

THE RATIONALIZATION OF LOGISTICS AND PROCUREMENT COSTS IN THE PROCESS OF PURCHASING CONSOLIDATION

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Abstract Combining enterprises into purchasing groups unlocks the potential for cost savings and reductions by way of, among others, using the economies of scale. The consolidation of demand offers better trading terms and conditions than those negotiated by single companies. Experience suggests that the best cost savings can be brought by joint procurement of those commodities, which support the functioning of enterprises. The Authors look into the models of functioning of purchasing groups that they have modified. Group formation stages are also being investigated based on the case study.

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1. INTRODUCTION

The literature on the subject shows that the supply chain is a more or less effectively organized system of business entities, linked by a various interdependencies (Boruc, 2009) (Ciesielski & Długosz, 2010), (Lysons, 2004). Each entity is a component in a mechanism, intended to convey raw materials, semi-finished products, products and services into the production process and, consequently, delivering finished goods to an end customer (Sarjusz-Wolski, 1998), (Coyle, Bardi & Langley Jr., 2002).

Every day each enterprise has to answer the question of how to respond to demand changes and customer requirements in a timely fashion. In the face of ever-changing circumstances companies must give closer attention to each and every process taking place in the supply chain they are involved in. To remain competitive, companies seek cost savings (Waters, 2001), (Śliwczyński, 2007). Procurement is evidently one a promising area for cost savings.

2. PURCHASING CONSOLIDATION AS A MEANS OF RATIONALIZING PROCUREMENT COSTS

From the onset of the world crisis (2008) we have been observing a shift in the perception of purchasing on an enterprise-wide basis: from functional strategy towards a tactical strategy. The operational function of purchasing has remained unchanged on the same level for years. This phenomenon is confirmed by the case study involving 12 Polish companies (Fig. 1).

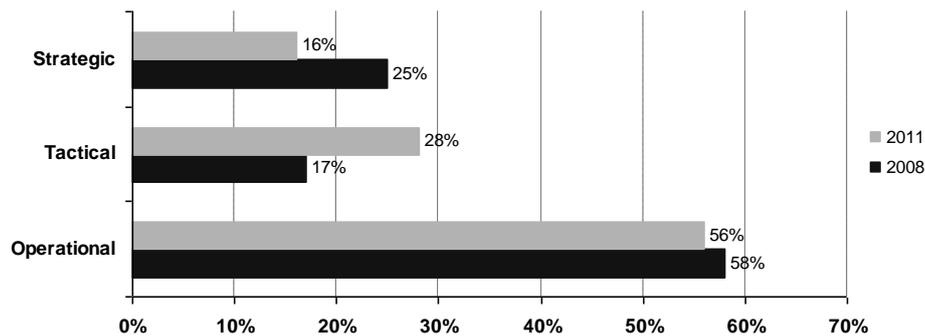


Fig. 1 The function of procurement in Polish companies (Filipowski, Syga, Danek & Szmalec, 2012)

Strategic operations with a long-term perspective tend to be moved to a back burner. It is a consequence of the crisis, which has also hit Poland. It has forced Polish companies to constantly look for cost saving opportunities. They are sought for within enterprises, although to a limited extent – as efficiency level has been on a steady increase for years. Today entrepreneurs seek cost savings also outside of their companies. They conduct analyses and try to achieve cost savings in the entire supply chain (Filipowski, Syga, Danek & Szmalec, 2012), (Lysons, 2004), (Coyle, Bardi & Langley Jr., 2002).

The analysis of operating costs demonstrates that procurement and transportation comprise more than half of all of the costs incurred by the company (Fig. 2).

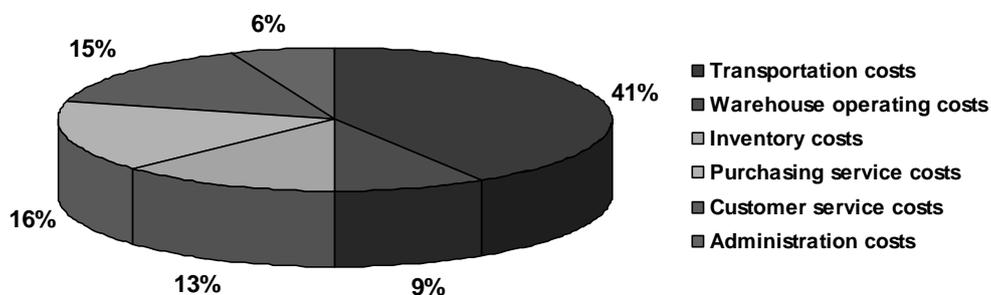


Fig. 2 Operating costs of the company (unpublished materials, The Institute of Logistics & Warehousing, 2011)

This area of the company’s activity shows potential for cost savings and cost cutting, for example through the use of the economies of scale thanks to group purchasing.

