

Models for decision making in purchasing: Kraljic versus Monczka

Brigitte Faber

Nico Lamers

Reinder Pieters

Institute for Logistics

HAN University for Professional Education

Postbus 5171

6802 ED Arnhem, the Netherlands

Abstract: Most purchasers in the Netherlands, Germany and Sweden rely upon the portfolio method of Kraljic for decision making. In the USA Monczka has become extremely popular amongst purchasers with his Michigan State University (MSU) model. This article tries to compare both models and will show that both models should be used side-by-side as they enforce each other.

I. Introduction

Purchasing is rightly seen as being one of the most decisive departments in an organization for attaining competitiveness. The increase in the rise of purchase within an organization is directly linked to the percentage of turnover directly spend on purchasing raw materials, products and services. The increase in this percentage is mainly due to an increase in outsourcing parts of production and tasks which are not considered to be part of the core business of the company.

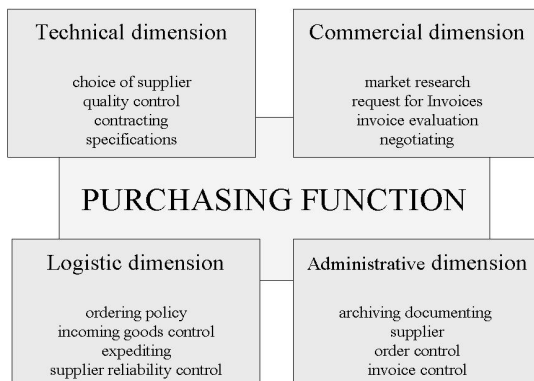


Figure 1 dimensions of purchasing

At the same time, a purchaser has to understand that his role is not being someone who just simply

buys, but to understand that it encumbers more dimensions as is shown in figure 1 [6].

II. Changing role of purchasing

Next to these aspects, we see a decrease in the time a product will be sold on the market. The product life cycle (PLC) has decreased over the last decades and for some products like cellular phones, it has become less than 3 months. After this period, the product will no longer be sold as it will be replaced by a new model from the own company or from competitors.

Other reasons why purchasing has become more important lately are developments like:

- increased change in technology. A purchaser should know what the main trends are and how this changed technology could be used to improve their products and services;
- improved infrastructure and falling distribution costs on long distances. Countries like India were not interesting as a potential source due to the fact that it was very difficult to get something out of the country. Roads, railways and harbor facilities were inadequate to cope with modern day demands on speed, reliability and capacity. Today, larger ports are being set up everywhere to cope with the larger ships. These boats have grown in size and can easily ship thousands of containers all over the world. Both aspects ensure that the distribution costs for shipment over long distances have gone down. This has allowed distant countries to become more interesting for outsourcing;
- improved data communication. The telegraph and telephone have caused a major change in the way we perceive our world. But the

possibility to log on to the Internet and send emails or see information online allows suppliers situated far away to be informed instantaneously. Sales data can be send directly to the supplier, or even his capacity can be checked online before accepting an order from a customer.

- lowering of trading barriers. Borders will be always there, but they hinder trade less and less. The EU is now one large economic market with no internal obstacle for transporting anything to anywhere inside this market. The World Trade Organization (WTO) has helped to simplify the trade between member states. The trademark of ideas and products are better protected, so companies are less hesitant to search for potential suppliers in areas where copying used to be the rule.

This puts a high pressure on the purchasing department on aspects like:

- low levels of inventory as otherwise the company could be left with a stock of unsold products or materials;
- less time to learn from mistakes for suppliers or to find out if a supplier is really up to the expectations of the company;
- a good base of available suppliers which are able to help the company to achieve its goals
- and willingness of suppliers to get involved in the problems of the company and vice versa.

III. Changing environments

In old times the role and place of a purchaser was easy to understand: buy products which we need for production and/or sales. He only had to concentrate on the previous link in the chain and leave the rest to others.

At present the purchaser has become aware of the value chain and that all links should be viewed as one organism if success will prevail for all links in this chain. The suppliers of my suppliers have an impact on my production which in due cause will have an impact on the performance of my customers. So in this vision a purchaser will have to explain not just the sales persons of the previous link what is really needed, but also the purchasers of this link and the links upstream.

