

## PROCUREMENT LOGISTICS IN BRANCH PURCHASING GROUP

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**Abstract:** The aim of the article is an organization and functioning of logistics supply in the the commercial company operating in the branch purchasing group has been presented. The definition, classification and functioning of purchasing groups have been discussed. The organization of supply systems that can be used in purchasing groups has been shown. On the example of the commercial company an evaluation of the supply system has been conducted as well as the costs analysis of supply logistics on a selected company.

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## 1. INTRODUCTION

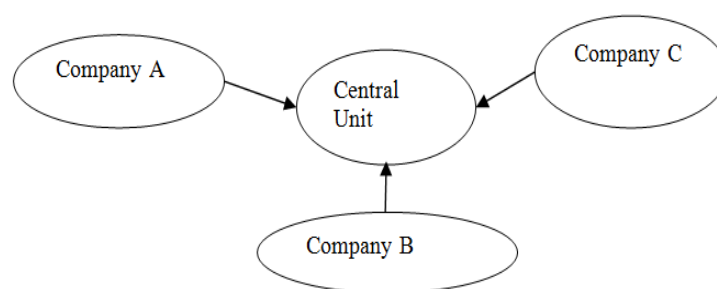
Nowadays common operation of companies in the market has become very popular. There are established various capital-related organizations or without any ties. Some of them are set up to act as long as possible, others are created just to perform the intended task, e.g. joint purchase of goods, services, etc. Purchasing groups are a very popular form of cooperation between companies. Purchasing groups are organizations which associate a group of companies which is managed by a specially created unit or by an external integrator. Joint action of companies, and additionally a guidance which one needs to follow, are necessary to have a significant impact on one of the most important areas of logistics, i.e. the supply logistics. Supply is a process of purchasing management so that goods, materials and services were delivered exactly on time, at a specific place and at an attractive price. Today well-organized supply logistics is essential to stay in the market and to develop a company. Companies operating in the branch purchasing groups have several options on how to organize the supply logistics. The choice of a policy to supply companies in products, goods will depend on the risks the company can afford at the moment.

## 2. PURCHASING GROUPS

Purchasing groups are the most popular form of fight against competition. In order to provide a proper definition of the purchasing group one should distinguish two concepts, namely group shopping and a purchasing group. Very often we can encounter a situation when several companies work together and perform once or sometimes a common purchase. This type of action should be defined as a group shopping, i.e. a common action in order to purchase merchandise, a product, a material or a service without creating a special supervising unit and without additional restrictions imposed on individual participants for a given transaction (Zimon, 2016, pp. 471–485). It is a very popular operation now to get low prices. What else should be understood by the purchasing group. The purchasing group can be described in the simple way as a group of companies of the same or different branch which combine to make joint purchases (Zimon, 2015, pp. 284–290). This is a very simplified definition of this type of organization. Another definition defines the purchasing group as a group of cooperating companies. They are managed by a specially created central unit whose aim is the realization of tasks commissioned by the companies making up the purchasing group (Zimon 2014, pp. 319–327). A more extended definition of the purchasing group is based on the definitions of logistics and supply chain by Christopher Martin and it is as follows – a purchasing group is a group of cooperating companies which jointly controls and improves the flow of goods, information and money from suppliers to end

customers. The participants of this system consists of a separate central unit whose main task is to achieve the objectives set out by the companies in the system (Zimon 2014, pp. 319–327).

Business integration within the supply chain is essential to fight the competition, joint actions and not continuous rivalry allows to avoid self-destruction (Christopher, 2011, p. 13)



**Fig. 1.** Scheme of organization purchasing group; own research

The central unit functioning in the branch purchasing groups will have a crucial impact on the supply logistics supply which will be implemented by a company.

It will operate on the principles of developing databases of suppliers. It will accept a definite attitude towards suppliers in order to force them to meet the necessary requirements (Leenders, Johnsson, Flynn & Fearon, 2006, pp. 170–184).

