



IMPORTANCE OF THE KRALJIC MATRIX AS A STRATEGIC TOOL FOR MODERN PURCHASING

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ABSTRACT. Too often purchasing is seen as just an improved operational task. Due to this a lot of possibilities to use purchasing as a strategic tool for the organization are simply ignored. This article will show that purchasing could be more. The famous and well known portfolio model of Peter Kraljic will be used as starting position but the core will be to show current developments to turn this model into a strategic tool for purchasing.

Also the use for this model in virtual organizations and for extended enterprises will be discussed and we will show that these organizations will profit from using this model for making decisions concerning make or buy decisions and long term relations with suppliers.

Key words: Purchasing, Kraljic-matrix, purchasing strategies, new concepts based on Kraljic-matrix, logistics, competencies of buyers.

INTRODUCTION

Purchasers often hold the view that their profession is mainly a practical job and therefore should be based on experience. As far as theory as a good foundation for present and future action, little is expected and therefore not sought.

When browsing through literature on the subject of purchasing anyone will find the possible harvest meager compared to the vast amount of titles on subjects like marketing and sales. Even logistics has more literature on offer in any university library and it is hard to say that anyone would be drowned under the stream of information. It is difficult to point the finger on the reason for this result. Perhaps it is the fact that purchasing has just recently come out of the backroom into the board room. Not so long ago purchasing was often considered to be a simple job, mainly concerned with ensuring that all goods and material needed for production should be available on time. What should be bought was decided on a different level by managers like research and development, production and marketing and sales.

At present purchasing is more and more seen as a strategic tool and the actual placing of an order is just a result derived from the overall company strategy. The last action is simple and could be done by almost anyone, the first activity demands a good insight into all the aspects involved in the markets around the organization. This change is also pushed by the fact that more and more companies are

reconsidering what will be part of their core business and what could be outsourced to third parties. Areas with low wages lure production away from the traditional industrial countries and this outsourcing strongly increases the volume of purchasing. At present more value is added by suppliers as ever before and this trend shows no tendency flow slowing down. Purchasers have to be more aware as ever before that the survival of the organization depends on their ability to make the right decisions. Experience will still be in demand, but a good theoretical basis is also needed to succeed. Otherwise all knowledge could disappear with the departure of a single purchaser.

Kraljic's article *Purchasing must become supply management* was published in the *Harvard Business Review* in 1983. Not a journal directly connected with purchasing but it proved to be just the right platform at that time. In a few years time the article was translated in many languages (Dutch in 1985) and was discussed in articles and handbooks. Since then this model has been around and has become one of the corner stones of modern day purchasing theory. But why received his model such a positive and welcome reception by the profession?

- The time was right for a useful tool for strategic purchasing. Purchasing was growing at a rapid rate and it was realized that a successful supply chain management demanded strategic well founded purchasing instead of just a department which took care of operational and tactical purchases.
- The used medium. Kraljic initially had developed his model just for internal use for the company he was working for at that time and the article had already seen publication in Germany. In order to become the success it had also to be published in English in a journal read by a broad specter of managers of all kinds: CEO's, marketing managers and so on.
- The model itself. The power of the model is its simplicity. It could be understood by purchasers and by non-purchasers alike. Especially the last group was important as they had to understand which purchasing strategy should prevail.

Kraljic divided his model in 4 phases in order to make his model easier to understand:

Phase 1: Classification	To determine in which segment of the model fits an article best
Phase 2: Market analysis	Determine the bargaining position
Phase 3: Strategic positioning	To identify the opportunities
Phase 4: Action plans	What to do?

For this article we will use the same line as well.

Phase 1: Classification

Kraljic opens his article directly with the core for setting up a long term strategy for purchasing:

1. The strategic importance of purchasing for an organization. This is to be found in the added value due to purchasing, the impact of purchasing on profitability etc.

2. The complexity of the market. This is determined by the scarcity on the purchasing side, the speed of changes in technology changes, barriers for entry of new suppliers, costs of logistics and monopolies and oligopolies on the supply side.

