

# PURCHASING AND THE COMPANY ECONOMY

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## Key words

*purchase management, supplier-customer relations, costs, economic effectiveness*

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## Introduction

In present conditions purchasing becomes one of important active factors of the creation and fulfilment of strategic aims of the company. Its significance grows mainly in the companies, which show a relatively high proportion of material costs, high extent, frequency and variety of completion subdeliveries for final products and their strong effect on a final quality of purchased components. It is obvious that if a company underestimates a strategic management of the purchase, it may cause a complicated situation in relation to its external and internal partners. The problematic areas in this sense are as follows:

- the problems in the choice of supplier – are manifested in insufficient fulfilment of the quality and economic criteria of intra-plant needs and this reflects also in the deterioration of competition status of the company on the market and herewith also in the increase of the costs, the decrease of revenues/sales, etc.,
- insufficient activity of the purchase in making decision about an optimal material variant for the product may be negatively reflected in the standardization of material assortment and in the effect on material economy,
- very important strategic decision includes also the “purchase – produce – cooperate – exchange” area, the information from this area concentrates on the economic demandness of the purchase, mainly on the acquisition costs for inputs, the costs for maintaining the supplies, terms of payment and delivery, reliability of a supplier, etc.;
- the area of quality of final products – the quality of products is not solved in a complex way in case it is narrowed only to the competence of divisions of the quality management and production preparation. The problems may arise in case there is no choice of optimal supplier with respect to the quality guarantee. It is again necessary to emphasise the fact that the quality must be effective, that means the quality must be compared in relation to the costs.
- the area of company logistics is aimed at the intensity and structure of the material and products flow and the strategic decisions about the costs for these flows are its substantial part, but it concentrates also on the supplies and costs connected with them;

- the purchase has a great influence also on the ability to react effectively on the changes of demand on the side of output what has a direct effect on the volume of revenues and also on a long-term position of the enterprise on the market.

### **The Costs Connected with the Optimization and the Use of Supplies**

It is often enforced that the management of supplies is a dominant task of the purchase management of the company. The purchase division is responsible for the management of production supplies including the supplies of raw materials, materials, components, semi-products, spare parts, tools, fixtures, packages, packing materials, but also the materials necessary for the management and administration, research and development, etc. We may say that the management of supplies and business processes and especially the level of supplies management is a strategic set of activities which have a great influence on the effectiveness of functioning of the whole company economy.

The shortages in the management of supplies may be the cause of an inadequate debit of the enterprise and herewith also excessive indebtedness or the problems on the part of the sale. A common and additional supply must be maintaining of the supplies and the minimum costs at non-covering or incomplete or delayed covering of the needs. It is necessary to consider in calculations also the changes of conditions in different schedules of completing the supplies (e.g. discounts for higher quantities of the purchase or supplementary charges during the purchase when the quantity is under the determined limit, etc.).

A so-called optimization approach is a basic methodological approach to the supplies management in conditions of market economy which uses mathematical and statistical base of the supplies theory. In practice EOQ (economic order quantity) is the most commonly applied model. Its principle is the same, irrespective of the fact whether the goods are produced or ordered at external supplier's. It concerns the comparison of the costs connected with very high supplies and the costs connected with very low supplies. Minimalization of the total costs on the purchase and maintaining of the supplies in its broadest meaning is a basic criterion in the application of optimization methods. But what must be respected is the conditions of the total coverage of suggested needs with a certain degree of certainty or the risk and at the same time also variations in the course of deliveries and drawing the supplies (1).