Organization of supplies in a purchasing group can be described as centralized shopping as the central unit has a stronger negotiating position (Krawczyk, 2011, p. 181). The functioning in a purchasing group and distinguishing a separate central unit is similar to strategic logistics network. Strategic logistics networks are directed by a centrally located manufacturing or commercial company and their goal is to service the markets foreseeable at the time. The characteristic feature of these networks is a long-term cooperation. (Bukowski, 2016, p. 93).

While realizing the group purchasing, the economies of scale will reduce the costs of the purchase and the costs associated with the order. Companies operating independently on the market in order to optimize the supply chain and stand up to competition from various types of enhanced logistic networks and as a part of the integration of the supply chain they can also get a number of benefits such as costs reduction (Walasek, 2016, p. 177).

Due to the selection of participants purchasing groups can be divided into sectoral and multi-sectoral. This division is important because of the intensity of the most important features for the assumed purchasing groups, i.e. the economies of scale. In the branch purchasing groups there are companies which operate within only a single branch. There are no other branches. This is very significant for the intensity of economies of scale "power buy". Companies operating in this type of

group order the same type of goods. Limitation of suppliers makes that the scale of the order is large. In such a case the Central Unit negotiates the conditions of purchase for a branch purchasing group, so it has a strong advantage in the form of the size of the contract, which the supplier (producer) must be reckoned with.

When analyzing the formation of purchasing groups, they should also be divided into due to the unit that integrates them, i.e. into the Internet and traditional ones. Recently, it has been very popular to organize purchasing groups by the Internet. There are many advertisements where the organizer invites to cooperation. Such type of groups, for example are drugstores or automotive wholesalers. The main goal, the companies operating within the purchasing groups want to obtain, is a low purchase price. It is accomplished the most in the branch purchasing groups.

The functioning of the units in purchasing groups should bring the following financial benefits:

- lower costs,
- increase sales,
- protect the company from loss of financial liquidity.

The above mentioned financial benefits arise when in a purchasing group the following situations occur (Zimon, 2013, p. 213):

- economies of scale
- cooperation of participants that create a particular purchasing group
- creation of a unit on the principle of non – profit organizations
- the functioning within a single branch
- joint marketing activities.

All these components occur in traditional branch purchasing groups. Weaker results in these areas are obtained in a conventional cross-branch purchasing group.

Collaboration and cooperation of companies in many organizations do not completely eliminate the factor of competition, often this type of action is referred to as "relations similar to the partnership" (partnership-like relationship) (Goffin, Lem & Szwejczewski, 2006, pp. 189–200). In the companies operating in purchasing groups there is a rivalry, but the positive effect is the driving force and an increase of the purchasing group.

### **3. SUPPLY METHODS OF COMMERCIAL COMPANIES OPERATING IN PURCHASING GROUPS**

Supplies can be best defined as the purchase of goods or services. Supply consists of all the activities that are necessary for the acquisition of goods and services consistent with the requirements of the user (Coyle, Brandi & Langley, 2002, p. 104). The most important issues related to the purchase of logistics processes are

the completeness, quality, timeliness of delivery as they condition the efficient service processes (Skowronek & Sarjusz-Wolski, 2012, p. 161).

In the commercial company the supply logistics (purchase) is the process of ordering, delivery of goods, and to some extent, their storage. From the point of view of logistic cost management, warehouse management covers all three phases of supply logistics, production and distribution. Therefore, the process of goods introduction to the company and their storage should also be treated as supply logistics. Companies operating in marketing and purchasing groups can organize delivery in several ways, it depends on the fact of having the central warehouse that can serve as a point of separation. The supply chain expands and the companies should pay attention to it (Nollet & Beaulieu, 2005, pp. 11–17). The central warehouse for commercial companies is in the flow of the stream of materials, goods which are stored in the main inventory system as buffer stocks to cover independent demand (Fertsch, 2003, p. 129). In the purchasing groups with the central warehouse the supplies can be divided into four variants (Zimon, 2015, pp. 7058–7059):

#### 1. Direct deliveries

This delivery system is possible only when the right size of range set by the central unit is ordered. The central unit is bypassed, delivery directly from the manufacturer warehouse goes to the company in the purchasing group. In case of an order of a small quantity of a given product companies are forced to use other delivery systems.