Kraljic states that new strategies for purchasing could emerge if questions are answered like:

Does the company uses all possibilities for combined purchasing by all departments and divisions?

Could anticipated disturbances and bottlenecks in supply be avoided?

What level of risks is acceptable?

What is the best balance between costs and flexibility when considering make-or-buy decisions?

How could cooperation with suppliers or even competitors strengthen long term relationships with suppliers or could these shared sources be better capitalized?

The model build out of these questions is better known by the figure as shown below:

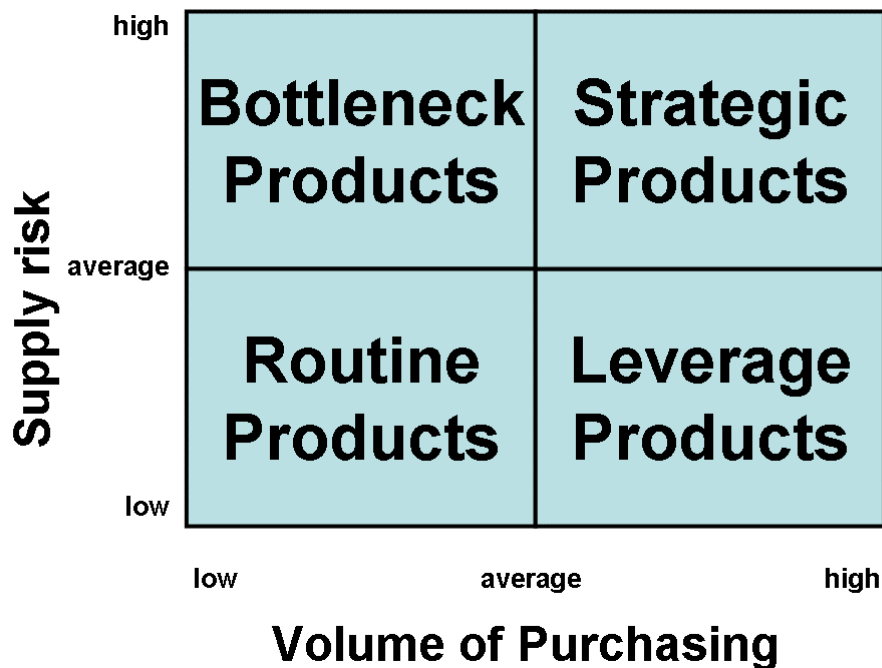


Fig. 1. Classification of articles
Rys. 1. Klasyfikacja produktów

The overall importance of purchasing is determined by aspects like: costs of material, total costs of production, added value, profitability etc. The risks on the supply side is composed of elements like: possible sources, situations of monopolies and oligopolies, speed of progress in technology, obstacles for new suppliers to enter this market, costs of logistics, complexity of the product etc.

Kraljic [1983] gives for each segment suggestions for the purchasing policy as given in the next table:

Table 1. The different purchasing strategies
 Tabela 1. Różne strategie zakupowe

	Non critical items	Leverage items	Bottleneck items	Strategic items
Procurement focus	purchasing management	materials management	sourcing management	supply management
Time horizon	limited: normally 12 months or less	varied, typical 12 to 24 months	variable, depending on availability versus short term flexibility	up to 10 years determined by long term strategic impact
Key performance indicators	functional efficiency	cost/price and material flow management	cost management and reliable short-term sourcing	long term availability
Items purchased	commodities and some specific materials	mix of commodities and specific materials	mainly specified materials	scarce and/or high value materials
Typical sources	established local suppliers	many suppliers mainly local	global, predominantly new suppliers with new technology	established global suppliers
Supply	abundant	abundant	production based scarcity	natural scarcity
Decision authority	decentralized	mainly decentralized	decentralized but centrally coordinated	centralized

Phase 2: Market Analysis

So now we know what we are looking for but we still have to obtain a good idea what are the positions and possibilities of all parties concerned on the market. For all combinations of company and product this will be completely different and it will be subject to change over time. Positions on the market are a relative phenomenon and an advantage can easily turn into a liability if one is not careful enough. Kraljic [1983] gives for some aspects a further explanation like:

