

## THE IMPACT OF LOGISTICS ON THE LEVEL OF CURRENT ASSETS IN THE GROUP PURCHASING ORGANIZATION

ZIMON Grzegorz

*Rzeszów University of Technology, Department of Finance Banking and Accountancy, Rzeszow, Poland, EU*

### Abstract

A group purchasing organization is a multi-stakeholder entity that is designed to improve the company financial position. Logistics in the GPO is expanded because there are cooperating companies and the central unit in such an organization. The purchasing group's central unit manages the supply chain process, which directly affects individual logistics management. Logistic processes in an enterprise are generally considered in a short-term or operational aspect. Therefore, logistics management is a great support for building short-term management strategies and that is why it has a large impact on current assets. The article presents the impact of logistics on the level and structure of current assets and in units operating within a GPO. The analysis was based on the financial data of 25 trading companies operating in the group. The research was done on the basis of the financial statements for 2013-2015. In the study the preliminary financial analysis and selected financial indicators were applied.

**Keywords:** Logistics, purchasing group, current assets

### 1. INTRODUCTION

In order to survive on the market commercial companies need to compete with small, medium and large companies. Generally, the key to winning a business contract is the favorable price a company offers. Increasingly, however, this is not enough, and therefore sellers are forced to offer long merchant loans. The long repayment offer has a significant impact on the decision-making process and facilitates the fight against competition. However, if a company wants to build its position on the market, it must manage efficiently and effectively its current assets. Management of current assets is building appropriate strategies for inventories, receivables, and cash. Logistics has a major impact on various components of current assets. Customers increasingly pay attention to the time, price and place of delivery of goods, i.e. to logistic processes. Logistics is the process of managing of movement and storage activities to facilitate the flow of products from the place of origin to final consumption [1]. All consumers and suppliers depend on the process to be as short as possible. The shortening of this time is an interference in the management of receivables, inventories and cash, and thus the assets that create current assets. The customer is interested as cheap as possible goods that are delivered exactly at the destination point. The logistics organization has a great influence on the level and structure of current assets. In multi-entity enterprises such as group purchasing organizations there are still mutual relations between individual companies. The companies obtain some guidelines from the central unit of group, which modifies the classic methods of logistics organization. In commercial companies operating in GPOs an impact of logistics on current assets is strongly expanded. Businesses have many different options in terms of delivery organization, which differently affects the level and structure of current assets.

### 2. CURRENT ASSETS

Current assets are possessions whose useful life is shorter than 12 months [2]. These are assets with high liquidity, their high level increases the financial security of enterprises. In an enterprise they play an important role because management has a great influence on financial performance, management effectiveness and financial liquidity. The level of current assets and structure depend on industry and types of an activity. Manufacturing companies account for a high share of the total assets structure, whereas turnover assets are

predominant in the business. Their level depends on the asset management strategy chosen by the business manager. In enterprises where the share of fixed assets in total assets is high, the profit is generally low as the assets generate high fixed costs [3]. The reverse situation is much more favorable when the current assets outweigh the fixed assets. Such a structure of assets affects positively the financial security of an enterprise.

Current assets are short-term, they are reproduced several times a year [4]. Hence, the most important influence of the management of turnover assets is reflected in the results of financial liquidity.

Current assets management is the choice of separate strategies for receivables, inventories, and short-term investments. Such a division makes it difficult to manage the revolving assets as a whole. It is important for managers to determine how they want to manage their current assets and then try to create appropriate strategies for each asset. An asset management strategy will be influenced by logistics organization. Accelerating and streamlining of inventory management will shorten delivery times, reduce inventory, accelerate cash flow, and lead to faster receivables.

The situation is more complex in units operating within GPOs where group purchases occur and slow down the effectiveness of the management of current assets.

