

Analysis of Sourcing & Procurement Practices: A Cross Industry Framework

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Abstract

Procurement has been mainly a back office function which uses buyer power to achieve lower prices. Traditionally, procurement was focused on price, confrontation between supplier and buyer, short-term relationship between buyer and seller, and surface-level, short-sighted consideration of seller's operations. By contrast, the alternative to traditional-style procurement is to go beyond narrow focus on price to include supplier and buyer collaboration, long-term relationship between supplier and buyer, and long-term in-depth consideration of supplier's operations to the extent that procurement now is a collaborative enterprise between buyer and supplier. Procurement is a strategic tool that can create value. This thesis addresses the underlying principles in selecting a procurement strategy and the factors that shape procurement practices and trends. The research is based on a general survey of the relevant literature, case-studies of 21 companies operating in 9 industries¹, i.e. Aerospace, Apparel/ Footwear, Automotive, Computers, Communications Equipment, Consumer Packaged Goods, Pharmaceuticals, Petroleum and Retail, and interviews with industry consultants. In order to better understand the commonalities and the differences among the practices, this thesis introduces a cross industry framework. Additionally, a three step framework developed to link the underlying principles with what is considered best organizational practices.

Keywords: Analysis of Sourcing, Procurement Practices, Procurement Industry Framework,

1.0 INTRODUCTION

Procurement and sourcing have gone through various evolutionary stages. Most of the academic and professional interest has been in the operational decisions concerning Procurement. Purchasing, which includes all the operational and daily Procurement decisions, is focused on how to optimize local problems. It ignores the wider perspective of Procurement, which draws attention upon the high level, strategic decision making. Procurement is the integrated functions within an organization that are necessary to identify a need, specify the commercial requirements, search, select and agree with the appropriate suppliers, accept the materials and/or services, evaluate the performance of the supplier and initiate the payment.

In this context, Procurement supplies the production material, the services and the materials needed for the administrative backup of the operations. This study focuses on the inbound flow of all the material used in the production which is called direct spending, i.e. all the materials that go into the end product, and contrasts the indirect spending which includes all the products/goods that are necessary to run the organization. The objective of Procurement is to bring in the company the right products, in the right quantities, in the right time and in the right place. More precisely, the goals include:

- Purchasing the materials.
- Providing a continuous flow of materials
- Achieving and sustaining high quality/high efficiency of inbound flow
- Improving the competitive advantage of the firms
- Standardizing – modularizing components and/or material.

In order to succeed in these objectives, procurement performs activities like:

- Recognition and description of the need
- Identification of supply sources
- Supplier selection
- Ordering
- Receipt of goods
- Administrative work
- Relationship management.

¹ Those cases have been developed as part of the Phase A of the Supply Chain 2020 project. More information for this project is available at www.sc2020.net.

Relative to the organizational structure, there are two options companies traditionally use: a centralized one, where all decisions are taken centrally usually at corporate/ business headquarters, and a decentralized, where the decisions are taken in the business units. Table 1 presents the differences between these two systems.

| | Advantages | Disadvantages |
|----------------------|---|--|
| Centralized | Strategic Focus | Lack of Business Unit Focus |
| | Specialization | Less cost assignment focus / visibility |
| | Better Talent | Long decision making line |
| | Coordination and control | Un-flexible organization |
| | Effective & Efficient Planning | Distance from end users |
| | Proximity to Top Decision Makers | Aggregation adverse effects |
| | Critical Ordering / Purchasing Mass | Complicated coordination |
| | Firm Recognition | |
| Decentralized | Easier coordination with operational department | More difficult communication with headquarters |
| | Expedited & competitive response | Discourages central planning |
| | Flexible use of local resources | Local orientation / no global optimization |
| | Business Unit Autonomy | Maverick buying |
| | Report line simplicity | Limited expertise |
| | | No standardization / modularization |