This idea is not as simple as it may seem at first glance as can be seen in the next figure:

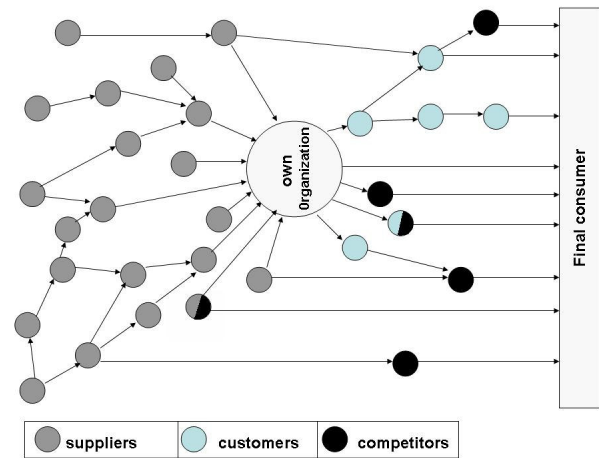


Figure 2 a company network

The situation for one product could be that we have a certain set of suppliers who in their turn have also suppliers. But just as we have customers, so do they and they could supply our competitors, our customers as well. The customer of today could be our competitor of tomorrow.

This all has changed the main role of the purchasers over all these years, from trying to keep costs low, to ensuring that the company is able to withstand all storms on the markets. This also puts more pressure on purchasers to make better decisions. For this they can use decision making models and the two best known in the field of purchasing are:

- Portfolio method of Kraljic and
- Michigan State University (MSU) of Monszka.

In order to compare both methods will be explained further in the next two paragraphs.

IV. Kraljic

The portfolio method of Peter Kraljic dates from the sixties and became worldwide known after being published in the Harvard Business Review [3]. Kraljic's idea was very simple: make a two-by-two matrix with the risks for availability of a product on the X-axis and the financial risks on the Y-axis. At present most users of this model can be found in European countries like the Netherlands, Sweden and Germany. In the USA the model is used, but not on a grand scale.

According to Kraljic, all purchased products could be placed in one of these four fields and each field should result in a different approach... The line between these four fields is vague. The most urgent aspect should be

the key for proper placement of an article. The next figure depicts Kraljic's model.

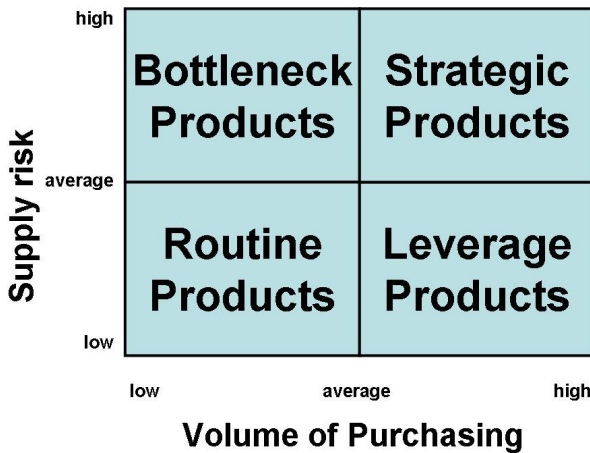


Figure 3 Kraljic's portfolio

These four fields are:

1. *Leverage* products are products bought in large quantities. So a small change in price could have a huge impact on total costs and therefore on profits. The US\$ often is a hidden leverage product when you buy a lot on the international market. The main goal for the purchaser is to get the lowest possible price. This could be achieved by playing different suppliers off against each other or by ordering in larger volumes. Perhaps even by buying more different products at this supplier and requesting a discount. Bulk products are often found in this category.
2. *Critical* or *bottleneck* products are simply difficult to get. It could be that there is just one supplier or that the harvests failed. In this case the company should have to fear for non-delivery and failing production. In this case a company wants to ensure supply by changing to items that are easier to get or ask the supplier to give priority to them. This could be achieved by paying a higher price than the competitors.
3. *Strategic* products form the key to the success for this product. If these items are failing to perform as they should do, the customer will reclaim his money and the product will not sell. Every product should have a certain quality, but these items are so special that a supplier should understand what would be the consequences if he fails to deliver the required quality. In this case a purchaser could opt for

partnerships by promising long-term contract and future deals.