2. THE ESSENCE OF A PURCHASING GROUP

Purchasing Groups are a phenomenon that the Polish enterprises are familiar with. Over the past years the companies have tended to combine into Purchasing Groups in order to be given more favourable trading terms and conditions. Creating all kinds of organizations comprised of companies cooperating with one another is conducive to establishing Purchasing Groups. It is also supported by the European Union, which allocates substantial funds for establishing and running regional clusters, service centres, research centres and similar forms of cooperation to enhance the growth and development of their participating companies. In these circumstances it can be observed that not only closely tied affiliates and subsidiaries, but also loosely linked companies form central purchasing units. This process seems to be a natural development path to follow in a situation where two thirds of Polish companies surveyed in 2011 declared having a

central purchasing unit. The external consolidation of joint purchasing requirements provides an opportunity for cutting of cost reduction – as a result of product range standardization and volume aggregation at the level of company groups (Filipowski, Syga, Danek & Szmalec, 2012), (Kolińska & Doliński, 2013).

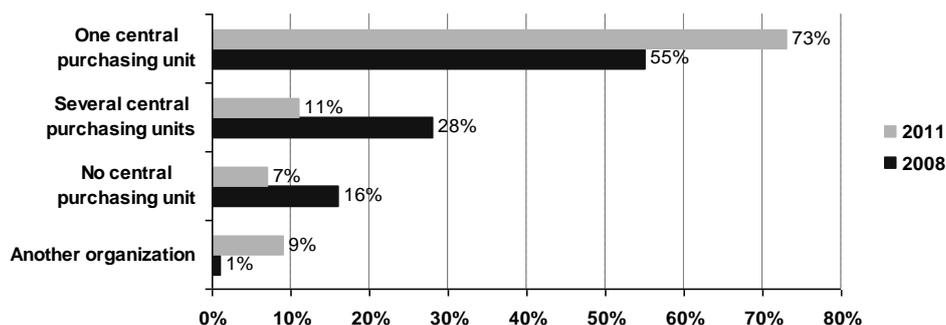


Fig. 3 The presence of central purchasing units in the structure of Polish enterprises (Filipowski, Syga, Danek & Szmalec, 2012)

A Purchasing Group is a voluntary association of business entities, formed for the purpose of procuring items collectively. The consolidation of demand should encourage vendors to offer better terms and conditions than the conditions which individual companies working in isolation are able to negotiate. The experience shows that the fundamental condition for achieving success is voluntariness, inspired by the realization that collective activities can generate extra additional profits. The companies belonging to a purchasing group organization are not, but can be, affiliates and subsidiaries. Those companies undertake collective procurement, whereas other areas, including trade, can be independent or nearly independent. Before taking any actions, the companies declaring the intention to procure products jointly should determine the terms and conditions that the Purchasing Group will be guided by - most commonly in the form of an agreement (Kolińska & Doliński, 2013). Such an agreement should specify:

1. The structure of a Purchasing Group,
2. The coordinator of a Purchasing Group,
3. The scope of responsibilities and rights of the Purchasing Group coordinator and members,
4. The method of making settlements both within and outside of a Purchasing Group,
5. The list of items to be procured collectively,
6. The procedure for modifying the list of items to be procured collectively.

A precise and coherent specification of the terms and conditions in the cooperation agreement will make its functioning more efficient. The principles of cooperation

tion within a Purchasing group are determined by the model of the functioning as selected by the Group participants.

The structure of a Purchasing Group is composed of the coordinator and other Group members (Fig. 4).