Table 1 - Centralized vs Decentralized Organizations

2.0 COMPARISON AND ANALYSIS FRAMEWORK

This study uses a three-dimensional framework as a basis to compare the different practices. Its dimensions are: Internal which consists of the inputs, switching costs, life cycle of the input and the product, External which consists of the number of buyers and suppliers and the bargaining power of suppliers. Procurement Organization which consists of the number of suppliers per input/ product line, supplier relationships, segmentation, buyer strategy, use of information technology and organizational structure. The common practices identified through this framework include: Collaborative Supplier Relationships which almost all companies have. However, these close relationships are not maintained with all suppliers. Companies usually qualify a critical mass of suppliers (preferred suppliers) that can handle their demand. They also pre-qualify another group of suppliers (contingency suppliers) that are able to assume demand in case of unfavourable events. Furthermore, most of the companies, especially those with high infrastructural and manufacturing investment costs, try to acquire visibility and control on Tier 2 suppliers or even more upstream so as to improve their control, resilience and performance.

Additionally all of the participating companies have automated procurement systems that facilitate easier ordering and help the company achieve consolidation of purchases and improvement of processes. Although each of the firms have either developed their own system or have implemented off the shelf solutions, the common characteristics of all of them are standardization of processes, ease of use, flexible routing and approval, on-line ordering, multi-supplier (pre)qualification, reduction in maverick buying and multiple communication options with suppliers. IT also improves reporting than legacy systems do since it can more effectively handle the performance history of each supplier. All companies in this study are using IT to improve the communications, accommodate the issuance of RFxs², improve visibility over their entire supply chain, monitor suppliers' performance and introduce barriers to entry for potential competitors.

Companies don't rely solely on Electronic Data Interchange (EDI) but they have also moved forward introducing e-marketplaces where they pre-qualify suppliers who can participate in auctions. Internet, although not a panacea, is another tool to increase the number of suppliers without decreasing the visibility and/or performance monitoring. Furthermore, IT enables companies introduce sophisticated auctioning practices.

Other practices include:

- Managerial Accounting Approach and recognition of key cost drivers

² RFx includes among other forms Request for Proposal (RFP), Request for Quotation (RFQ), Request for Interest (RFI).

- Continuous improvement programs
- Cross-functional teams
- Global Sourcing
- Top management involvement
- Centralized, Decentralized and Hybrid organizational structures (which are analyzed in Section 3.0).

3.0 PROCUREMENT ORGANIZATIONAL ARCHITECTURE

In order to propose the best practices, this study uses a three step framework. This identifies four alternative organizational structures by linking the product characteristics with the supplier and buyer power. The first step of this framework is the product classification. For this purpose, this study uses the Kraljic Matrix³ (Figure 1). The horizontal axis measures the value of the input while the vertical the criticality to the supply chain. For instance, the higher the value and the criticality of the input (strategic products), the more attention the firm has to pay. For example, Toyota’s complex auto systems are considered strategic products based on this analysis.

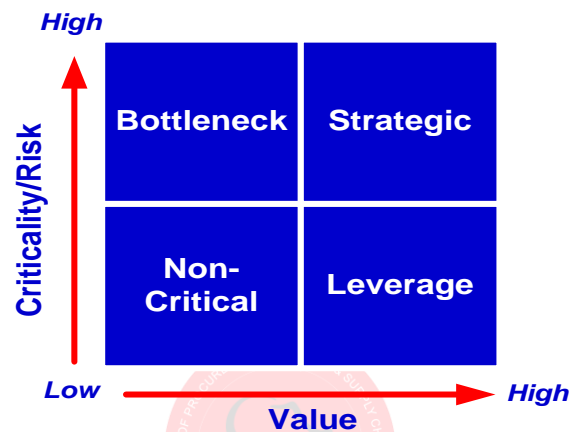


Figure 1 - The Kraljic Matrix

The next step of this framework is to analyze the supplier/buyer power differential. The Power Matrix⁴ (Figure 2) contributes in understanding the relationship that the buyers and suppliers have based on their relative utility which is measured in the two axes. Wal*Mart for example is in the buyer dominance quadrant due to the broad distribution channels and to the large number of suppliers in that market which decreases their power.