- *Use of supplier's capacity.* The purchaser runs a high risk of non delivery when using most of the available capacity of a supplier. But a continuously low level of used capacity could indicate a product at the end of its life cycle. An item like that could easily be given up.
- *Costs break even point.* A supplier who breaks even at a used capacity of 70% should be expected to accept a lower price as if he only passes this point at a rate of 80%. On the other hand he could be less eager to accept any order in the first compared to the second situation as he passes this point at an earlier stage.
- *Volume of purchase.* It is a known fact that a price for an item tends to fall when purchased in larger quantities.
- *Potential costs in case of no delivery or insufficient quality.* Taking on a new supplier also implies taking on new risks. Little or insufficient information is available as the relationship is still in its infant stage.

Phase 3: Strategic Positioning

Now we have to ask ourselves the question “can we achieve this?” To answer this question we could make use of the matrix as given below. It depicts the possible situations of the power position of the supplier compared with the power of the purchaser.

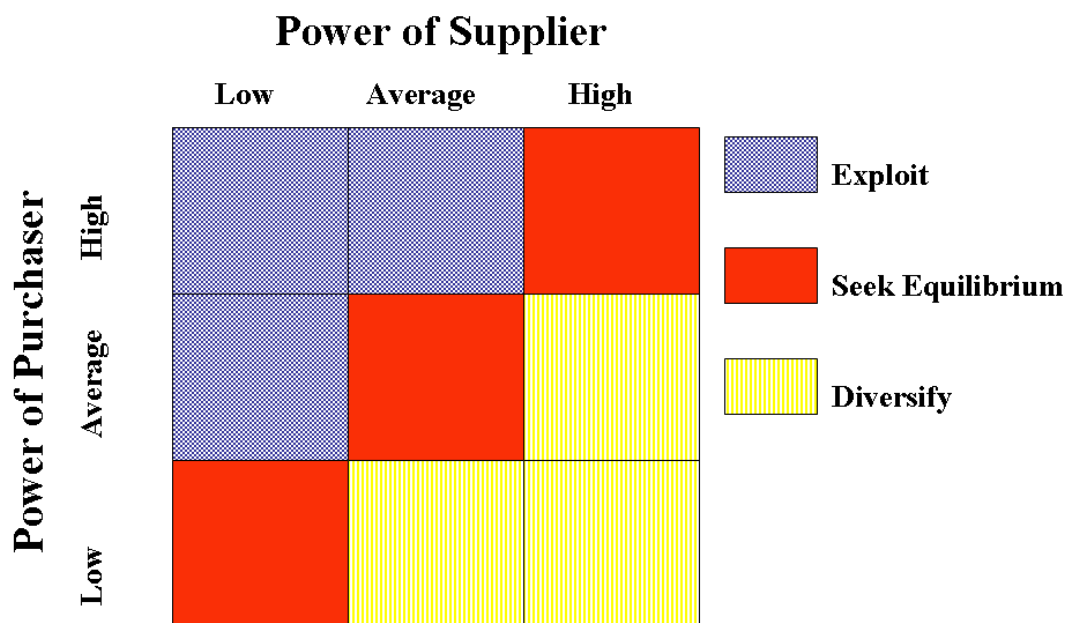


Fig. 2. The Purchasing Portfolio Matrix [Kraljic 1983]
Rys. 2. Macierz portfolio zakupów [Kraljic 1983]

Once it is discovered that the own company possesses a dominant position on the market and that in comparison the position of the selling party is relative weak a reasonable aggressive approach is advisable. In such a way one can exploit its good position in the market. In this situation a purchaser should be able to achieve a positive contribution by aiming for low prices and favorable contracts. The approach should be not too aggressive as it could have a negative impact on long term effects.

An other more defensive strategy is advisable for goods where the market position is less favorable. In this case one should look for new potential suppliers or for possible substitutes for the products. Also more money could be spend on purchase marketing or supplier management. Perhaps it might be a sound idea to spend more on research and development (R&D) or on increasing the production capacity at the suppliers. In short, purchasing has to diversify in order to spread risks.