Direct delivery system does not incur high transport costs and ordering. Another positive feature is its speed of delivery. The speed and virtually no transport costs are the advantages of this solution. However, this type of supply of goods is possible in case of large supplies. The manufacturer for a small quantity of goods is not going to organize free transport. This system bypasses the Central Unit.

#### 2. Deliveries with the use of the central unit of the purchasing group

Supply system with the use of the central unit is a solution for companies that at the time of the offer on the range of goods did not join the joint purchase or if they ordered a small quantity of goods or special items which have been delivered to the storage unit.

Different companies take the goods from the warehouse of the central unit. A major drawback of this system are the costs to be incurred, i.e. the costs of transportation and inventory costs in the warehouse of the central unit. Delivery time is longer but the advantage is low storage costs.

#### 3. Combined deliveries

This model supplies occurs in situations where a given batch of goods is in an area where there are several companies in the purchasing group. The combined deliveries are based upon the principles of the concept of Milk-Run and occur when loads are too small to justify the direct deliveries (Krawczyk 2011a, p. 247).

This system (moderate supply management strategy) appears when deliveries are smaller. The manufacturer sends the delivery to multiple recipients, which in the following locations (companies) is successively discharged. This type of deliv-

ery requires more time. Very often it is free, but this depends on the size and value of the order. Inventory costs, ordering, transportation are low.

#### 4. Supplies bypassing manufacturer

The last system is the most expensive system that can be described as an aggressive strategy of supply management. The central unit in the purchasing group acquires goods which is stored in its warehouse. Companies buy goods from the warehouse of the central unit.

If the goods are in the central unit and there is a demand for them, then the companies can order them. If it is not in the company and the central unit, then the company loses the customer. In this way the deliveries on a range, which ran out, can be realized and the deficiencies can be complemented. The orders which rely on this management strategy are very costly. Storage costs in such a case are low. But the unit cost of goods ordered increases immeasurably. The central unit sells it more expensive as it adds the costs of storing the goods. Additionally, the company bears the delivery costs.

### **4. SUPPLY LOGISTICS IN COMPANY WORKING IN THE BRANCH PURCHASING GROUP**

The analyzed company is a trading company operating in the construction industry. It functions within the branch purchasing group. Supply logistics in a company working in the branch purchasing group is closely linked to the central unit. This unit is engaged in purchasing organization. Based on information from individual companies operating in purchasing groups, it organizes purchases of individual goods. Purchase without using the central unit does not practically exist. It is simply not viable. Companies which use the central unit receive the lowest possible prices and favorable period of trade credit. The downside of this type of organization are frequent purchases with a supply greater than the safety stock.

However, this does not cause the formation of excessive inventory, which it is considered this part of inventory whose maintenance is not justified by the established level of customer service that allows secure the continuity of releases (Cyplik, 2005). Ordering over the safety stock, is contrary to the main tasks facing warehouse managers (Richards, 2011, p. 28):

- achievement of low inventory,
- low management costs,
- storage and high-quality services.