In practical implementation of the optimization of supplies, the costs on their creation, completing, storing, maintaining and the use are divided into three basic groups:

- a) The costs for order, delivery and receipt – these costs are caused by the activities and overhead expenditures, which are connected with the purchase and completing of the supplies. They include the costs for:
  - preparation and placement of order, prediction, research and the choice of supplier, preparation and agreement, communication with the supplier before order processing, etc.,
  - transport – is a part of the costs that are fixed per one delivery regardless its size and these costs are not included in the price,
  - receipt, the check of quality and quantity, information processing of the receipt, storing and keeping the records,

- activities in the settlement and reimbursement of invoices.
- b) The costs for maintaining, storing and administration of the supplies include:
- the costs for tying of financial means in the supplies (e.g. the interests from the loan for supplies);
  - the costs for storage and administration of the supplies. These costs include the costs connected with the operation of a warehouse, making register of the supplies (they relate to building, warehouse and handling equipment, the consumption of energy for lighting, air-conditioning, wages of stockmen, insurance of stored goods, etc.);
  - the costs for the risk – the costs related to discarding of non-used supplies (damaged, broken, devalued supplies as a result of the expiration of guarantee period or the goods which are discarded due to the changes of production programme, discounts/reductions for useless supplies, etc.).
- c) The deficit costs arise in the moment when the production is not sufficient for early satisfaction of the needs of intra-plant customers. These are mainly the costs which arise:
- directly during the purchase – the extra costs which have arisen in speeding up of the procurement of alternative performance (communications, travelling costs, higher prices, etc.),
  - in the production, operation and in other intra-plant customers due to non-satisfaction of the needs for the reason of improvisation, non-utilization of facilities, extension of continuous time of the production and accumulation of the supplies from unfinished production,
  - in the sale – these are the costs which arise due to non-fulfilment of the obligations against the customers, potential loss of the customer, impairment of the position of the enterprise on the market, increased costs in case of speeding up the process of despatching and transport, etc.).

### ***Calculation of the optimal size of delivery***

A basic model for calculation of the optimal size of delivery in condition of a constant need of deliveries and constant completing of supplies is as follows:

$$Ncn = \left( Nd + Ns \cdot \frac{D}{2} \cdot td \right) \cdot \frac{Dp}{D} ,$$

$Dp$  – suggested total need of the delivery for T period

$Nd$  – the costs to ensure one delivery of a certain type of material

$Ns$  – the costs for storing and maintaining the supplies, expressed in Slovak crowns for the supply unit of a certain type of material and per one day

$Ncn$  – total costs in Slovak crowns to ensure the deliveries, storing and maintaining of supplies at total purchase  $Dp$  in a planned period T

$t$  – the length of planned period in days for which we consider  $Dp$

$D$  – the size of delivery of a certain material in material units or Slovak crowns

$td$  – the length of delivery cycle of a certain type of material at a given size of delivery expressed in days.

