and expected contribution of the project assignee's supplier, and to make certain future project integrations of supply base (Wynstra and Echtelt 2001).

Considering that different contexts demand different approaches to sourcing, Spekman et al. (1999) identified four different levels of sourcing and supplier relationships ranging from the most traditional notions of purchasing management to a more comprehensive view of supplier management. Di Benedetto et al. (2001) also defined a three-stage sourcing strategy development that goes from the "traditional" (internal cross-functional teams) to the "strategic" (supplier involvement and mutual decision-making) role of purchasing in new product development.

Purchasing Importance

Literature's review also suggests that a strategic purchasing function needs to be viewed by top management as important, and to be treated as an equal to other major functions in the firm. White and Hanmer-Lloyd's data analysis (1999) found that a purchaser is likely to be significantly impaired from achieving a significant strategic role by inadequate internal status and trust, and by the supportive involvement and influence of the firm's CEO. Spekman et al. (1999) apprehended that companies with outstanding sourcing strategies appear to share two characteristics: executive level commitment to building sourcing capabilities and viewing sourcing as a cross functional capability. Carter e Narasimhan (1996c) reached as well that the attached importance of purchasing within organization was the most critical factor for performance, and consequently a high purchasing contribute requires a top management emphasis on the purchasing function. Their previous work (Carter and Narasimhan 1994) also realized that a requisite for TQM success is top management's acceptance of purchasing's strategic role.

Therefore, purchasing importance emerges as a third factor, in addition to cross-functional teams and supplier involvement. Giunipero and Vogt (1997) realized an enhanced team participation and implementation in those organizations in which purchasing perceived top management's view of the function as strategic or profit oriented. The conceptual work of Watts et al. (1995) linking purchasing to corporate competitive strategy, also stressed that this viewpoint requires top management recognition of the purchasing critical role.

Several construct conceptualizations concerning the perceived importance of purchasing function were studied on literature: status and recognition of purchasing versus other functional areas (Pearson et al. 1996), status of the

purchasing function (Carr and Smeltzer 1997), importance of purchasing and supply management (Ellram et al. 2002; Zsidizin and Ellram 2001).

As a consequence of this increased purchasing importance, Carter et al. alleged that: *“increasingly, time spent in purchasing/supply chain activities will be viewed as a very positive source of experience for future CEOs”* (Carter et al. 2000, p.18).

Purchasing Activity Execution

Within an R&D environment, Stuart (1991) realized that meaningful purchasing involvement appeared to require a proactive purchasing, i.e., a purchasing function that actively searches for information concerning future directions and expected purchases. Smeltzer et al. (2003) developed a seven-step process that integrates strategic sourcing and negotiation planning. This process indicated the appropriate activities to perform in order to lead a sourcing team to the optimum negotiation plan for a given buy. Both these examples put an emphasis on the activities that need to be performed to achieve something. Therefore, it can be stated that purchasing function needs to know “how to do” (appropriated activities) the best purchase, in order to contribute effectively to business goals.

Many studies on literature focus on the nature of the organizational buying process (see for instance Johnston and Lewin 1996; Kauffman 1996; Sheth 1996). Considered one of most popular research area in the field of organizational buying behavior, the understanding of the decision-making process has implications to sellers and buyers in a business-to-business market. For buyers this understanding is important to make more efficient and effective decisions. For sellers this understanding is critical to influence the buyers’ decision (Park and Bunn 2003, p.237).

Nevertheless this vast research’s interest on buying process, Kauffman (1996) found a lack on research for a more general framework with the exception of Bunn’s work. Bunn (1993) developed a classification scheme of six buying decision approaches that ranged from “casual” to “strategic new task”. In order to accomplish that, she considered buying activities and situational characteristics. More recently Moon and Tikoo (2002) replied Bunn’s work, and recognized the usefulness of the four Bunn’s buying activities for classifying the buying decision approaches.