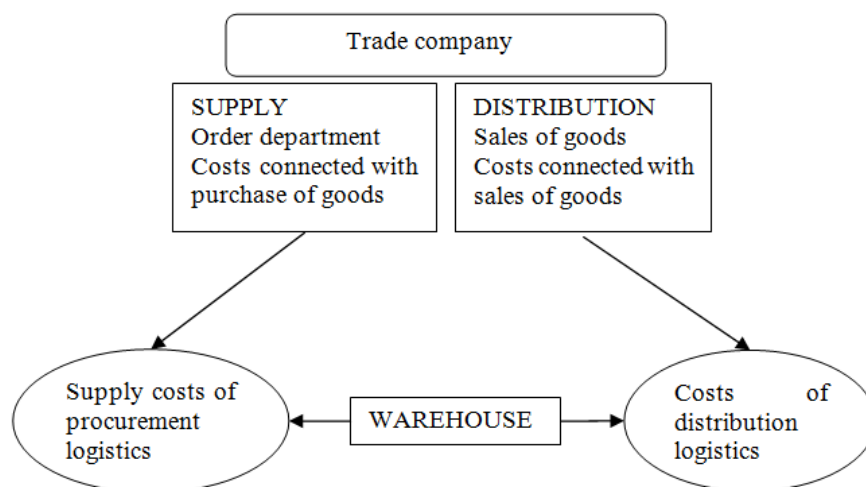
This is that the central unit sets minimum limits on the order data. For a low price one should buy more than needs. This results in higher costs of maintaining inventory. However, the price obtained and the guarantee of continuity of sales make this way of organizing purchases the most favorable for the company. In turn, the effective supply of goods and services contribute to the competitive

advantage of the organization (Coyle, Brandi & Langley, 2010, p. 103). The central unit often represents all companies active in the group, selects suppliers for specific product groups. Very often there are chosen only one or two suppliers for a given product. Supply of companies in the goods is similar to the method of supply from one source, which increases the chances of reducing the unit costs of purchases and better cooperation and communication with the supplier (Murphy & Wood, p. 149).

Another downside of organizing supply in this way is a loss of independence when selecting suppliers. Managers of the central unit of the purchasing group conduct negotiations with suppliers and make a choice. In the case of branch purchasing groups the delivery of goods can take place in two variants:

- supplies directly from the manufacturer,
- the supply with the use of the central unit.

The choice of other methods of delivery is theoretically possible but uneconomical. In the studied company the first variant is applied in 95% of cases. The central unit performs the contract and the producer delivers the goods directly to the company. The second variant is used in about 5% of the orders, and it is relevant if there are lacks or when smaller batches of goods are ordered.



**Fig. 2.** Influence of different departments on the cost of supply logistics; own research

The way of company functioning has a strong influence on the formation of logistics costs in different areas of the company. In the studied commercial company the logistics process includes three phases, supply – storage – distribution. In this type of company there is no manufacturing phase. In commercial enterprises, in contrast to the production units and services, the warehouse will perform very important functions. It will have a big impact on the overall logistics costs. Translat-

ing phases of logistics processes for cost centers in the commercial company must the departments of sales, procurement and management should be selected. The influence of the management on the cost of logistics is indirect and difficult to calculate. The warehouse, as the most important area of logistics costs, has been selected from the management. The detailed picture showing the effect of different departments on the cost of supply logistics is shown in the figure below.

The major problem in the case of logistics costs management is to separate the costs associated with the storage. In the warehouse there are costs associated with taking delivery as well as the costs associated with the release of the goods. The costs of maintaining the warehouse, the cost of staff salaries, additional other expenses related to the operation of the magazine will concern both the logistics of distribution and supply. In such a case it would be right to divide the total cost by using the appropriate key settlement, e.g. the quantity of goods taken or issued, etc.

**Table 1.** Costs in the order process; own research based upon Twaróg, 2003, p. 76

<b>Stages in the process of creating an order</b>	<b>Costs specification</b>
<b>Reconciliation of orders and communication</b>	The cost of preparing the order, the cost of data transfer
<b>Adoption of an order</b>	The cost of receiving the order, the cost of filling the order, the cost of taking the order
<b>Control of financial credibility</b>	The costs of checking the reliability, calculation costs of suppliers selection
<b>Documentation</b>	The cost of the order confirmation, the cost of preparing the order, the cost of instructions for the preparation of the goods
<b>Contract preparation</b>	Costs of goods preparation
<b>Delivery</b>	Transport cost
<b>Operations after delivery</b>	Other costs

A similar situation applies to the sales department, unless the firm is a separate unit responsible for procurement organizations. In the case of commercial companies the cost of the supply logistics include mainly:

- the costs of the supply department (purchase),
- costs of quality control (in commercial companies which use aggressive strategies for inventory management costs this type will occur),
- high quality criteria and tight control of the supply grows to the rank of the most important tasks in the supply sphere,
- storage costs – the costs of inventory management,
- the transport costs of purchased goods.

