



e-PROCUREMENT PRIMER

Introduction

Purchasing is a key activity in any company, as a large percentage of any company's revenues is spent on purchasing the goods and services it needs to produce its goods and services. According to a study released by the Center for Advanced Purchasing Studies (CAPS) in 2001, the cross-industry average of purchase dollars spent as a percentage of sales lies at more than 40%.¹ So for every dollar made in sales, 40 cents were spent in purchasing.

The past decade has seen companies move towards a concentration on core competencies and subsequently increased levels of outsourcing, thus increasing purchased goods as a percentage of sales. Therefore, the purchasing function has to be made part of and integrated with the overall strategy of the company.

The purchase multiplier is a tool that is commonly used to illustrate the effect that purchasing can have on the bottom line. The purchasing multiplier is calculated by dividing one Euro (saved in purchasing) by the average profit margin on sales. It shows us how many additional Euros would have to be earned in sales to achieve the same bottom line effect (see Figure 1). For example, a profit margin of 5% on sales would mean that for every Euro saved in purchasing, twenty Euros would have to be made in sales, all other things being equal.

¹ The range was from less than 1% (life insurance) to 60% (cable telecommunications). The data did not include the automotive sector.

This technical note was prepared by Professor Marc Sachon. September 2001.

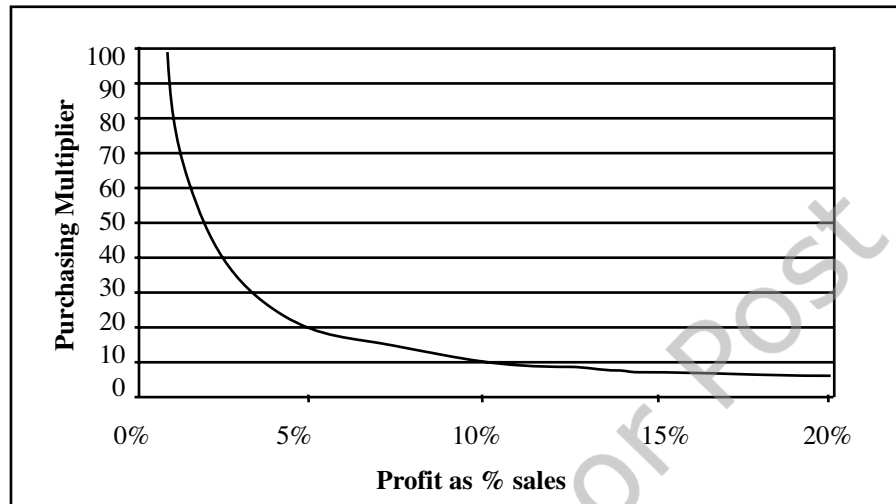
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Figure 1. The Purchasing Multiplier



For the reasons outlined above, companies are generally interested in any tool that will help them reduce the amount of Euros spent in purchasing. This applies particularly to companies that operate in low margin markets. The advent of the Internet as a medium for business transactions has brought with it an opportunity to reduce the costs of purchasing, particularly in the field of goods that in the past did not form part of electronic purchasing transactions.

To be able to see the advantages – and the challenges – of e-procurement, it is necessary to have a clear understanding of the goods and services being purchased and how they can be classified. Of particular interest is how these classifications can be mapped onto the software engines that enable Internet-based procurement. The key factors for this mapping are the complexity of the good or service and the number of purchases of this type of good or service throughout the course of a year. The more complex the good, the higher the demands on the software. Likewise, one-time purchases generally do not merit the implementation of an e-procurement system, while the transaction costs of repeat purchases can greatly benefit from e-procurement. In the following, we will establish a framework of terms which will allow a clear classification of different classes of goods and services. The use of this terminology then allows us to identify different types of goods that require different forms of e-procurement.