4. *Routine* products are simply everything else. The purchaser does not have to concentrate on a specific aspect but tries to use his negotiating skills to get the best deal. Most products will fall in this category.

The model has many advantages but most important is that it is simple to use, requires hardly any time and points out the most important aspects for a purchaser to focus on.

After the purchaser has placed the products in the Kraljic's portfolio, he should analyse his position on the market.

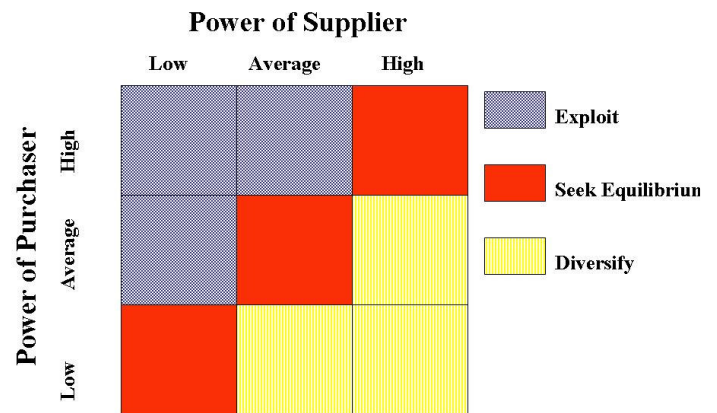


Figure 4 Market power position

By understanding the powers of both the company and the suppliers the purchaser can allocate a market position for this product [3]. By doing so, the purchaser can see whether his market power will be sufficient to get what the company needs or that he will have to search for alternatives. These alternatives could be:

- search for more, at present unknown suppliers;
- train suppliers to make this product;
- ensure that product development will not use this product any longer in the design;
- increase the demand for this supplier and therefore increase the attractiveness of the own company;
- offer long term contracts;
- change specifications for this product so now it will be more available;
- etc.

The main problem with Kraljic is that it is a momentary picture of the actual situation. Over time the situation could change and this would require a new matrix test as well.

This problem has been tackled by Gelderman [1] who has given Kraljic's model a dynamic twist by actually stating that you always have to consider all of your options. For a bottleneck product he states that you have two options: accept your fate or try to look for alternatives so it could become a routine product. But even routine products could be used and be turned into leverage products, in this case one could try to get lower prices and have less cost. If one would order more routine products from one supplier, one could demand a discount. In any case, it ensures you have less paperwork, which is also a good aspect. So for each and every part of the frame you could reconsider your present position for possible action.

Another advantage is that now you can use the insights of Kraljic in order to simulate possible scenarios on the market and consider the possible action which can be taken.

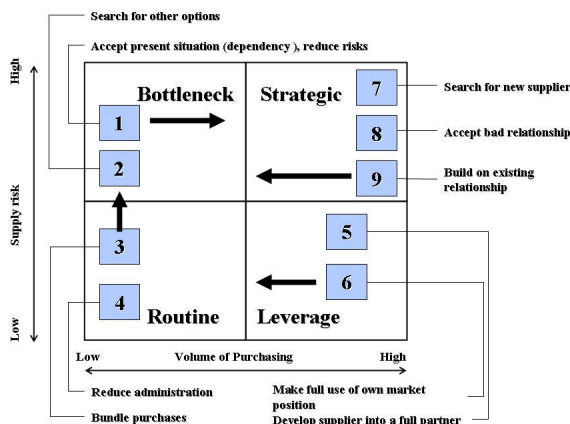


Figure 5 Gelderman's dynamic approach

V Monczka

The model of Monczka is better known as the MSU model named after the Michigan State University where it was developed. The model [4] is in fact a step-by-step approach which helps organisations to improve their purchasing processes. It consists of eight strategic steps all of which open up a deeper layer with similar setup circles till all aspects are described. Monczka adjusted also six business strategy enablers; processes that need to be organised in order to enable purchasing to perform excellent.