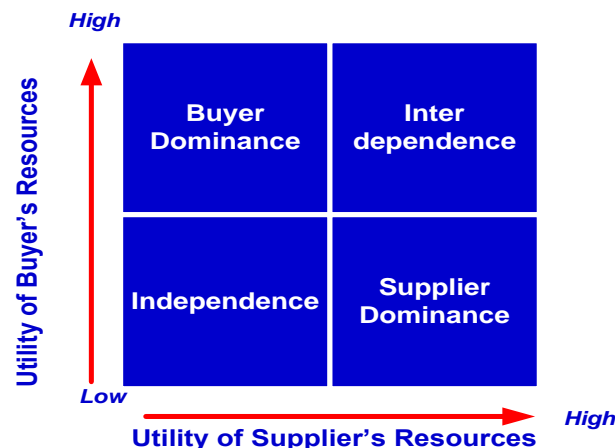


Figure 2 - The Power Matrix

³ Kraljic, P. (1983). Purchasing must become supply management. Harvard Business Review.

⁴ Cox, A., (2001). Understanding buyer and supplier power: A framework for procurement and supply competence. Journal of Supply Chain Management; Spring 2001; 37, 2

The last part of this framework is the Procurement Organizational Architecture Matrix (Figure 3). Based on the results of the Kraljic and the Power matrices, and on the analysis of the business practices, this study proposes four structures that best fit each combination. The alternative options, centralized, decentralized, hybrid-operational and hybrid-strategic structure, are based on the importance of the input and on the supplier/buyer power differential. For example Novartis' procurement organization is decentralized. The reason for that is that the products (water, chemicals) are commoditized, posing no risk in its supply chain, and the suppliers have low power over Novartis. On the other hand ExxonMobile uses a centralized organization because the input is important and the suppliers are very powerful.

