

KRALJIC MATRIX – IS IT STILL RELEVANT IN PROCUREMENT COST REDUCTION?

Abstract

Research and development costs, procurement costs, manufacturing costs, administrative costs, selling and shipping costs are examples of costs when classified based on their position in the value chain. Procurement costs are costs incurred to purchase products or services that eventually become inputs used by the purchasing organization when the said organization is manufacturing its own products or rendering its services. These costs often form a significant portion of overall costs of the purchasing organization. One of the ways in which procurement costs can be reduced is the application of the Kraljic Matrix. This matrix can be used to perform an analysis of the upstream section of the supply chain where activities are performed just before the products or services are purchased. This article explains the Kraljic Matrix and attempts to understand its relevance in helping the purchasing organization reduce its procurement costs.

INTRODUCTION

In the year 1983, a procurement practitioner named Peter Kraljic described a 2 x 2 matrix which provides a structured approach based on two factors: supply risk and profit impact. The term 'profit impact' refers to the impact that an item being purchased can have on a purchasing organization's profit. An expensive item will have a higher profit impact compared to an inexpensive item. The term 'supply risk' refers to the possibility of an instance wherein a purchasing organization is looking to purchase an item but there is either no supply or inadequate supply of the item. Based on



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the aforementioned two factors, purchases made by an organization can be classified into **Strategic**, **Bottleneck**, **Leverage** and **Non-critical** purchases (see **Figure 1**). This classification guides the procurement strategies of organizations and helps in identifying opportunities for cost reduction.

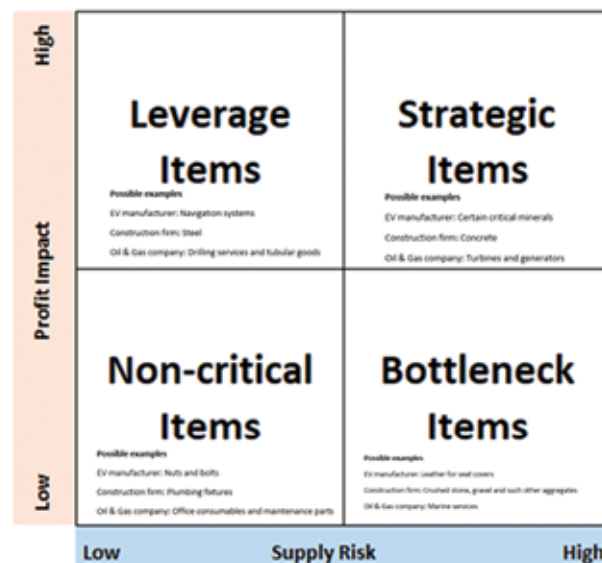


Figure 1

PURCHASE CLASSIFICATIONS EXPLAINED

The Kraljic Matrix has four quadrants that help

classify purchases based on supply risk and profit impact. These classifications are explained below:

1. **Non-critical items:** These items come with low supply risk as several suppliers are available. Besides, these items are not very expensive and have low impact on an organization's profits. While an organization may need these items, the lack of supply of these items from any one supplier does not jeopardize the organization's operations and the immediate supply of these items does not have any significant impact on the organization's operations. For instance, for an electric vehicle (EV) manufacturer, non-critical items would include nuts and bolts which are easily available from several suppliers and do not have any great impact on the EV manufacturer's profits. For a construction company, plumbing fixtures would be non-critical items. For a company in the oil and gas sector, office consumables and maintenance parts will be good examples of non-critical items. In case of non-critical items, cost savings can only be possible from reduction of administrative efforts that go into the sourcing and handling of these items. This will help with a positive impact on profits, even though the impact may not be huge.
2. **Leverage items:** These items also come with low supply risk but have a high impact on a purchasing organization's profits. Navigation systems can be a good example of leverage items in case of an EV manufacturer. While these are available without much supply risk, these are expensive and have a high impact on the EV manufacturer's profits. In case of a construction company, steel may be a good example of a leverage item. For a company in the oil and gas sector, drilling services and tubular goods will be good examples of leverage items. Because procurement practitioners possess the balance of power in their relationships with various suppliers, it is justifiable for them to exploit the powerful position to negotiate lower prices. Any purchasing organization that is able to get the same items from a supplier at a much lower cost will be able to see a significant positive impact on its profits.
3. **Bottleneck items:** These items come with a high supply risk and have a low impact on a purchasing organization's profits. For instance, leather for seat covers can be considered as bottleneck items for an EV manufacturer in markets where they are not easily available even though they may be less expensive. In the case of a construction company, crushed stone, gravel and such other aggregates often get classified as bottleneck items. For a company in the oil and gas sector, marine services will be good examples of bottleneck items. Because the supplier of bottleneck items is in a stronger position, there will not be much scope to get the suppliers to reduce their prices. One possibility may be to get the supplier to agree to relaxed payment terms (while ensuring other factors remain unchanged). This may not eventuate but if it does, the purchasing organization may benefit from a much better availability of working capital to fund its own operations. This way the purchasing organization can avoid borrowing funds from lending institutions and any costs associated with such borrowings. Cost savings from reduced borrowings would also mean positive impact on profits of the purchasing organization.
4. **Strategic items:** These items have a high profit impact as they are expensive. These items also come with a high degree of supply risk – there are hardly any alternative suppliers. Therefore, it is only strategic suppliers that the purchasing organization depends on for supply of such mission-critical items. For an EV manufacturer, certain critical minerals may be considered to be strategic items given that they are expensive and come with a high supply risk. For a construction company, concrete will be a strategic item. For a company in the oil and gas sector, turbines and generators will be good examples of strategic items. These items do not afford any opportunity to the purchasing organization to reduce costs.

