STOCK MANAGEMENT IN A MANUFACTURING AND TRADING COMPANY

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Abstract: The article shows stock management in the logistic context on the example of a manufacturing and trading company. Stock is one of the most important, and, at the same time, the most difficult issues related to company management as it requires efficient handling of transport and inventory. Also, the amount of stock should possibly be optimal so it does not account for too high operating costs of a company.

Keywords: logistics, stock, stock levels, sales.

1. Place of stock in company logistics

Management involves continual solving of different problems connected with the organization and management of a company which results in making various decisions. In order for them to be sensible, a number of factors influencing the organizational units in a company must be taken into account. One of the departments, where the fate of, among others, the volume of sales and stock levels is decided is logistics.

The logistic operations are very closely related to the transport and inventory processes as it is owing to them that the volume of stock may be efficiently planned and the goods may be transported to a specific place, which makes it possible to reduce the costs of a company operation, and, as a consequence, of the finished goods, too.

It is necessary to manage stock properly within the processes of deliveries, treatment, storage and packaging, both in the process of supplies and distribution. Stock constitutes the main element of current assets in a manufacturing company, that is why its management may be recognized as on of the directions in the control of a company operation [5., p. 251.].

Manufacturing and trading companies should have stock in the sphere of supplies, where mostly materials and semi-finished goods used in the production process are accumulated. Other than that, a company may also have a finished stock with goods available for sale. In T. Wojciechowski's opinion, in the process of supplies we deal with material stock which is divided into [6., p. 109.]:

a) standard (current) stock- its level corresponds to the production and delivery cycles as negotiated with the suppliers;
b) security (minimum, reserve) stock- maintained in case of disruptions in delivery cycles and in connection with maintenance (e.g. spare parts);
c) preventive stock- is connected with the anticipated rise in demand for finished goods and includes demand for materials;

d) excessive, redundant or „forced" stock- results from mistakes in analyses of demand for a company products and from the necessity of making seasonal purchases, e.g. in a processing industry.

It is absolutely vital, but, at the same time, difficult, to plan optimal amount of stock, as its storage is costly, but its shortage may result in production stoppage and loss of orders. The determination of essential, and, simultaneously, obtainable level of stock of materials in a company requires [6., p. 109.]:

a) Specifying the predicted use of a specific material by individual departments in a specific planning period (e.g. of one month), which entails the necessity of cooperation of organizational units connected with planning sales volume, as well as, consequently, production capacity and supply needs.
b) Arranging delivery dates of each range with contractors, preferably in accordance with the JIT principles, which enables to determine the level of maximum stock directly after receiving a delivery, and, before the delivery, the level of minimum stock.
c) Correction of arrangements concerning minimum level of stock with information and calculations specifying the logistic and organizational abilities of "emergency delivery collection" in case of depleting the minimum stock. This may be caused by the delay in deliveries in relation to accepted schedules, or by the periodic rise in consumption.

We deal with stock management not only within the supply process, but also in distribution where finished goods are stored. The following are included in the group of finished goods inventory [6., p. 109.]:

a) operational distribution stock- is created following the completion of the production of goods and constitutes stock until shipment,
b) reserve distribution stock- is created to meet the occasional meets of consumers arising outside the planned cycles of deliveries,
c) excessive or redundant stock- is created as a result of mistakes in planning and possible resignation of consumers

The volume and type of finished goods inventory should depend on distribution capabilities of a company, which should preferably be arranged beforehand with the department of sales and marketing. Therefore, on the level of planning stock management it is essential to ensure the flow and processing of information regarding the determination of the volume and type of production for several months taking into account external factors, i.e. sales potential, selection of appropriate suppliers and the dynamics of the situation on the market [2., p. 180.]. Also, a lot of stock should not be stored long as it could spoil (e.g. groceries), or the fashion trends could change (e.g. clothes).
The choice of the method of stock control is made with the following taken into account [3., p. 206.]:

a) chances of there being no shortage in stock in the cycle of replenishing it,
b) expected number of shortages in stock in one cycle of replenishing the stock,
c) the factor of security of production continuity which is a basis for determining the volume of security stock.

The basis for determining the importance of stock in the logistic system is the connections of logistics with some departments in a company [1., p. 219.].

1. marketing is interested in a high level of stock, with its regular replenishing, which allows to satisfy a customer rapidly and completely,

2. production wants low costs of purchase and long production series with the possibility of early production of seasonal goods in order to minimise production costs and avoid paying for overtime,
3. finance is interested in a low level of stock and its high turnover ratio, decrease in current assets and obtaining high return of capital on assets.