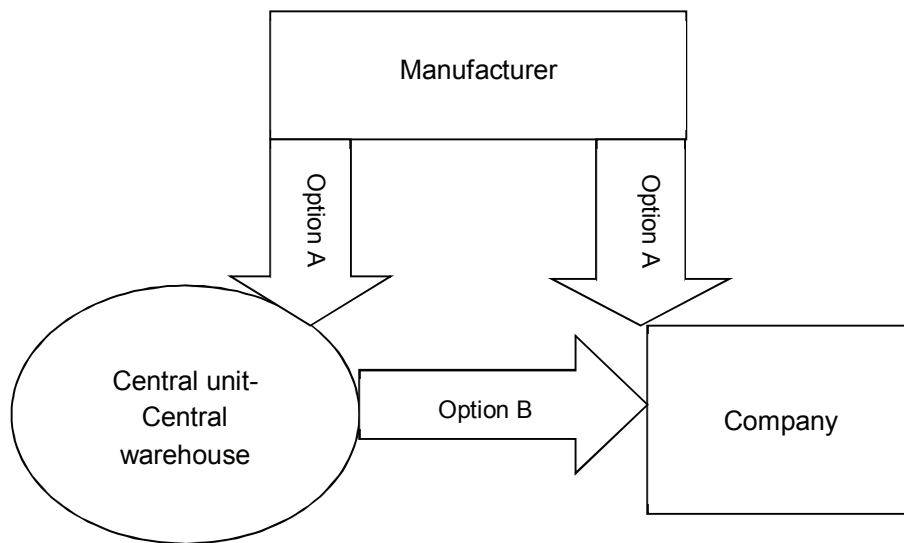
### **3. GROUP PURCHASING ORGANIZATIONS**

Nowadays, more and more companies operate as multi-entity organizations. Mutual operation is an opportunity for safety. These types of organizations may include Group Purchasing Organizations (GPOs). The purpose of GPOs is to strengthen competitive power. GPOs have a positive impact on the quality of service or goods sold. Typical defects are organizational costs and loss of flexibility [5]. To be successful a GPO must be able to foster and maintain the commitment of its members. [6]. This is possible thanks to the unification of the group members and the acquisition of powerful purchasing power [7]. The easiest way to define a GPO is to identify it as a group of companies from the same or different industries that combine to make a joint purchase [8]. Another definition of a group purchasing organization is based on Martin Christopher's logistics and supply chain definitions and it is as follows: the Group Purchasing Organization is a group of cooperating companies that jointly controls and streamlines the flow of goods, information and money from suppliers to final recipients. Participants in such a system form a separate central unit whose main task is to achieve the goals set by the companies operating in the system [9]. The central unit of GPOs organizes purchases and negotiates delivery terms. It often sets limits on the amount of orders one needs to make to get a certain discount. It has a significant impact on inventory management policies, cash trading and receivables management. 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 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 [10]. The choice of an appropriate supply method has an impact on costs. The rational strategy can improve the profitability of the company [11]. There are 4 types of supplies in GPOs:

- a) Direct deliveries
- b) Deliveries with the use of the central unit of the purchasing group
- c) Combined deliveries
- d) Supplies bypassing manufacturer

### **4. LOGISTICS VS. CURRENT ASSETS IN COMPANIES OPERATING IN A GROUP PURCHASING ORGANIZATIONS**

In the group studied 90% of purchases and deliveries are carried out by the central unit. The central unit's task is to negotiate prices, terms and conditions of delivery. Companies participating in joint purchases receive goods directly from the manufacturer or from the central warehouse. These two delivery systems were identified as variants A and B. The details are shown in **Figure 1**.



**Figure 1** Organization of purchase of goods in the industrial GPO  
Source: own research

Goods orders using options A and B is organized by the central unit. Option A, i.e. the direct delivery is the cheapest and fastest way to receive goods. Option B is a more costly way to receive goods because they are purchased from the central unit's main warehouse. Central unit, because of the storage of goods at home, imposes additional margins on the supplies sold. It must acquire funds for the functioning of the warehouse.

Option A can be described as conservative logistic management. The company executes large orders, receives long deadlines for repayment of liabilities. Cash is in the enterprise. The company does not have to collect charges very quickly. It is a strategy of "waiting" for cash. The company does not need to use inventory optimization methods in this way. It does not have to deal with the organization of supplies. All it has to do is to make sure that it orders the product in a timely manner. The order is sent to the central unit that handles its further implementation. Companies that are managed in such a way generally try to order such quantities of goods which guarantee high discounts. **Table 1** below shows the impact of logistics on current assets when a company adopts a logistic conservative strategy.

**Table 1** Logistic conservative strategy vs. current assets

| Current assets | Level   |
|----------------|---------|
| Inventories    | High    |
| Receivables    | High    |
| Cash           | Average |

Source: own research

The lack of an application of methods leading to inventory optimization increases their level. With the option A of delivery, the central unit negotiates the terms of the deal and the company usually gets a long credit term for the merchant credit. This allows to extend the loan term to their own counterparties and therefore the receivables grow. This management style is characterized by faster turnover of liabilities. Earlier money flows from the buyers before the arrival of goods from the manufacturer, which positively affects the level of cash.