In the remaining field in the purchasing portfolio matrix we find the situation in which we may expect to have little or no advantage for all parties concerned. Cost could go up by a meek approach but an aggressive attitude could damage any possible relationship. A purchaser should try to find equilibrium between these two extremes.

Phase 4: Action Plans

Finally we know what we want and what we may expect to be able to get. After analyzing this information we should set up a plan of action. In the table below possible policies as found in the purchasing portfolio matrix are placed next to each other using aspects like volume, price etc.

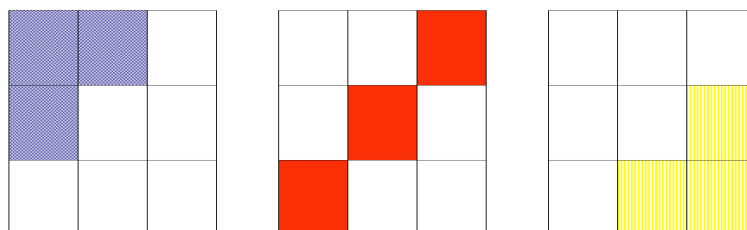


Table 2. Possible Purchasing Policies for the Purchasing Portfolio Matrix [Kraljic 1983]
 Tabela 2. Dostępne polityki zakupowe dla macierzy portfolio zakupów [Kraljic 1983]

Policy issues			
Volume	spread	keep or shift carefully	centralize
Price	press for reduction	negotiate opportunistically	keep low profile
Contractual coverage	buy "on the spot"	balance contract and spot	ensure supply through contract
New suppliers	stay in touch	selected suppliers	search vigorously
Inventories	keep low	use stock as buffer	bolster stock
Own production	reduce or don't enter	decide selectively	build up or enter
Substitution	stay in touch	pursue good opportunities	search actively
Value engineering	enforce supplier	perform selectively	start own program
Logistics	minimize costs	optimalize selectively	secure sufficient stocks

Case: Application of the model with Shell Netherlands BV

The scheme below is based on a lecture by a supplier on the use of Kraljic at Shell BV in the Netherlands. Possible actions are given on basis of this scheme for each of the four positions on the Kraljic model for:

1. What to do in the future?
2. What the core of the policy should be?
3. What to do if the supplier is not satisfactory and
4. What could be the expected benefits?