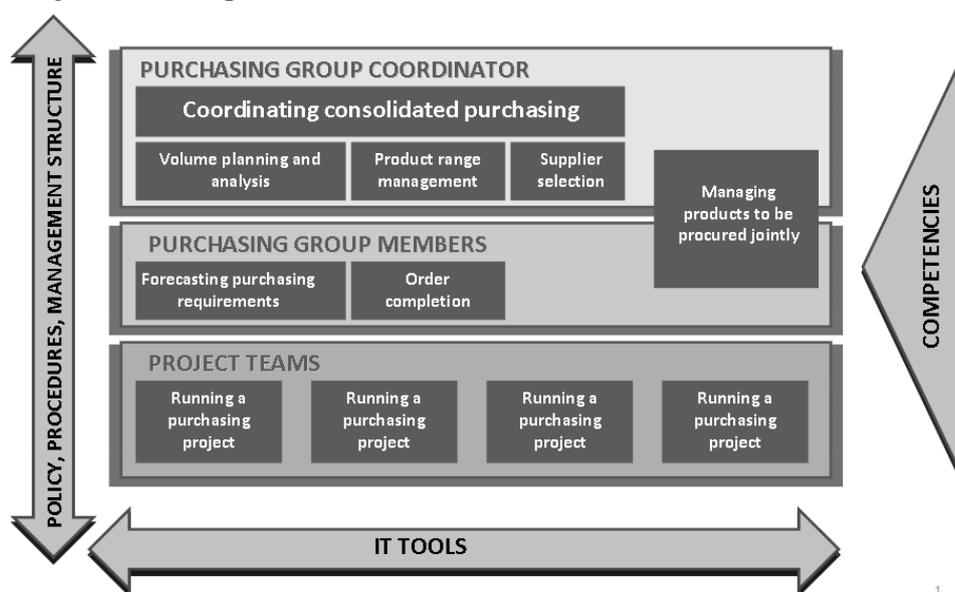


Fig. 4 The organizational structure chart of a Purchasing Group

To be able to function efficiently, a Purchasing Group requires a carefully selected coordinator. The selection procedure depends on the scope, scale and the number of the group members. A coordinator may be:

1. A representative of one of the Purchasing Group members (preferably the lead company)
2. A task force composed of the representatives of each of the participating companies
3. An organizational structure established especially for that purpose (special purpose entity),
4. A company specialized in project management,
5. A company specialized in consulting in procurement and logistics.

A Group coordinator usually performs the following tasks:

1. Organizing and coordinating,
2. Collecting and aggregating purchasing requirement volumes,
3. Identifying product ranges, product range groups which open up the potential for cost reductions,
4. Preparing a purchasing strategy for particular product ranges,
5. Conducting procurement proceedings,

6. Identifying the supplier who offered the trading terms which are the most competitive for the entire Purchasing Group.

The tasks of Purchasing Group members include collecting, forecasting and conveying the information regarding the volume and the value of procurement requirements in a given period of time. After the vendor selection process is completed and after the cooperation has been established, the representatives of the Group members procure items for their companies.

Experience shows that in the case of a Purchasing Group composed of members demonstrating a low level of awareness and a high level of scepticism about changes, all of the group members should be engaged in the activities conducted by the coordinator, in particular at the initial stage of the Group's operations. The coordinator and participating companies may form an organizational and management task force in charge of managing the range of products to be procured jointly. In the case of large, complex tasks, the organizational structure of a Purchasing Group may entail interdisciplinary project task forces responsible for developing the strategy, order specifications and for running procurement proceedings for given product ranges. Such teams are appointed for the duration of a given procurement process or may be permanent – having product ranges assigned to them. Those teams should be small (3-5 members) and composed of the representatives of the most involved companies. For the vendor selection process to be efficient, the team ought to be composed of the members with the highest level of competencies in a given product range.

In large project the organizational structure of a Purchasing Group should be formalized in line with the policy of Collective Procurement, adopted by the Group. To enhance the Group's effectiveness, its management and procedures should be supported with standardised IT tools. Awareness is of key importance as well. Each participant of the process, both direct and indirect, should be aware of the purpose behind collective procurement and the terms of cooperation in this area. The next condition for an efficient functioning of a Purchasing Group is the exchange of information and knowledge accumulated at particular points within the Group.

3. THE MODELS OF FUNCTIONING OF THE PURCHASING GROUP

Following Kolinska and Dolinski (2013), the Authors identify the basic models of the Group's functioning. Depending on the role and the scope of the coordinator's rights and responsibilities in a Purchasing Group, we can distinguish the basic, representative and project models of functioning.

The basic model implies organizational activities being the coordinator's centre of focus. The coordinator preforms the role of a messenger, conveying the information between the Group memnbers and the suppliers. The coordinator obtains from the Group members the information on the planned requirements regarding a given

product range. Based on this information procurement procedure is conducted, in the course of which a supplier offering the most favourable terms for the Group is being selected. In this model the coordinator enters into a framework agreement with the supplier and each Group member signs on his own behalf a cooperation agreement with the selected supplier. The model functions efficiently provided that, on the one hand, the supplier complies with his obligation to cooperate with each Group member on terms at least as good as those negotiated in the course of the proceedings and, on the other hand, provided that all of the Group members with purchasing requirements enter into an agreement with the selected supplier.