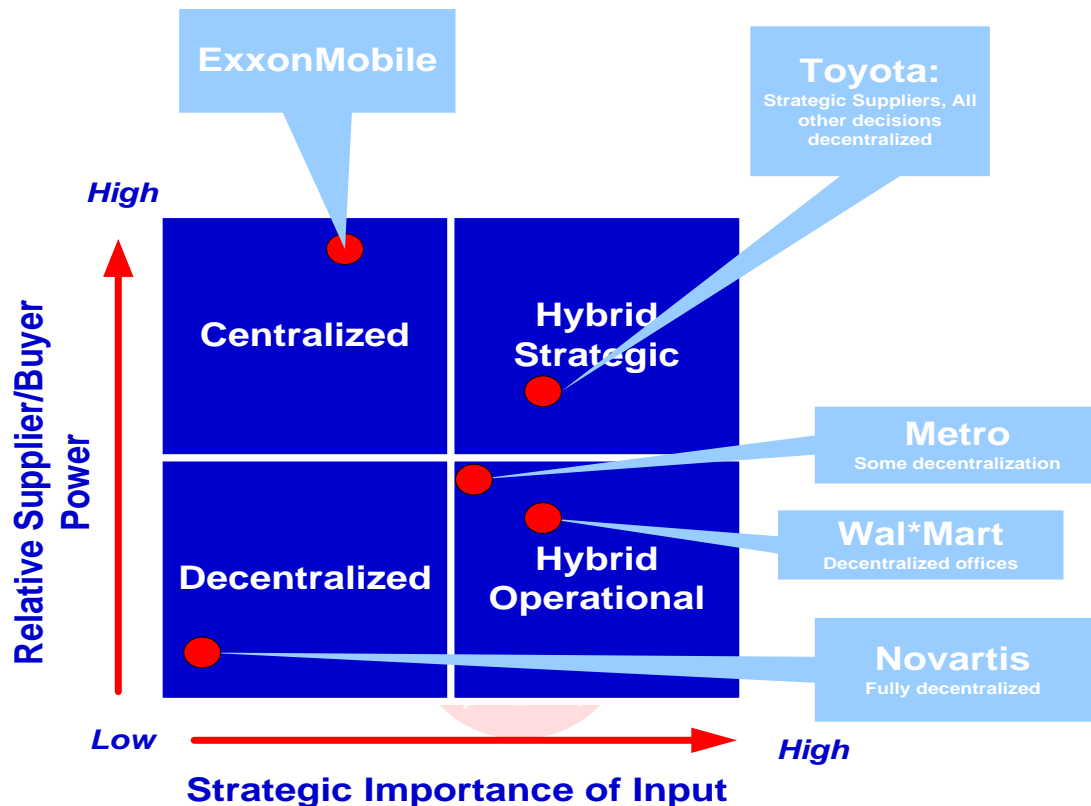


Figure 3 - The Procurement Organizational Architecture Matrix

The trend is that companies gradually adopt more flexible organizational structures. For example Wal*Mart, has a hybrid structure and delegates some of the operational decisions to local procurement groups. The reason for that trend is the need to have more flexible organizations that can better adapt to the changing economic environment.

4.0 FACTORS AFFECTING PROCUREMENT PRACTICES

The last section of this research identifies the key factors that affect the procurement practices. These include: Strategic Sourcing – The Extended Enterprise. Understanding the strategic importance of procurement and rationalizing the function are critical for Procurement. Sourcing is a critical part of the strategy and companies with superior performance align the functional objectives with corporate objectives and select strategically the suppliers. Extending the enterprise upstream increases visibility, monitoring, control and performance. For example Dell requires full visibility over its suppliers and an open book policy.

By this way it controls the suppliers' profit margins and is able to offer lower prices to its customers. Strategic sourcing implicitly proposes integration of processes and close and/or collaborative relationships with suppliers. With this tactic, the firms can also take advantage of suppliers' competencies, since they oftentimes have better insights and expertise in areas that the companies may not have. Suppliers also contribute in other areas like marketing, technology and financing. Low Cost Sourcing is another trend that affects procurement strategy. The current economic context makes it imperative to reduce costs and the technological advances allow sourcing globally in low cost countries. The question is not whether to source in a low cost country, but what to source, where to source it from, in what quantity

/ quality and how to set up the supply chain / procurement organization. The price of energy is another critical factor that affects procurement practices. The cost of energy is both a direct cost for the companies, since it is used in the manufacturing, delivery processes and the like, as well as indirect cost because it affects inflation which in turn increases the prices of commodities. With oil prices currently soaring in the US\$70-80 threshold, the companies experience harsh pressure in their cost structures.

Agile sourcing, the ability to be adaptable and flexible, in order to quickly respond to new or changing requirements also affects procurement. This is primarily achieved by utilizing traditional and non-traditional contracting tools when procuring goods and services. The companies have to be able to adapt in an environment of constant and unpredictable change. Low volume, high quality, make or engineered to order, short life-cycles and short development and production lead times are characteristics of the products customers order. This concept forces companies to change their business models so as to accommodate these customer needs.

Another trend that will affect the procurement models is E-procurement which includes all those business practices that use internet or similar technologies to communicate. Online auctions, eSourcing (for contractual processes, like tendering, RFxs), e-marketplaces, e-Catalogues and e-Payment are but some of these practices. The benefits of e-Procurement include efficiency improvements, reduced lead and fulfillment time, improved commercial relationships with suppliers, reduced operational/ transactional costs, open marketplaces and full visibility over the supply chain. However, there are risks inherent in these practices among them the confidentiality of the inputs, the integrity of the suppliers, the fulfillment availability and generally the commitment to the auction result.

Last but not least, measuring the performance of the procurement department is a very difficult task and a challenge that formulates the procurement practices. Simply put, the goals are different depending in the organizational level, the business unit and the vision of each stakeholders/unit. A coherent procurement strategy aligns these goals and improves the overall corporate efficiency.

Other challenges that will affect the procurement practices include:

- Growth through reaching new markets,
- Improving customer service level
- Differentiating from competitors,
- Improving cash position and/or reducing costs,
- Improving productivity and throughput so as to reduce average costs,
- Reducing the number of suppliers,
- Integrating the operations with the suppliers.

Conclusively, companies with superior performance select those procurement practices that increase the efficiency and effectiveness of their operations, increase the flexibility and deliver higher value. These companies align the functional objectives with the corporate objectives and match the internal capabilities with the external environment.

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