Most of the 20 companies use option A for the delivery of supplies. They apply conservative logistic management and it is confirmed by the results of the analysis of the level and structure of current assets.

**Table 2** shows the average results for 2013-2015.

**Table 2** Results of selected indices for companies using conservative strategies in logistics management

| Company    | Share of inventories in current assets | Share of receivables in current assets | Inventory rotation index |
|------------|--|--|--------------------------|
| Company 1  | 0.66                                   | 0.34                                   | 71                       |
| Company 2  | 0.49                                   | 0.50                                   | 66                       |
| Company 3  | 0.49                                   | 0.15                                   | 123                      |
| Company 4  | 0.41                                   | 0.56                                   | 54                       |
| Company 5  | 0.42                                   | 0.51                                   | 57                       |
| Company 6  | 0.42                                   | 0.47                                   | 49                       |
| Company 7  | 0.42                                   | 0.58                                   | 50                       |
| Company 8  | 0.43                                   | 0.47                                   | 72                       |
| Company 9  | 0.51                                   | 0.48                                   | 58                       |
| Company 10 | 0.51                                   | 0.42                                   | 91                       |
| Company 11 | 0.49                                   | 0.43                                   | 69                       |
| Company 12 | 0.51                                   | 0.48                                   | 59                       |
| Company 13 | 0.42                                   | 0.45                                   | 55                       |
| Company 14 | 0.42                                   | 0.57                                   | 64                       |
| Company 15 | 0.42                                   | 0.56                                   | 74                       |
| Company 16 | 0.57                                   | 0.20                                   | 84                       |
| Company 17 | 0.40                                   | 0.54                                   | 60                       |
| Company 18 | 0.51                                   | 0.44                                   | 84                       |
| Company 19 | 0.44                                   | 0.52                                   | 47                       |
| Company 20 | 0.40                                   | 0.59                                   | 46                       |

Source: own research

Option B of supply organization is aggressive logistics management. In the latter case, companies must already use different types of systems to determine the demand for goods at a given time. The item is shipped from the central unit store, it is not worth using this system often because it is expensive. Deliveries also cost, the timing of payment obligations is short. The central unit wants to get paid quickly. Logistics must be organized quickly and accurately on time. Orders are often submitted, the procurement department must control the stock level systematically. The impact of this aggressive logistics management policy is presented in the table below.

**Table 3** Aggressive strategy vs. current assets

|                |         |
|----------------|---------|
| Current assets | Level   |
| Inventories    | Low     |
| Receivables    | Low     |
| Cash           | Average |

Source: own research

Logistics organization in Just In Time system is an aggressive collection of receivables and keeping cash reserves to meet emergency obligations. Deliveries must be organized very often to complement the missing product range. The logistics department has to be expanded to a large extent because the company is to a lesser extent based on the operations of the central unit. The company does not always use joint purchases. It frequently purchases from the central unit itself. The advantage of this operation is the reduction of storage stock and warehouse management costs.

In the researched group only 5 units manage aggressively logistics. The table below presents the results of selected indices for companies using risk-based logistics (aggressive) based on the JiT principle. **Table 4** shows the average results for 2013-2015

**Table 4** Results of selected indices for companies using conservative strategies in logistics management

| Company   | Share of inventories in current assets | Share of receivables in current assets | Inventory rotation index |
|-----------|--|--|--------------------------|
| Company 1 | 0.25                                   | 0.75                                   | 42                       |
| Company 2 | 0.35                                   | 0.36                                   | 75                       |
| Company 3 | 0.34                                   | 0.34                                   | 91                       |
| Company 4 | 0.33                                   | 0.45                                   | 58                       |
| Company 5 | 0.35                                   | 0.59                                   | 47                       |

Source: own research

## 5. CONCLUSION

The research conducted has shown that companies operating in group purchasing organizations can organize logistics in two ways. The first approach is the conservative management used by most companies. Units do not have to use complicated logistics methods and tools, often with large quantities of goods ordered. Deliveries are generally made straight from the manufacturer to the company. Conservative logistic management means a high level of current assets. In the structure of current assets, inventories are high.

Several companies under investigation use aggressive logistic management based on Just In Time principles. This strategy means the lower share of current assets in total assets, it is risky logistics management.

Joint action within a GPO is generally conservative logistic management, characterized by a high share of current assets in total assets. Companies use economies of scale, maintain high inventory levels, outsource the entire ordering process, and negotiate with the central unit. This operation greatly simplifies the organization of logistics, which is primarily aligned with the assumptions and proposals coming from the central unit.

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