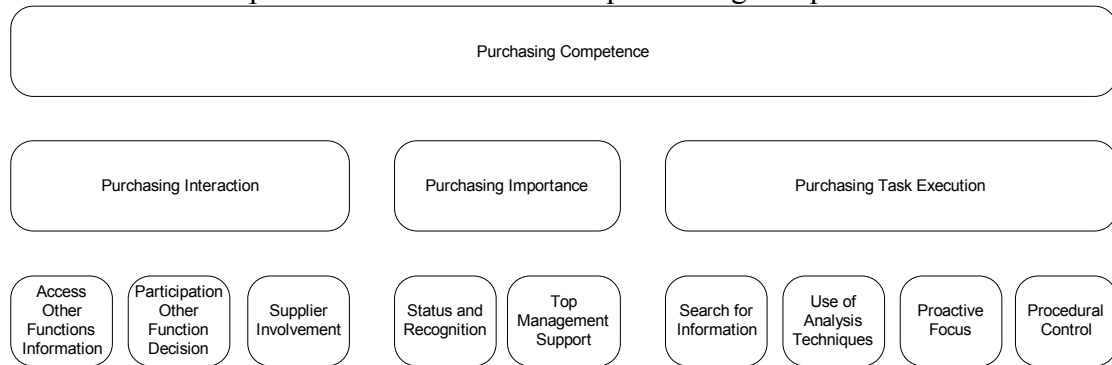
It is clear that many constructs used empirically in the strategic purchasing literature are related to purchase decision making and, in particular, to the more general Bunn’s buying activities. A few examples are provided. The constructs of “market monitoring” (Ellram et al. 2002; Zsidisin and Ellram 2001), “use of technology” or “information technology” (Ellram et al. 2002; Zsidisin and Ellram 2001), and “change in supplier market” (Carr and Smeltzer 1999a) take into account activities relating to “search for information” activities. The construct of “total cost of ownership” (Ellram et al. 2002; Zsidisin and Ellram 2001) considers activities concerning the “use of analysis techniques”. The constructs of “purchasing and supply management strategic orientation” (Ellram et al. 2002) and “strategic purchasing” (Carr and Pearson 2002; Carr and Smeltzer 1997,

1999a, 1999b; Zsidisin and Ellram 2001) consider activities relating to the “proactive focus” definition.

The concept of purchasing competence

Purchasing competence is the latent capability to coordinate, organize, and develop the industrial buying effectively in a way that produces value to the firm. Specifically, the degree of purchasing competence of a firm is defined as the degree of purchasing interaction with other functions and key suppliers, the degree of purchasing internal importance, and the level of purchasing activity execution. The proposed measurement model is presented in *Figure 1*, which shows the relationship of the underlying dimension to the proposed construct purchasing competence.

Figure 1
Conceptual model: dimensions of purchasing competence



Purchasing interaction is captured in terms of purchasing access to information generated by other functions, purchasing participation in decisions made in other functions, and supplier involvement. The following studies can be used in developing measures considering elements of purchasing interaction: Carr and Pearson (2002); Carr and Smeltzer (1999a); Ellram et al. (2002); Pearson et al. (1996); Ragatz et al. (2002); Spekman et al. (1999); Zsidizin and Ellram (2001).

Purchasing importance is defined by the perceived status and recognition of purchasing versus other functional areas, and by perceived top management support. Measures can be derived from the following studies: Carr and Smeltzer (1997); Ellram et al. (2002); Pearson et al. (1996); Zsidizin and Ellram (2001).

Finally, purchasing task execution is measured in terms of execution degree of the buying activities: search for information, use of analysis techniques, proactive focus, and procedural control. Items for task execution derived directly from Bunn’s scales (1993).

Two former constructs of purchasing competence were identified on literature: Das and Narasimhan (2000) and Narasimhan et al. (2001). Both considered purchasing competence as a latent variable with several first-order dimensions. Despite name similarities, our construct has basically two differences from previous constructs. First, it considers as a key factor the internal

environment in which the capabilities are performed. The top management support has a significant impact in the way the function is perceived, and that perception induces the purchasing involvement in strategic decisions. Second, as a decision making process, our construct also emphasizes the activities performed by purchasing to assure the “best buy”. In our understanding of purchasing competence, this should be a key issue in all organizations.

Conclusions and management implications

This paper develops the purchasing competence construct and identifies its dimensions. In order to accomplish that, it provides a summary of the current debate and research on strategic purchasing and the relationship to performance. Our purchasing competence construct considers three dimensions: purchasing interaction with others functional areas and key suppliers, purchasing importance concerning the internal status, recognition and top management support, and purchasing task execution concerning the purchasing activities of search of information, analysis techniques, proactive focus and procedural control.

The knowledge of the purchasing competence dimensions could help managers in two ways: (1) they can use it as a diagnosis tool of their strategic purchasing level (strategic or not), and (2) they can use the underlying variables as key factors to improve their purchasing alignment with business goals and plans. There are clear benefits associated with elevating the purchasing function to a strategic function, for example at the level of new product and service development, cost reduction, and key suppliers strategic alliances.