In the representative model, the coordinator is granted all of the rights of participating members in such a scope that would enable entering effectively into an agreement with the selected supplier. In return for granting rights to the coordinator, the participating members save time required for achieving a given objective. The coordinator obtains from other participating members individual anticipated requirements for particular product ranges or product groups, aggregates the data and, if possible, standardises product ranges on the Group-wide level. Based on this information the coordinator verifies bids of potential suppliers and proceeds with the procedure aimed at selecting the best bid. Upon selecting the supplier the coordinator enters into an agreement with him on behalf of the companies participating in the Purchasing Group. After the cooperation has been established, the coordinator purchases products based on the requirement data that has been supplied and, following that resells them to the Group participants. The coordinator settles accounts for resold products directly with the Purchasing Group members. This model is most often followed by the groups having a strongly emphasized owner's role and by the entities with a highly developed management culture. Purchasing Groups using the representative model in most cases designate the coordinator as the operator of the agreement that has been signed. The coordinator obtains the data, purchases and coordinates deliveries and, if it is justified, also acts as the financial operator of the agreement – settles accounts for the items procured on behalf of the Group – with the supplier and with the Group participants. This model is efficient if the operator is professional in his business dealings and if the participants exhibit a high level of awareness and trust.

The project model operates analogously to the representative model. The main difference is that the coordinator's role is performed by an external entity. Depending on the conditioning it could be: (1) A company specialized in managing projects, selected usually when entities need organizational or project-related support, (2) A company specialized in consulting in the area of procurement and logistics, when logistics functions are perceived as ancillary to core business operations (a form of outsourcing) or if the process participants expect specialist support, (3) A structure established especially for that purpose by the Group members, if the solutions put forward in pt. 1 and 2 cannot be applied.

4. THE BUILDING OF A PURCHASING GROUP

The process of building the Purchasing Group and procurement consolidation system hinges on many factors. There is no recipe for creating a Purchasing Group. In each and every case all of the circumstances should be taken into account – in order to develop a model that will be best suited to a given Group. The entire system of collective procurement must, on the one hand, protect the interests of individual participants and, on the other hand, be flexible enough to meet the requirements of all of the Group participants.

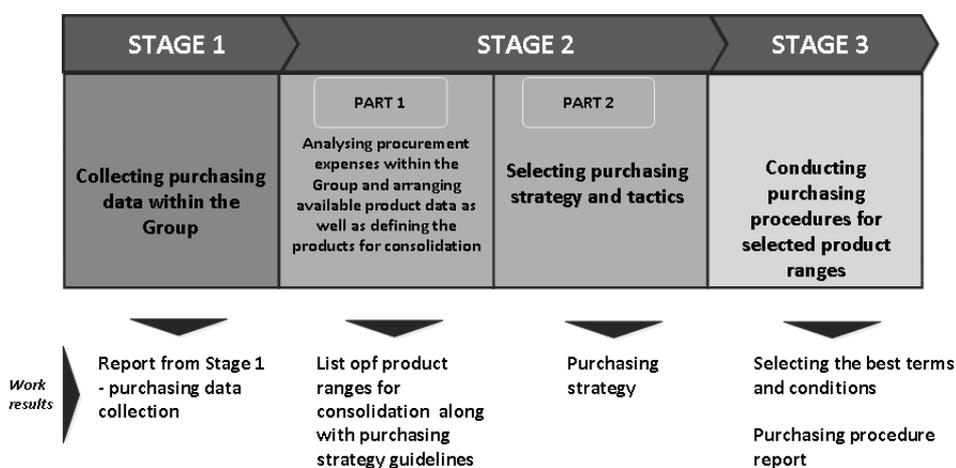


Fig. 5 The development of the consolidated procurement system in a Purchasing Group

