Organizing IT purchases: Evidence from a global study

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ABSTRACT

Information technology (IT) purchasing is covering an increasing part of companies' expenditure. Scholars mainly investigated IT purchasing in terms of make or buy drivers from an IT perspective. Similarly, companies have been focusing on make or buy decisions and specifications definition in relation to technological characteristics. This often resulted in failures related to the goods/services purchased due to e.g. lack of negotiation skills, contracting, and suppliers' relationship management. Accordingly, IT purchasing might require new structures and processes management.

The purpose of the paper is to investigate what are the possible configurations for IT purchasing, and how these configurations are characterized in terms of purchasing process (i.e., strategic purchasing, sourcing and supply) and organization (i.e., roles involved, level of centralization, and span of control). Furthermore, the paper asks how IT relevance and purchasing maturity might affect these configurations. Through 12 case studies of leading international companies, four main configurations of the organization and the purchasing process for IT purchasing were identified, namely neutral (no specific approach is in place), IT oriented (the IT department takes the lead over the purchasing department), purchasing oriented (the purchasing department manages the whole IT sourcing process) and IT strategic (IT and purchasing departments jointly manage the IT purchasing process). The choice of the configuration is driven by IT strategic importance (low for neutral and purchasing oriented) and purchasing maturity of the company (low for neutral and IT oriented).

1. Introduction

The idea that purchasing strategies and practices might vary considerably across different categories (i.e., homogeneous groups of goods and/or services that are also known as "commodities") is well-known in the purchasing literature (Monczka et al., 2010) as a result of a long-lasting debate about purchasing portfolio models (Gelderman and van Weele, 2005) since the seminal work of Kraljic (1983). Given that purchasing accounts for a large part of value creation, companies need differentiated approaches (i.e. portfolio models) to exploit the wide range of optimization opportunities available in purchasing (Wagner and Johnson, 2004; Olsen and Ellram, 1997; Dubois and Pedersen, 2002).

As a matter of fact, there has been increasing recognition that the purchasing function may have a significant role to play in an organization's pursuit of competitive advantage (Spekman 1994; Carter and Narasimhan, 1996; Ellram and Carr, 1994; Carr and Pearson 1999). However, much of the discussion has focused on the relative significance of the management of direct, revenue-generating expenditure on corporate success. There has been much less concern by academics about the efficacy and appropriateness of current approaches to the sourcing of indirect, or non-revenue-generating and support, expenditure. This is arguably because the effective management of indirect expenditure is unlikely to impact directly on competitive advantage.

Given this, and the relative paucity of academic writing about the management of indirect spend, this paper seeks to shed light on what major companies are doing in an area of expenditure representing indirect spend, i.e. information technology (IT). We choose IT as, on one side, it represents indirect goods and services (it is probably one of the most relevant indirect costs for a company – usually constitutes 30–60% of a firm's total expenditures, Orr, 2002) and, on the other side, offers several possibilities to study goods with very different characteristics, ranging from commodities (such as PC and laptops) to high-value non-standard products (such as servers and storage infrastructures), to non-physical products (such as software), to services and body rental. They are in some cases just an enabling factor, in others represent the cornerstone driving the organizational change. Many companies (such as IBM, Xerox, Philips Electronics, and Alcatel) reorganized their value chains in order to

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focus on few core activities increasing IT goods and services buying instead of internal solutions development (Quinn, 1992). This sometimes resulted in failures in IT goods or service supply (Kern and Willcocks, 2002; Hirschheim and Lacity, 2000). These failures have been related to mistakes due to IT purchasing management (i.e. lack of negotiation skills, contracting, and suppliers relationship management) (Grover, Teng 1996; Kern and Willcocks, 2002; Hirschheim and Lacity, 2000). Anyway clear indications about how to organize and manage IT purchasing are missing. We are therefore interested in identifying possible configurations of processes and organizations for IT purchasing by introducing a compelling research framework. We are not discussing pros and cons of make vs. buy, we just take for granted that many companies are spending more and more in IT purchasing (e.g., Cullen and Willcocks, 2003).

We model the IT purchasing process by considering both strategic decision-making (i.e. strategic purchasing) as defined by previous studies (e.g. Chen et al., 2005; Leenders et al., 2002; Monczka et al., 2010), as well as tactical activities (i.e. sourcing and supply, van Weele, 2004) in order to provide a thorough view, even if specificities might not emerge in all phases.

Considering the IT purchasing organization, we wonder what are the department/s devoted to buying IT and what is their structure as a result of roles involved (Fichman, 1992), level of decision making (Gonzalez-Benito, 2007) and span of control (Johnson and Leenders, 2001).