As future work, we intend to implement a cross-industry survey to validate our dimensions of purchasing competence. We also intend to study the impact of purchasing competence on organization success, integrating it in a more comprehensive model that acknowledges a network environment – business partners. At a first stage, our research will comprehend a definition of a structural equation model concerning the following set of three hypotheses: (1) increased purchasing competence has a positive effect on firm’s performance, (2) increased purchasing competence has a positive effect on firm’s innovativeness and (3) increased market orientation has a positive effect on firm’s purchasing competence.

References

- Brookshaw, T., Terziovski, M. (1997). The relationship between strategic purchasing and customer satisfaction within a total quality management environment. *Benchmarking for Quality Management & Technology*, 4(4), 244-258.
- Bunn, M.D. (1993). Taxonomy of buying decision approaches. *Journal of Marketing*, 57, 38-56.
- Carr, A.S., Pearson, J.N. (2002). The impact of purchasing and supplier involvement on strategic purchasing and its impact on firm’s performance. *International Journal of Operations & Production Management*, 22(9/10), 1032-1053.

- Carr, A.S., Smeltzer, L.R. (1997). An empirically based operational definition of strategic management. *European Journal of Purchasing & Supply Management*, 3, 199-207.
- Carr, A.S., Smeltzer, L.R. (1999a). The relationship of strategic purchasing to supply chain management. *European Journal of Purchasing & Supply Management*, 5, 43-51.
- Carr, A.S., Smeltzer, L.R. (1999b). The relationship among purchasing, benchmarking, strategic purchasing, firm performance, and firm size. *Journal of Supply Chain Management*, 35(4), 51-60.
- Carter, J.R., Narasimhan, R. (1994). The role of purchasing and materials management in total quality management and customer satisfaction. *International Journal of Purchasing and Supply Management*, 30(3), 3-13.
- Carter, J.R., Narasimhan, R. (1996a). A comparison of North American and European future purchasing trends. *International Journal of Purchasing and Supply Management*, 32(2), 12-22.
- Carter, J.R., Narasimhan, R. (1996b). Purchasing and supply management: future directions and trends. *International Journal of Purchasing and Supply Management*, 32(4), 2-12.
- Carter, J.R., Narasimhan, R. (1996c). Is purchasing really strategic? *International Journal of Purchasing and Supply Management*, 32(1), 20-28.
- Carter, P.L., Carter, J.R., Monczka, R.M., Slaughter, T.H., Swan, A. (2000). The supply of purchasing and supply: a ten-year forecast. *Journal of Supply Chain Management*, 36(1), 14-26.
- Chen, I.J., Paulraj, A., Lado, A.A. (2004). Strategic purchasing, supply management, and firm performance. *Journal of Purchasing & Supply Management*, 22, 505-523.
- Cousins, P.D., Spekman, R. (2003). Strategic supply and management of inter- and intra-organisational relationships. *Journal of Purchasing & Supply Management*, 9, 19-29.
- Das, A., Narasimhan, R. (2000). Purchasing competence and its relationships with manufacturing performance. *Journal of Supply Chain Management*, 36(2), 17-28.
- De Boer, L., Ebben, M., Sitar, C.P. (2003). Studying purchasing specialization in organizations: a multi-agent simulation approach. *Journal of Purchasing & Supply Management*, 9, 199-206.
- Di Benedetto, C.A., Calantone, R.J., VanAllen, E., Montoya-Weiss, M.M. (2003). Purchasing joins the NPD team. *Research Technology Management*, Jul/Aug, 45-51.
- Ellram, L.M., Carr, A.S. (1994). Strategic purchasing: a history and review of the literature. *International Journal of Purchasing and Supply Management*, 30(2), 10-18.
- Ellram, L.M., Pearson, J.N. (1993). The role of the purchasing function: toward team participation. *International Journal of Purchasing and Supply Management*, 29(3), 3-9.