Developing a collective procurement system from scratch involves, besides the identification of both formal and informal factors, three stages. The first stage entails gathering the information on the expenses of each participant willing to participate in the collective purchasing system. The expenditure data is analysed in terms of volume and value regarding particular product ranges or product range groups over a relevant period of time. The period of time under investigation depends on the specific nature of the companies of the future Purchasing Group. It is usually a year – in reporting terms it is relatively easy to specify this „common denominator” – the products purchased by each of the participants. In the second stage individual expenditure volumes are aggregated and the total volume of the Group’s enterprises is subject to analysis. In the course of the analysis products are divided into those which could be consolidated and those which do not exhibit this potential. From among the products designated for consolidation, one should start with those which could bring the highest cost reductions or which are achievable in the fastest possible time. As a result a list of product ranges along with purchasing strategy guidelines should be developed. The second part of works at this stage consists in using internal

company data and external market information to assume a purchasing strategy for the Group and to select the relevant purchasing. At the last stage purchasing activities are being conducted for selected products. This stage consists of three substages.

At the stage in question purchasing requirements are being verified and divided into particular product ranges. On this basis a consolidated purchasing plan is drawn up. The subsequent substage involves following a purchasing procedure in line with the plan that had been approved. Each purchasing procedure entails selecting the future Group's with the most competitive offer. In the third substage, having entered into the cooperation with a new supplier, the Purchasing Group fulfils the order pursuant to the terms that had been previously agreed. With such a process of selecting the supplier of materials purchased jointly within the Group, the terms and conditions, tools and processes are being standardized across the entire Group.

If a need arises for materials to be purchased instantly, it is done by the members reporting such a need. Next the Group volume is recalculated and the purchase proceedings are continued with a new, adjusted volume.

5. CONCLUSION

IT tools are a must if the purchasing procedure is to be managed and monitored effectively these days. They ensure the level of efficiency which allows companies to respond to dynamic market conditions. The use of specialist software is necessary to monitor the processes taking place in large Purchasing Groups.

A number of new IT tools supporting purchasing processes have appeared on the market recently. The functionalities of existing tools have been expanded. Entrepreneurs have access to systems supporting the purchasing process right from requirements planning up to settling accounts with the suppliers.

Table 1 Savings generated as a result of joint procurement of products and services in Purchasing Groups Source: (Kolińska & Doliński, 2013)

Category	Savings [%]	Number of companies participating in the Purchasing Group
Energy	7,0	8
Fuel	5,0	10
Mobile phones	10,0	10
Courier services	35,0	39
Office supplies	6,0	34
Fixed telephony services	30,0	30
Cleaning products	8,0	12
LPG gas bottles 11kg	15,0	19

IT tools used jointly by a Group enhance the management and control of joint purchasing, yet their implementation is not a prerequisite for putting a Purchasing

Group in operation. At the initial stage widely available applications may be used (spreadsheets, database systems). The purchase and implementation of IT systems should support and enhance the functioning of the Purchasing Group. An additional advantage of IT systems is their „mobility” – they can be put to use at any time and any place, which brings considerable reductions in time, labour-intensity and measurable cost savings.

Collective procurement realized by a Group of enterprises offers the prospect of measurable economic benefits. Studies indicate that in a group composed of ca. 10 companies, the savings could be at 5-10%, depending on the product range. Savings figures are the most noticeable in the case of items which support the functioning of enterprises (Tab. 1).

When developing a Purchasing Group on the Polish market, the expected rate of savings could be between 10 and 20%. The success of a consolidated procurement system project depends on:

1. The maturity and involvement of Purchasing Group members, which ensure efficient cooperation,
2. A unanimous support of higher management, which means that the superiors will be involved in the decision-making process, aimed at resolving difficult situations,
3. The formalization of the Purchasing Group's structure – providing for clearly defined roles and the distribution of tasks and responsibilities of the Group members,
4. Drawing up and implementing the Collective Purchasing Strategy,
5. Engaging people with the relevant experience and competencies required for proceeding with collective procurement,
6. Identifying the parties biased against the success of the Purchasing Group; a quick and efficient identification of the opponents of consolidation may bring, in some cases, even greater cost savings provided that pathologies are being removed,
7. Identifying those products, in the case of which the costs of consolidation exceed potential benefits; With the products unfit for consolidation being excluded, the resources in limited supply could be managed more efficiently – and designated for the tasks capable of providing the highest added value,
8. Fostering favourable organizational and functional conditions for carrying out consolidated procurement projects in a group of companies,
9. Run standardization processes (indexation, uniform procedures, uniform IT tools).

All the factors listed above determine the relations between real effects of the reductions of cost collective purchases and those actually achievable ones. Only an efficiently functioning Purchasing Group is capable of securing the interests of all the participating members and meeting their requirements and expectations.

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