An important group of costs in the department of procurement are the order costs which include the costs shown in Table 1.

Table 2 presents the structure of logistics costs in the studied company.



**Table 2.** Share of logistics costs in total costs; own research

<b>Costs of supply logistics</b>	<b>Costs of distribution logistics</b>	<b>Total costs of logistics</b>	<b>Share of logistics costs in total costs</b>
<b>880 470 PLN</b>	3 967 564 PLN	4 848 034 PLN	58 %

There is a clear predominance of the costs associated with logistics distribution, which accounts for about 82% of total costs. Supply logistics costs are low and represent less than 18%.

Below in Table 3 a detailed analysis of the costs related to procurement logistics is presented.

**Table 3.** Costs of purchasing department in 2014; own research

<b>Sorts of costs</b>	<b>Costs of purchasing department (2014)</b>	<b>Share in the total cost of supply logistics</b>
<b>Remunerations</b>	197 000 PLN	65 %
<b>Surcharges on remunerations</b>	42 000 PLN	14 %
<b>Rents</b>	52 000 PLN	17 %
<b>Amortization</b>	2 100 PLN	1 %
<b>Materials and energy consumption</b>	9 646 PLN	3 %
<b>Total</b>	302 746 PLN	100 %

Subsequent costs that were incurred by the purchasing departments are those to maintain the warehouse. As it was not possible to separate the cost of inventory management due to the process of purchasing and selling, the inventory costs have been allocated in 50% in its distribution logistics and supply.

**Table 3.** Costs of warehouse management; own research

<b>Sorts of warehouse management costs (2014)</b>	<b>The amount of costs (2014)</b>	<b>Share of costs in warehouse management</b>
<b>Remunerations</b>	165 000 PLN	29 %
<b>Surcharges on remunerations</b>	30 524 PLN	5 %
<b>Rents</b>	361 200 PLN	63 %
<b>Amortization</b>	11 000 PLN	2 %
<b>Materials and energy consumption</b>	10 000 PLN	2 %
<b>Total</b>	577 724 PLN	100 %

Costs related to warehouse management are high. However, purchasing groups affect the size of the inventory. The biggest share in the cost of inventory management are the rents and remunerations, together about 92%. However, one keeps in mind that inventory management is such a costs management area where by the introduction of basic methods, strategies of inventory management, one can pretty quickly reduce the level of costs (Zimon, 2015, pp. 459–470).

## 5. CONCLUSIONS

Management and organization of supply is a very difficult process, because the company has to decide what batch of goods needs to be purchased to guaranteed continuity of sales and will not overstate unnecessarily the cost of storing inventory. This decision is crucial for the development of costs in a company, which has a significant impact on financial results. In companies operating in purchasing groups the order size is often determined by the central unit. Additionally, the selection of a deliverer is also made by the specially created central unit. It also leads negotiations with suppliers. Thus, one can see that to a large extent, supply logistics is created by the central unit.

When analyzing the costs of supply it can be noticed that the cost of ordering are at a lower level compared to the cost of inventory management. They represent about 35% of the cost of supply logistics. Giving to the central unit the entire "burden" associated with the search for suppliers and negotiating terms of supply decreases costs in this area of management. On the other hand, the operation time and order limits not seldom exceed the optimum volume of orders of the goods and cause high cost of storage management. However, the benefits that companies gain cause that operation in this type of group is justified. In addition, the central unit and the warehouse are always a security buffer for businesses in case of the lack of goods in stock.

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