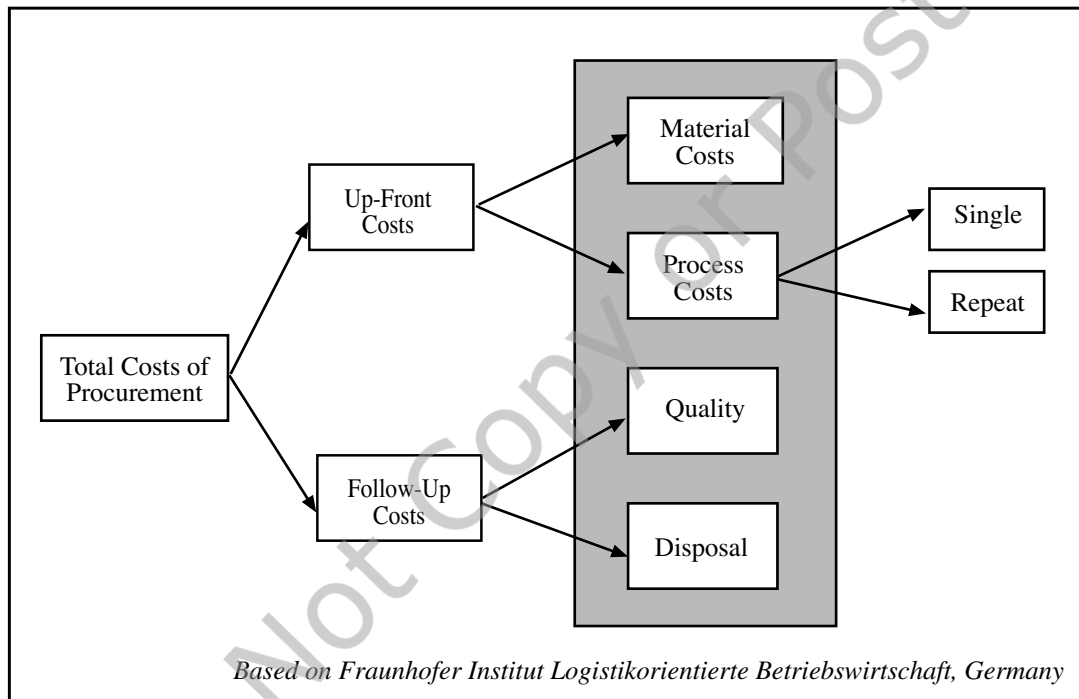
Types of costs

The costs incurred in purchasing can be broken down along different lines. Here, we will do so from a process point of view, aiming to identify costs that can be reduced due to improved transaction efficiencies, volume discounts, etc. In general, we can distinguish between *follow-up costs* (costs incurred after receiving the goods, see Figure 2) and *up-front costs* (costs incurred before receiving the goods). Follow-up costs are generally given less weight than up-front costs in purchasing analysis. However, due to regulations introduced in Europe, *disposal costs* will increasingly form part of purchasing decisions in the Euro zone.

Quality costs result from poor product quality and lead to post-purchase costs for the company (e.g., costs resulting from faulty tires in the automotive sector in 2000 and 2001).

Costs paid up-front can be divided into *material related* (i.e., the purchasing price paid for goods or services) and *process related* (i.e., all costs incurred during the procurement of a good or service that are not included in its price).

Figure 2. Classification of procurement costs



Process costs can be incurred *repeatedly* or *one-time only*. The former is typical for the purchase of MRO goods, while the latter applies to the purchase of raw material (master purchase agreements) and machinery.

Until the year 2000, most e-procurement solutions focussed on reducing the process costs related to the area of MRO goods. For example, the procurement of standard office supplies such as paper or pencils generally will have no follow-up costs, low material costs but high repeat process costs (these supplies can be ordered by anybody at any time and therefore result in frequent orders). These solutions were generally static, catalog-based price procurement solutions. Since the end of 2000, a number have started to develop e-procurement solutions for complex MRO and even direct goods. These solutions are moving away from static, catalog-based prices towards dynamic pricing via auctions or marketplaces.

Types of goods and services

A clear classification of the goods a company purchases is a prerequisite for implementing an e-procurement strategy as it determines which tools should be used for which product category.