- Ellram, L.M., Zsidisin, G.A., Siferd, S.P., Stanly, M.J. (2002). The impact of purchasing and supply management activities on corporate success. *The Journal of Supply Chain Management*, 38(1), 4-17.
- Freytag, P.V., Kirk, L. (2003). Continuous strategic sourcing. *Journal of Purchasing & Supply Management*, 9, 135-150.
- Giunipero, L.C., Vogt, J.F. (1997). Empowering the purchasing function: moving to team decisions. *International Journal of Purchasing and Materials Management*, 33(1), 8-15.
- Johnston, W.J., Lewin, J.E. (1996). Organizational buying behaviour: toward an integrative framework. *Journal of Business Research*, 35, 1-15.
- Kauffman, R.G. (1996). Influences on organizational buying choice process: future research directions, *Journal of Business & Industrial Marketing*, 11(3/4), 94-107.
- Mendez, E.G., Pearson, J.N. (1994). Purchasing's role in product development: the case for time-based strategies. *International Journal of Purchasing and Supply Management*, 30(1), 3-12.
- Mol, M.J. (2003). Purchasing's strategic relevance. *Journal of Purchasing & Supply Management*, 9, 43-50.
- Moon, J., Tikoo, S. (2002). Buying decision approaches of organizational buyers and users. *Journal of Business Research*, 55, 293-299.
- Murphy, D.J., Heberling, M.E. (1996). A framework for purchasing and integrated product teams. *International Journal of Purchasing and Supply Management*, 32(3), 11-19.
- Narasimhan, R., Jayaram, J., Carter, J.R. (2001). An empirical examination of the underlying dimensions of purchasing competence. *Production and Operations Management*, 10(1), 1-15.
- Nollet, J., Ponce, S., Campbell, M. (2005). About "strategy" and "strategies" in supply management. *Journal of Purchasing & Supply Management*, 11, 129-140.
- Park, J.E., Bunn, M.D. (2003). Organizational memory: a new perspective on the organizational buying process. *The Journal of Business & Industrial Marketing*, 18(3), 237-257.
- Pearson, J.N. (1999). A longitudinal study of the role of the purchasing function: toward team participation. *European Journal of Purchasing & Supply Management*, 5, 67-74.
- Pearson, J.N., Ellram, L.M., Carter, C.R. (1996). Status and recognition of the purchasing function in the electronics industry. *International Journal of Purchasing and Supply Management*, 32(2), 30-36.
- Ragatz, G.L., Handfield, R.B., Petersen, K.J. (2002). Benefits associated with supplier integration into new product development under conditions of technology uncertainty. *Journal of Business Research*, 55, 389-400.
- Ramsay, J. (2001). Purchasing's strategic irrelevance. *European Journal of Purchasing & Supply Management*, 7, 257-263.
- Sheth, J.N. (1996). Organizational buying behaviour: past performance and future expectations. *Journal of Business & Industrial Marketing*, 11(3/4), 7-24.

- Smeltzer, L.R., Manship, J.A., Rossetti, C.L. (2003). An analysis of the integration of strategic sourcing and negotiation planning. *Journal of Supply Chain Management*, 39(4), 16-25.
- Spekman, R.E., Kamauff, J., Spear, J. (1999). Towards more effective sourcing and supplier management. *European Journal of Purchasing & Supply Management*, 5, 103-116.
- Stanley, L.L., Wisner, J.D. (2002). The determinants of service quality: issues for purchasing. *European Journal of Purchasing & Supply Management*, 8, 97-109.
- Stanley, L.L., Wisner, J.J. (2001). Service quality along the supply chain: implications for purchasing. *Journal of Operations Management*, 19, 287-306.
- Stuart, F.I. (1991). Purchasing in an R&D environment: effective teamwork in business. *International Journal of Purchasing and Supply Management*, 27(4), 29-33.
- Trent, R.J., Monczka, R.M. (1994). Effective cross-functional sourcing teams: critical success factors. *International Journal of Purchasing and Supply Management*, 30(4), 3-11.
- Watts, C.A., Kim, K.Y., Chan, K. (1995). Linking purchase to corporate competitive strategy. *International Journal of Purchasing and Supply Management*, 31(2), 3-8.
- White, P., Hanmer-Lloyd, S. (1999). Managing the input market: the strategic challenge. *European Journal of Purchasing & Supply Management*, 5, 23-31.
- Wynstra, F., Van Echtelt, F. (2001). Managing Supplier Integration into Product Development: A Literature Review and Conceptual Model. *17th IMP Conference*, Oslo, Norway.
- Zsidisin, G.A., Ellram, L.M. (2001). Activities related to purchasing and supply management involvement in supplier alliances. *International Journal of Physical Distribution & Logistics Management*, 31(9), 629-646.