As a result, in this study we provide an extensive view of IT purchasing processes and organizations that companies might adopt. We draw evidence from empirical data and insights collected through a broad research initiative in collaboration with IBM. Since 2007, authors have been involved in several case studies, a dozen workshops, and several focus groups as well as meeting with managers aimed at investigating the complexity of IT business-to-business transactions. As far as IT purchasing is concerned, 12 representative case studies have been selected and developed by collecting in-depth information according to the research framework described in Section 3, in order to analyze the organization and processes adopted by large multinational companies to buy IT.

The paper is structured as follows: first, contributions coming from the IT and purchasing literature related to the process and organization for IT purchasing are critically analyzed. Then, research objectives and methodology are described. Next, results highlighting different approaches in terms of IT purchasing process management and organization are presented and discussed. Finally implications and conclusions are discussed.

2. An organizational perspective of IT purchasing

On one hand, the literature is quite rich in identifying the main drivers towards IT purchasing (i.e. cost reduction, cost variabilization, cost control, and focus on core competences) (Grover, Teng 1996; Hufnagel and Birnberg, 1989; Quinn 1992) as well as failure causes (i.e. lack of negotiation skills, contracting, and suppliers relationship management) (Grover, Teng 1996; Kern and Willcocks, 2002; Hirschheim and Lacity, 2000).

On the other hand, authors suggest that IT purchasing might require new structures (i.e. shared authority, responsibility) and processes management (i.e. coordination, joint process management) to assure the effectiveness of IT purchasing (e.g., Loh and Venkatraman, 1992). Anyway, when considering such aspects, authors mostly focus on the relation between the IT department and IT vendors rather than on processes and structure adopted by the buying firm. Partial exception is the study by Pinnington and Woolcock (1995), who propose to reconsider the whole organization for IT purchasing.

It is therefore worth to look at the purchasing and IT literature more in depth, in order to identify key variables that should be used to describe the process and the organization for IT purchasing.

2.1. The process of IT purchasing

To provide an overall picture of the IT purchasing process we identified its different phases thanks to different contributions in the purchasing literature. In the first phase of the IT purchasing process (hereafter called Strategic purchasing), different strategic decisions (e.g., make or buy decisions and portfolio strategy definition) are taken (Monczka et al., 2010; Chen et al., 2005; Leenders et al., 2002). Then, the sourcing phase regarding tactical activities, such as specifying needs, selecting and contracting suppliers, is performed (van Weele, 2004). Finally, the supply phase regarding operational activities, such as ordering, monitoring and post purchase activities (e.g. payment and invoicing), is accomplished (van Weele, 2004).

2.1.1. Strategic purchasing

Strategic purchasing is about taking different strategic decisions regarding the definition of general purchasing policies and portfolio approaches (Monczka et al., 2010) and supplier relationship management (Chen et al., 2005; Leenders et al., 2002; Cullen et al., 2005). The output of this phase consists in the definition of which products and services should be made in-house or purchased, what is the most suitable portfolio management approach, and how suppliers should be managed and evaluated.

As anticipated, most authors focus on IT make or buy decisions (Matthews, 2000), identifying drivers, such as cost savings (Due, 1992), better focus on core business (Grover, Teng 1996; Hufnagel and Birnberg, 1989; Quinn, 1992); internal IT department considered inefficient, ineffective, or technically incompetent (Lacity and Hirschheim, 1993); innovation availability (Teece, 2000; Utterback, 1971; Sage, 2000; Van de Ven et al., 1999).

Nevertheless, strategic purchasing involves other decisions, such as the definition of portfolio management strategies, supply relationships, and supplier strategic evaluation. Cullen et al. (2005), for instance, propose a portfolio model specific to IT purchasing or outsourcing that includes, among the others, relevant aspects such as scope grouping (i.e. which IT products and services are provided), geographical scope (i.e. physical locations that have been identified to receive particular IT goods or services, such as local or global), supplier grouping (i.e. how many suppliers provide outsourced services, allowing sole supplier, prime contractor, best-of-breed, and panel) and duration (in terms of short vs. long-term agreements).

Finally, supplier qualification, evaluation and relationship management have been frequently shown to be related to the IT purchasing or outsourcing effectiveness (King, 2007). Many firms that did little to monitor and manage the vendor relationship after recurring to IT purchasing or outsourcing have been surprised by negative outcomes (Cullen et al., 2005; King, 2007).

2.1.2. Sourcing

The sourcing phase regarding the IT purchasing process has been rather neglected in both IT and purchasing literature. Not surprisingly, most of the reasons for IT purchasing failures mentioned above (e.g. selection or negotiation problems) are related to aspects that have to be managed during this phase (e.g. Hirschheim and Lacity, 2000).

In general, the first step of the sourcing phase is the definition of specifications about the product or service to purchase (Van Weele, 2004). Both the purchasing department and the internal customer requiring goods or services, for instance the IT department or the final user, could be involved in this activity.