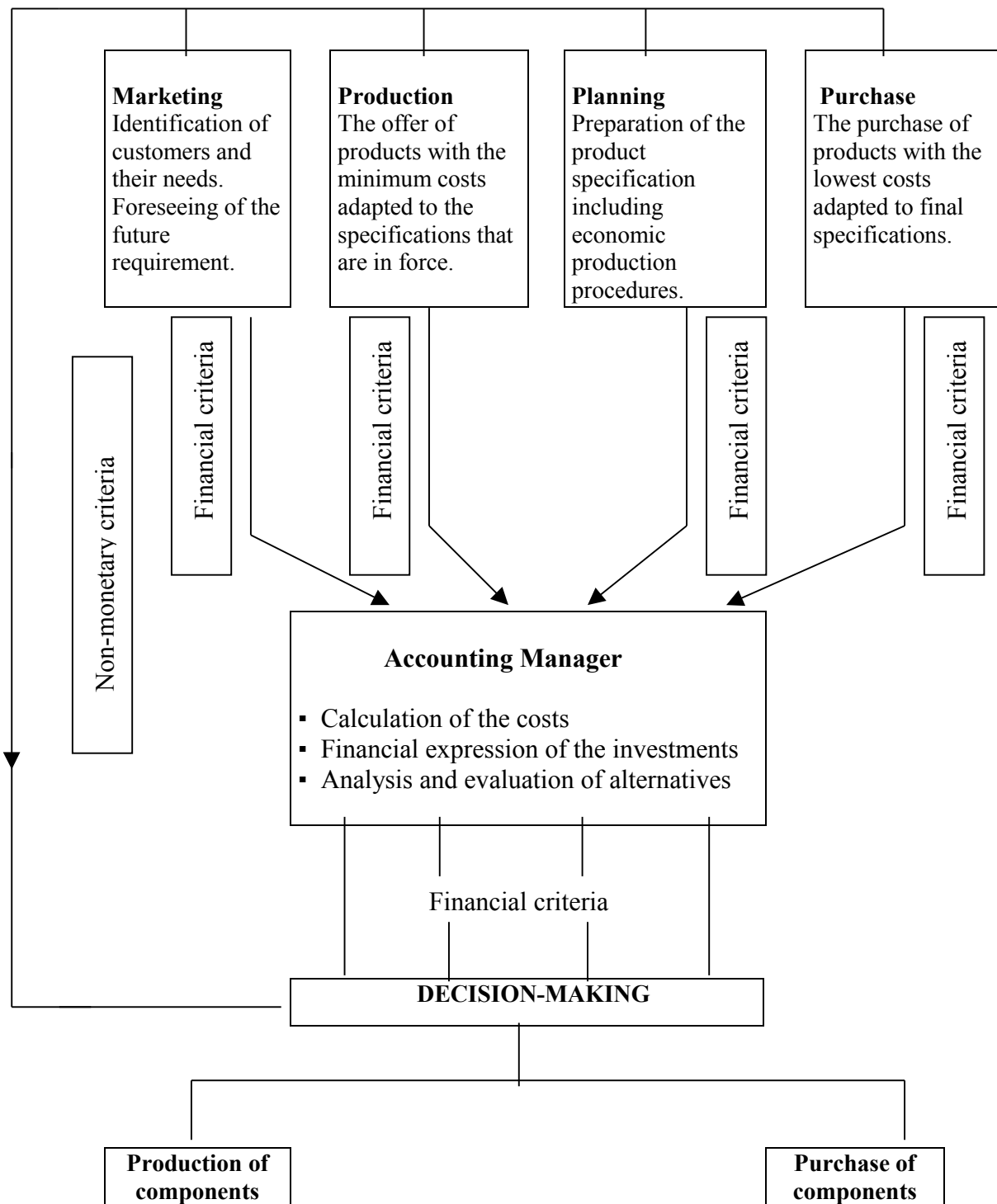
## **Conclusion - Alternative Solution of the Purchase in Relation to Economic Effectiveness**

The main idea of satisfaction of different alternatives of the purchase is the decision what is more effective for the enterprise – to purchase from an external supplier or to produce the product for own overheads (make-or-buy). Making decision what should be produced and what should be purchased are the subject and the output of the analysis which is commonly marked as a “make-or-buy” analysis. Sometimes it is possible to use also other options such as “cooperate-or-borrow”. On the basis of determined requirements in advance, the main task of a purchaser is to propose economically the most suitable alternative. Such aspects must be taken into account as own outputs of the company, potential transport costs or the problems during purchase, price, quality, etc. An evaluation analysis is the most suitable instrument for the choice of the most effective variant. The evaluation analysis is a method which enables to find economically suitable variants of the solution and as far as the initial price concerns – the costs for processing, the influence on the product quality or the sales price.

In practice there are also such cases that the company decides to produce a component of a certain product even for higher costs and even when the production itself requires higher costs than the purchase of this component. The reason for this is unreliable deliveries from the external supplier. Therefore it is known that the purchaser cannot clearly and with certainty prefer in advance whether to produce or to buy unless other substantial circumstances are taken into consideration and unless an adequate and exact calculation and evaluation are made. This is taken into account also in the following scheme (Fig. 1.).

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*Fig. 1 The scheme of “produce or buy” decision (Bingham, Raffield, 1990)*