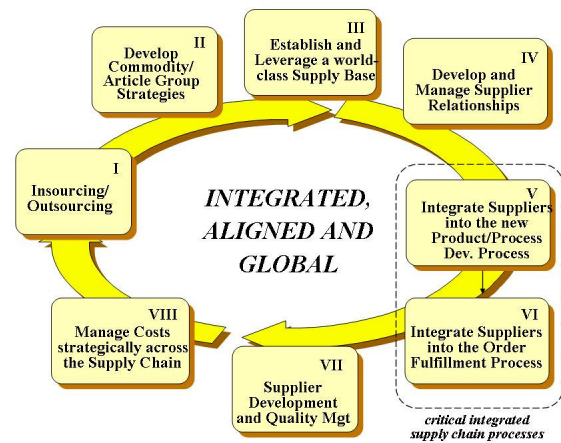


Figure 6 MSU model of Monczka

Figure 6 shows the basic structure of the MSU model. All of these steps require a decision; and within each step you could find more circles and therefore you have to make more decisions. We will only concentrate on the first layer. In this situation we should take the following steps:

1. The question should be asked whether I want to make this product myself or let someone else produce it for me. In fact, I have to ask myself whether I will opt for insourcing or for outsourcing this article.
2. The next step is to see whether we can find similarities between various items so we can treat them in a similar matter. This is a huge advantage over Kraljic who wants you to reconsider every time for every article.
3. Ensure a good and sound base of potential suppliers. Where can they be found and approached for a request for quotation?
4. Manage these suppliers by using for instance Supplier Relationship Management (SRM). What is my future with this particular supplier? Should I keep him or phase him out?
5. Integrate and use your supplier at the earliest possible moment; before the actual production phase during development, if possible. This way confusion can be avoided and the possibility of expensive changes eliminated during production.
6. Make sure they are involved with the production. They should be made aware that your product also incorporates their product. If you are successful, so will they.
7. Check and manage the quality and development of the skills at your supplier for future orders.

8. Make sure the costs go down in order to remain competitive.

Especially processes 2 and 3 of the MSU-model cover the same playing field as Kraljic. MSU is more elaborate and therefore more thoroughly. On the other hand, Kraljic is a tool which can be explained easily. To make the comparison even more difficult: Monczka gives a model that covers the whole purchasing function, whilst Kraljic helps us to tackle a very important part of it.

The MSU model is also used in a program [8] by the Dutch purchasing Society NEVI. They wanted to improve the quality of the Dutch purchasing. This program is called *Purchasing excellence* and compares purchasing processes in some Dutch companies with their American colleagues in similar situations. They simply benchmark them with the best. The project has created a base for improvement within the industrial sector trade and has stimulated many purchasers to rethink their own past behavior. Strangely enough Monczka does not mention the Kraljic in his book, although he describes the Portfolio Analysis [4].

Both systems have their advantages as well as their disadvantages. Without making an extensive list, we would like to point out the most important aspects.

1. It could be stated that the MSU model in fact is a set of checklists which have to tag off before getting to a final conclusion. Unlike Kraljic, it is not a model which forces the user to one unique solution. It stimulates thought and creativity.
2. Kraljic is easy to use for a one time purchase. Monczka requests many points to be answered first and this takes up valuable time. For these simple actions Monczka seems a bit overdone and Kraljic better suited.
3. Kraljic is easy to understand and is a strong communication tool that could be used to convince other departments what they should have to do. Monczka is more complicated and takes a lot of time this could be lost on some people.
4. Monczka needs information from many different departments and this will ensure that the outcome will be supported by more people as just the purchaser. Kraljic could tempt users to jump to conclusions and rely on partial information.
5. For strategic purchasing decisions Monczka takes a better time period in mind as Kraljic.

Gelderman's extension to the approach is helpful, but not as good as the MSU model.

6. The market power diagram makes Kraljic a good tool for trying to see the position for negotiations, Monczka lacks this aspect, but it could be done in one of the many steps on a more detailed level of the model.

VI Conclusions

In short both models have so many positive aspects that we would suggest to use both of them simultaneously. To make a good start by improving the whole purchasing function and the way an organisation approaches its suppliers Monczka could be a good tool but for well known and simple purchases we would suggest Kraljic for its speed and simplicity.

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