Until recently the costs of stock had not been calculated, but when, within the company management, the logistics developed entrepreneurs agreed that maintenance of stock costs a lot. That is why, for the purpose of a company's financial well-being, the amount of stock should be limited. But the production and sales differ in their preferences. From the point of view of marketing and salespeople it is convenient to have high stock levels because in this case a transaction may be completed quickly to a greater customer's satisfaction. The production managers, however, aim at producing long series which do not require machines to be often moved.

2. Volume of sales and stock levels

Stock levels depend on sales and the turnover of stock, and, often, also on the warehouse infrastructure. A company may use its own warehouses incurring the costs of their operation, or external ones- paying for the space let, but only the one which is needed in a given moment. Own warehouses may be centralized, i.e. located mainly in one place or decentralized allowing for reaching more dispersed customers, which is better for businesses selling their products on European markets. When determining the size of a warehouse one must take into account the cost of its maintenance, transport possibilities and logistic customer services, as well as financial capabilities of those who pay for the service and infrastructure in the place of loading and unloading.
On a strategic level of logistics we decide about the choice of warehouse for a specific customer and the choice of a suitable route and means of transport. However, on the operational level the following processes are included in planning [4., p. 37.]:

- Allocation of stock reserves before the season (in case of seasonal products),
- Organization of direct deliveries to customers,
- Replenishing stock within the distribution network,
- Deciding about means of transport and planning routes for carriage of cargo.

Lowering the costs of a company operation focuses above all on the reduction of production costs, the decrease in the level of stock and on its quicker turnover.
The examined company from a metal industry operates within the production and sales of goods for domestic and foreign market using its own warehouses in a centralized system. Due to high costs of stock maintained it has successively been aiming at lowering its levels. Especially the material stock in the sphere of supplies has been reduced owing to the fact that the company organizing the deliveries of raw materials and materials applies the principle of JIT. Orders for finished goods are most often taken in advance, which allows for efficient management of distribution. However, due to unexpected orders, technological problems and other unforeseen factors, fixed stock levels of finished goods are maintained, which allows to keep the continuity of sales. Table 1. shows what the stock levels look like in relation to the volume of sales.

Table 1. Stock levels of selected goods in relation to an average monthly volume of sales in years 2007 and 2008

Goods	2007		2008	
	Average monthly volume of sales [t]	Stock levels (%)	Average monthly volume of sales [t]	Stock levels (%)
Wire 1	880	65,1	1261	63,4
Wire 2	236	53,6	282	53,2
Nails	238	160,2	252	158,7
Wire 3	215	75,2	207	72,4

Source: Own study on the basis of the company data.

As one can see in Table 1. the amount of fixed stock in comparison with the volume of sales increased in 2008 in relation to 2007. This indicates the reduction of stock levels of particular goods. However, it is noticeable that the stock of nails is exceptionally high in comparison with others. But this is caused by the fact that this product is sold in packages of different weight, and to ensure their greater availability for a customer stocks of each weight group must be maintained. The comparison of volumes of stock of particular goods in years 2007 and 2008 is shown on Fig. 1.

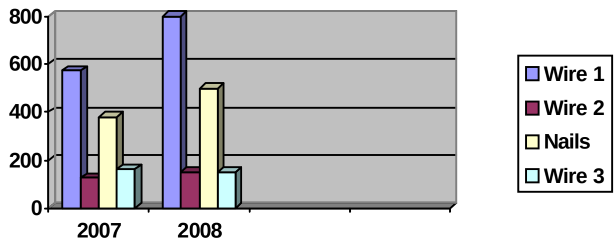

Fig. 1. Volume of stock levels of selected goods in years 2007 and 2008.
Source: Own study on the basis of the company data.

In the chart one can clearly see that although the stock levels in comparison with the volume of sales visibly lowered in 2008 the amount of stock increased. This was caused by the greater distribution in 2008, which influenced the increase in the stock of finished goods. It is a great success given the fact that the company examined operates in a difficult industry which has especially suffered as a result of the world financial crisis.

3. Summary

The task of a logistic activity in a company is to control the volume of stock so that its amount and costs of maintenance are optimal. It is not easy, however, as in a market economy it is difficult to predict the demand for finished goods, especially with such strong competition. Therefore, it often happens that both material and distribution stock is too big. It is especially dangerous when its long storage may influence its quality or when it is an atypical product which the ordering contractor has not collected. Then, companies wanting to reduce the amount of stock apply promotions and sales owing to which sales go up and quicker turnover of stock takes place.

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