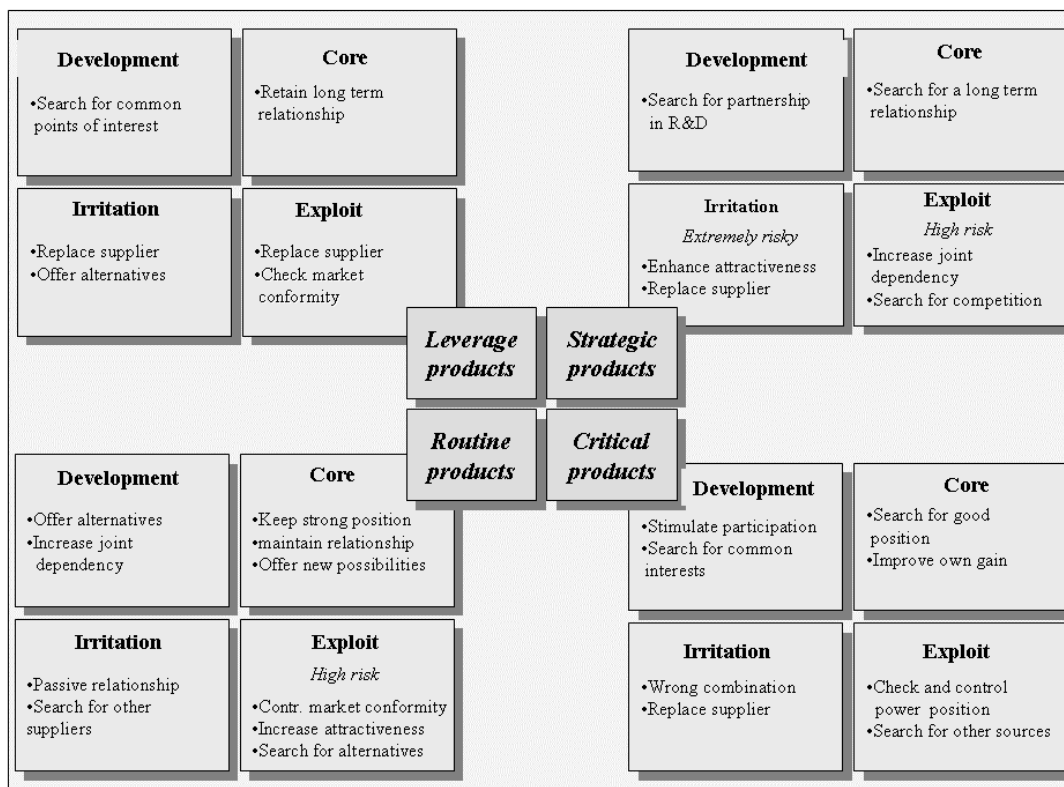


Fig. 3. Use of Kraljic at Shell BV [Pieters 2004]

Rys. 3. Zastosowanie matrycy Kraljic w Shell BV [Pieters 2004]

Modern day usage of the model

Time has not stood still and it would be bad for any profession if no development would be made in its theoretical basis. During its existence, the Kraljic's model has proven its value. Gelderman [1999] states it very clearly:

In the mean time the portfolio approach of Kraljic has been embedded in the basic theory to which every purchaser should have directly access to.

But the model lacks an active dynamic character. In his dissertation Gelderman [2003] added this by showing the consequences in the model. Kraljic is not a moment shot but needs to be adjusted and checked every time again in order to obtain the maximum results from it. The purchaser should always know what he wants to achieve. According to Gelderman the core of all purchasers' action should be in the case of leverage products to make the shareholders happy by increasing profit through low costs. Instruments could be found in reverse auctions. For routine products profit is to be made through reducing handling connected with purchasing. Little or no honor is to be found with these goods, so try to do it with less people. The instruments in this case are for instance E-procurement and E-ordering. In the case of strategic articles Kraljic proposes a partnership with a supplier. Easily said as done. Most of the attempts to set up these schemes will fail. Relationships in purchasing have a lot in common with human relationships. Trust is often the stumbling stone to build something lasting. Still partnership is the key to success in this segment of the model. But just as with some situations with bottleneck products, you could face an impossible task. Some aspects go beyond your control and

you could be too small to change them. In this case the only thing you can do is to accept your lot and hope for a brighter future.