PROBLEMS WITH THE KRALJIC MATRIX

There are certain limitations, drawbacks and issues that a purchasing organization must keep in mind while applying the Kraljic Matrix to its unique situation.

1. ***Making mistakes in classification of purchases:*** A purchasing organization may end up misclassifying a strategic item (high supply risk) as a leverage item (low supply risk) or a bottleneck item (high supply risk) as a non-critical item (low supply risk). Misclassifications may also occur between low profit impact items and high profit impact items. These misclassifications may misguide the purchasing organization's strategies with their suppliers and cost savings may not materialize. Instead, sub-optimal decisions based on incorrect guidance may turn out to be very expensive for the purchasing organization.
2. ***Not addressing the potential for innovation or capabilities:*** In certain industries such as the auto industry, the potential for innovation or capabilities become critical in procurement decisions. However, the Kraljic Matrix fails to explicitly consider the same.
3. ***Retrospective and myopic focus:*** The Kraljic Matrix focuses on the current situation but this tends to be retrospective for the most part. This leads to the sidelining of opportunities for development of the supply market in a manner that strengthens the purchasing organization in the power relationships.
4. ***Disregard for supplier's side:*** The Kraljic Matrix focuses only on the purchasing organization's side and disregards the supplier side even though suppliers and purchasers collaborate along the value chain. In case of non-critical items, if the purchasing organization changes its requirements at the last minute such that the supplier will now need to supply lesser than originally ordered, it could mean lower wages for hourly workers employed by the supplier. In case of leverage items, if the purchasing organization overzealously manages to arm twist the supplier to reduce its prices significantly, the supplier may be compelled

to exploit its workforce through excessive work and lower wages. In fact, at some point the supplier may be at risk of going bankrupt if the supplier is heavily dependent on the purchasing organization for generating revenues. In the case of bottleneck items, relaxed payment terms offered by the supplier to the purchasing organization would cause some financial stress for the supplier and this could negatively impact the supplier's workforce since their wages may get reduced or wage increases may be delayed.

5. ***Choice of factors:*** It is often very difficult to determine if the factors being considered in the matrix are the most appropriate ones in the light of the unique circumstances and situation of the purchasing organization.
6. ***Dyadic context:*** From an industrial network perspective, the Kraljic Matrix fails to take into consideration all the factors that would influence or dictate the relationship between a purchasing organization and its suppliers. The matrix is based on just two factors and analysis that is based on just two dimensions may not always be useful or adequate for a purchasing organization in deducing strategies. Besides, strategies based on this matrix may often end up being independent of each other. This can raise questions on recommendations such as exploiting the purchasing organization's position of power or to reduce the supply risk by being less dependent on a specific supplier within the network.

ALTERNATIVES TO THE KRALJIC MATRIX

With the passage of time, several other procurement practitioners and researchers conducted deeper studies into the Kraljic Matrix, published books and papers, and developed variations of this matrix. Provided below are a few examples:

1. Year 1985: T. I. Elliott-Shircore and P. T. Steele: Their procurement positioning matrix used two factors, namely, profit or value potential and supply vulnerability. The matrix categorized products as being one of the following: strategic critical, tactical profit,

strategic security, and tactical acquisition.

2. Year 1994: B. J. Hadelar and J. R. Evans: Their supply strategy matrix used two factors, namely, value potential and complexity but did not categorize the products.
3. Year 1997: R. F. Olsen and L. M. Ellram: Their portfolio model used two factors, namely, strategic importance and difficulty in managing and categorized the items exactly the same as the Kraljic matrix.
4. Year 2002: A. J. Van Weele: This purchasing portfolio matrix used the exact same two factors and the four categorizations as the Kraljic matrix.

Likewise, the work of others such as R. Syson (year 1992), R. Nellore and K. Soderquist (year 2000), D. N. Burt, D. W. Dobler and S. S. Starling (year 2003), P. Baily, D. Farmer, B. D. Jessop and D. Jones (year 2004), S. M. Wagner and J. L. Johnson (year 2004), R. M. Monczka, R. J. Trent and R. B. Handfield (2005) also focused on factors that were not much different from those used by the Kraljic matrix and used product categorizations that were essentially aligned with those used by the Kraljic matrix. Therefore, the outcome of the work done by them as well as the final recommendations, in most of the cases, were also much aligned with the outcome and the recommendations of the Kraljic matrix.

CONCLUSION

Since the purchase classifications from the Kraljic Matrix continue to guide procurement practitioners on cost reduction opportunities, the matrix continues to remain relevant from the cost reduction perspective. However, the matrix has received its own share of criticism because of its limitations and drawbacks. Purchasing organizations must, therefore, take these limitations and drawbacks into consideration while relying on the recommendations of the matrix for cost reductions. As part of networks, purchasing organizations may sometimes have to give more importance to their relationships with suppliers even though it may mean sacrificing some cost reduction opportunities. MA

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**CMA Rameshore
Khanal**

At the Helm!!!

We extend our warmest congratulations to CMA Rameshore Khanal for becoming Finance Minister of Nepal.

Previously he had served various positions viz. Economic Advisor to the Prime Minister of Nepal (Honorary), Secretary, Ministry of Finance, Government of Nepal.

We are proud to proclaim that he is a Member of the Institute of Cost Accountants of India. Further he had conducted cost analysis of National Textiles Corporation, Indian Drug and Pharmaceuticals, Steel Authority of India, Bharat Heavy Electricals, Hindustan Insecticides and different fertilizer companies of India for cost-plus contracts and subsidy administration while working as a trainee at the Cost Accounts Branch of Ministry of Finance, Government of India, July 1983 – July 1986.

We wish CMA Rameshore Khanal the very best in all his future endeavours.