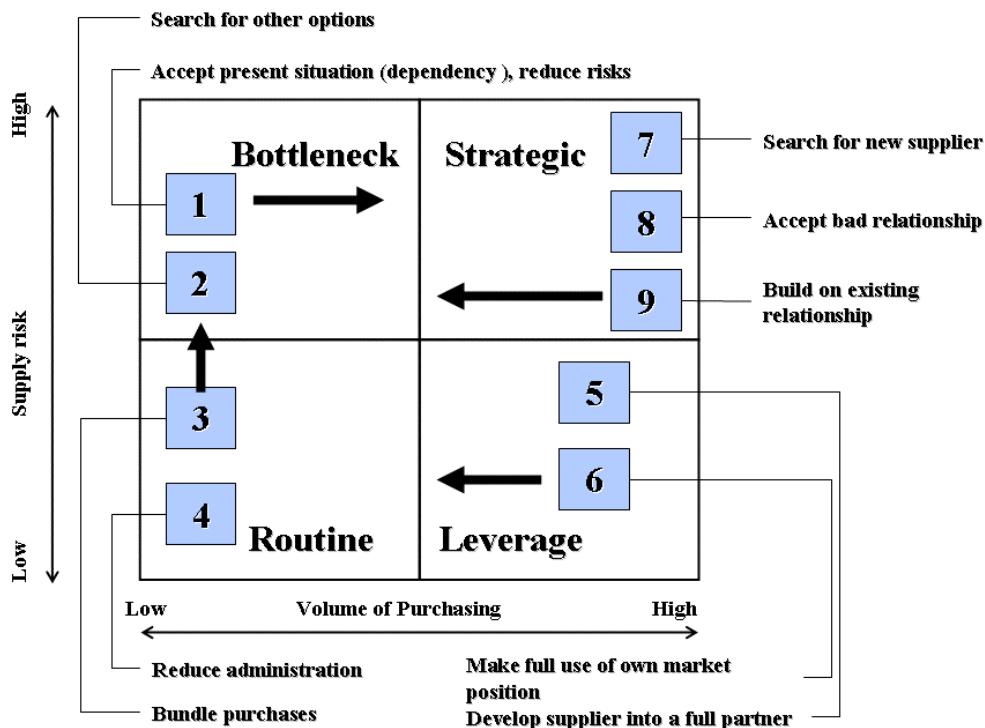


Fig. 4. Purchase Strategies in Portfolio [Gelderman 2004]
 Rys. 4. Strategie zakupowe w portfolio [Gelderman 2004]

Kraljic and Monczka

Kraljic is not the only well know name in purchasing. Next to Kraljic we also have Robert Monczka. His model knows a completely different setup. Models are just simplification of reality; every trial to get a grip on this reality is welcome. Monczka has a completely different opinion of the purchasing process. In his book *Purchasing and supply chain management* [2002] no reference is made to Kraljic's model. We think that Monczka has missed a great opportunity as the use of both models will increase the possibility to gain a better theoretical insight. But theoretic framework of purchasing is not finished yet. Just like Porter, who has found a permanent place in the theory of marketing, so Kraljic will take for ever a place of honor within the theoretical basis for purchasing.

Kraljic and the future

Most purchasers will not like to hear it but purchasing is part of the logistics process. Changes taking place within the supply chain will have an impact on our behavior within purchasing. With this picture in mind it is interesting to ask whether it is possible to use the model of Kraljic to predict these consequences for new developments in the supply chain. In this case some interesting developments are mentioned by Harrison and Van Hoek [2002]:

- Globalization of the supply chains while at the same time products will be produced for local markets.
- The technological possibility of achieving low-cost integrated flows of information for partners in the supply chain.

- Improved ability of companies to produce and distribute more customer specific products and services while at the same time retaining a competitive edge as far as lower costs and shorter product life cycles are concerned.

These developments require an improved flexibility in the supply chain in order to cope with new and/or changed customer demand and/or to respond quickly to changed circumstances in a dynamic environment. One of the most important requirement for this flexibility is to be found on the one hand in an increased speed in the flows of goods and services, and on the other side in being embedded in a flexible network of suppliers in such a way that changes can easily be coped with.

During recent years these developments have led to the creation of new forms of cooperation within the supply chain.

1. Virtual organizations

A virtual organization is a group of companies working like one. The customer is often not even aware that he is dealing with multiple companies. The borders between developers and/or supplier and/or producer are becoming vague. The exchange of information will play a central role in order to allow management to adjust and integrate all individual processes. Cooperation should result in synergy. A virtual organization is in principle a chain of relationships between partners based on common usage of data in order to use all changes to create added value and concur the market. A virtual organization could create its own identity by setting up its own brand and labels. Virtual organizations often have a temporary character due to product life cycles.

2. Extended enterprises

The concept of “extended enterprise” implies a perfect fit between all processes within the supply chain in. The main goal is to develop innovative products, to produce and distribute these high quality products against short delivery times and an acceptable sale price. This will result in changes in B2B business like reduction of suppliers, programs for supplier’s development, integration and early involvement of suppliers in product development, integrated information systems and centralization of stocks and inventories.

Even if these two concepts should be considered to be just fads, there is no denying that the direction of some developments in some branches will take this course.

What will be the consequences of these developments for purchasing and what about the application of Kraljic’s model?

The decision for forming strategic partnerships will be taken on a strategic level. Often the purchaser will not be involved in this decision. This is due to the fact that other aspects like long term overall strategies or trust are more important. The purchaser is expected to operate within this strategic framework once the decision has been taken. He is expected to deal and manage all aspects within this new position. He should be able to integrate strategic decisions on tactical and operational levels inside his own organization as well as within his suppliers. This requires good skills project management, logistics, ICT, commerce and communication.

An other aspect with virtual organizations is the increasing role played by the purchase of services like facility and ICT-services. One could ask with whom the responsibility for these purchases should be laid in the own organization. According to a survey, purchasing should have an important voice at purchasing both product or non-product related goods and services. Purchasing should coordinate the various requests and ensure that standardized contracts facilitate the communication between internal users and suppliers.

Time is the third important aspect. Innovative organizations that develop a lot of new products and processes need an always changing network of partners and suppliers. Production and sale of these products could go up and down rapidly and this implies a flexible and attentive supply department. Competitors and/or copy cats will enter the market and soon this market will be overflowed with similar products. This implies that purchased goods and services now considered to be strategic suddenly become routine products. This change requires that purchasing is faced with new questions and challenges. A thorough understanding of the market and the dynamism on this market is essential.

What could be the role of the model of Kraljic in such a situation?

It is certain that the dynamics on the purchase side will increase:

- Structure and volume of products and services bought can change relatively quickly
- By using more partnerships we will see old power positions disappear and regroup.

The purchaser will frequently have to adjust his purchasing strategy as a result of all of these changes. In this case it could be advisable to check bought raw material, commodities and services on a frequent basis, in such facilitating placing these goods and services into the model's segments, and also to take stock of the power positions within the logistic chain. It is also advisable to check on a regular basis the composition of these segments and to evaluate the present situation. If necessary this should be actualized and used to reconsider the negotiations with the supplier.

As a final conclusion we can honestly state that we see a bright future for the model of Kraljic!

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ZNACZENIE MACIERZY KRALJIC'A JAKO NARZĘDZIA STRATEGICZNEGO DLA WSPÓŁCZESNEJ DZIAŁALNOŚCI ZAKUPOWEJ

STRESZCZENIE. Zbyt często działalność zakupowa jest postrzegana tylko jako udoskonalone narzędzie na poziomie operacyjnym. Przy takim ujęciu możliwości zastosowania działalności zakupowej jako narzędzia strategicznego są po prostu ignorowane. Praca udawadnia, że działalność zakupowa może spełniać więcej funkcji. Jako punkt wyjścia zastosowano słynny i dobrze znany model portfolio autorstwa Petera Kraljic'a, następnie przedstawiono obecne tendencje rozwojowe w celu przekształcenia tego modelu w narzędzie strategiczne mogące mieć zastosowanie w działalności zakupowej. Poddano dyskusji zastosowanie tego modelu w organizacjach wirtualnych dużych przedsiębiorstwach i przedstawiono możliwości wykorzystania tego modelu przez powyższe organizacje przy podejmowaniu decyzji w takich obszarach jak decyzje make or buy lub wypracowywanie długookresowych stosunków z dostawcami.

Słowa kluczowe: zakupy, działalność zakupowa, macierz Kraljic'a, strategie zakupowe, działalność zakupowa, nowe koncepcje oparte na macierzy Kraljic'a, logistyka, kompetencje kupujących

DIE WICHTIGKEIT DER KRALJIC MATRIX ALS STRATEGIEWERKZEUG IN DER MODERNEN BESCHAFFUNG

ZUSAMMENFASSUNG. Einkäufer benutzen die Portfolio-Analyse von Peter Kraljic, um zu definieren, wie Artikel aus strategischer Sicht zu handhaben sind. 22 Jahre nach der Veröffentlichung des Artikels "Purchasing must become supply management" im Harvard Business Review (1983, p 109-117) ist es Zeit, dieses Portfolio zu überarbeiten und über das Original hinaus zu denken. In diesem Artikel wird das Kraljic Modell erklärt und erweitert, um ein dynamisches Modell zu erstellen. Es soll auch gezeigt werden, welche Konsequenzen das Modell auch für andere Betätigungsfelder, wie Marketing oder Logistik, hat.

Codewörter: Beschaffung, Kraljic Matrix, Beschaffungsstrategien, neue Konzepte basierend auf der Kraljic Matrix, Logistik, Wettbewerb der Einkäufer.

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