

Methods and policies for inventory management

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Abstract

Inventories are goods that a company holds for sale. Since it is difficult to predict the amount of goods that are needed in the market, in order to prevent situations in which they do not have enough produced goods, manufacturers create inventories. The demand is not constant and producers are never sure how much inventory they will need, therefore stocks should be properly managed in all reproduction stages, i.e., in the various stages of conversion. The most important stages of inventory conversion are: inventory of raw materials, inventory of work in progress and inventory of finished products, and therefore they should be analyzed separately, identifying all the factors that affect them. Inventory control represents the performance of a large number of activities such as measuring, checking, examining and comparing in order to determine whether they are in accordance with the actual conditions.

Inventory control methods serve as a means of determining the optimal inventory size, as well as deciding when and in what quantity to make a specific order of the necessary supplies. The optimal inventory size should be evaluated in terms of the flexibility that can be given to the inventory. In determining their optimal size, the company's management must balance the benefit on the economy of production, the procurement and the increased demand for products, with the costs of maintaining additional inventory.

Therefore, the main research goal of this paper will be the application of management methods and policies in function of optimization of inventory and achieving good financial results from the companies' operations.

Keywords: inventory management, inventory optimization, inventory conversion, inventory control

1. Introduction

Inventories are a category of assets in which capital is invested and which, like all assets, requires adequate management in accordance with achieving the general goals of the operation. Inventories represent current assets that directly affect the increase or decrease of the working

(current) capital of the business entity. According to IAS2 – Inventories, inventories are defined as assets in the form of:

- Raw materials intended for the production process or providing services
- Production in progress and - Products intended for sale.

Too little or too much inventory is a problem for every company. Too much inventory can lead to the tying up of too many financial assets that are not in circulation, stoppage of production, lack of storage space, but also to various defects of inventories or their destruction. Too little inventory hinders the regular operation of the organization, because it leads to a lack of raw materials for the production. For these numerous reasons, manufacturing or sales companies have a huge responsibility in adequate inventory management.

There is information about the quantity and value of the company's inventory in the bookkeeping records kept by each company. Based on the conducted records (material and financial), the movement of each type of inventory (quantity and value) can be seen. In the accounting system, purchases and consumption of inventories are recorded at the time of the occurrence of each change. This enables continuous inventory monitoring.

The value of each separate type of inventory is determined by their entry, that is, by the receipt of the goods in inventory and receipt of the invoice. Material and financial records are usually kept for the following inventories:

- for the raw materials and the materials;
- for the small inventory, the packaging and the car tires;
- for the production in progress; • for semi-finished products and
- for finished products.

There are several main arguments to create inventory:

- Economies of scale – creating inventories achieves various savings in production and procurement of raw materials, because when buying or producing large quantities of products, the company receives various discounts and uses the equipment in the most favourable way. Therefore, creating inventory is thought to contribute to cost effectiveness.
- Balancing supply and demand – in the production of some products (such as seasonal products, it is necessary to create products from seasonally available raw materials) it is necessary to create inventories, because at certain times the demand for those products is higher. With production even in conditions of lower demand, the realization of a normal production process and avoidance of seasonal work is achieved.
- Specialization – when a company has several subsidiaries it can specialize in the production of only one product. This facilitates the production process.
- Protection against uncertainty – uncertainty in demand is a major reason for stockpiling. With the fact that the company can never be sure what the demand will be and whether it will be in the conditions of increased demand to be able to meet the needs of customers, it is necessary to create inventories.
- Inventory within the distribution channel – The inventories help to create the main connection, while creating temporal and spatial benefits. Inventory helps ensure that there never will be a shortage of goods.

The essence of rational operation with inventories, as with all other assets in the enterprise, is the achievement of the greatest possible financial result with the least amount of invested assets, the least assets tied up in inventories of materials, semi-finished products, finished products or commercial goods. Starting from the principle of economy, it follows that working with inventories can be rationalized by reducing the volume of investments in inventories and increasing the speed of their circular movement.[1]

Optimal stocks are those stocks that allow full and regular supply of customers or the production process. At the same time, storage and delivery costs to customers are minimized.[2] In general, optimal inventories are those that are between the minimum (the minimum amount of products that can satisfy demand) and the maximum inventory (the maximum number of products that can be in inventory). They allow costs to be reduced to an amount which is satisfactory to the manufacturer or distributor, but customer to be supplied at all times. Industrialized countries try to develop business without creating inventory, so business without inventory is the primary goal that companies strive for. However, while this is not possible, creating an optimal inventory is the best possible solution for any business.[3]

2. Optimizing inventory

In a theoretical system, the expression optimization indicates the state of the dynamic system expressed through the most favourable relationship between the outputs of the system and the inputs to the system. Which means that, the size of inventories in the different stages of conversion affects: the continuous development of reproduction processes, the size of the funds engaged in them, and therefore also on the size of the costs related to them, accommodation, storage, social-psychological pressure, etc.

Advance planning is required to ensure inventory optimization. Planning the size of the inventory depends on the company's activity, its affiliation to a certain industrial branch, the specifics of its operation, etc. During planning, every enterprise tries to project the optimal amount of funds that will be tied up in inventories of raw materials, materials, semi-finished products, finished products and commercial products. They depend on the following specific conditions and specificities:

- when determining the working capital for raw materials and materials, small inventory, auto tires and packaging, the conditions for supplying these inventories, the character, volume and range of production, the volume of inventories to maintain the continuity of production, etc. are significant;
- when planning working capital in the form of production in progress and semi-finished products, relevant are the length of the time period of the individual cycles, the dynamics of production, etc.;
- for determining the working capital in inventories of finished products, the conditions of sale of the products, the characteristics and demands of consumers and the market, etc are important;
- for the determination of working capital in the form of commercial products, relevant are the conditions of supply, the distance from the sources of supply, the conditions of sale, storage, etc.[4]

When optimizing inventories, all factors affecting their size should be taken into account, such as the need to maintain minimum reserves in various forms of materials, the size of the input quantities of initial materials, the size of production series, the size of finished products and their

delivery, the method of collection and the possibility of procuring initial material for the repeated reproduction cycle.

3. Inventory management methods

There are traditional and modern methods of inventory management.

3.1. Traditional methods of inventory management

Traditional methods of inventory management are oriented towards one product, so the possibility of their use is limited. It is predicted that over time it will stop to be used. That is why we present the ABC and XYZ analyzes and the possibilities of their application.

3.1.1. ABC analysis

group

Vilfredo Pareto, sociologist and economist, is the creator of the Pareto Rule which states that 80% of the world's wealth is owned by 20% of the world's population. According to this rule, it represents a model of ABC analysis in economics. Generally, as applied in ABC analysis, the percentage of items Pareto Rule states that 20% of the products make up 80% of the revenue.

In Figure 1, the ABC analysis is shown graphically.

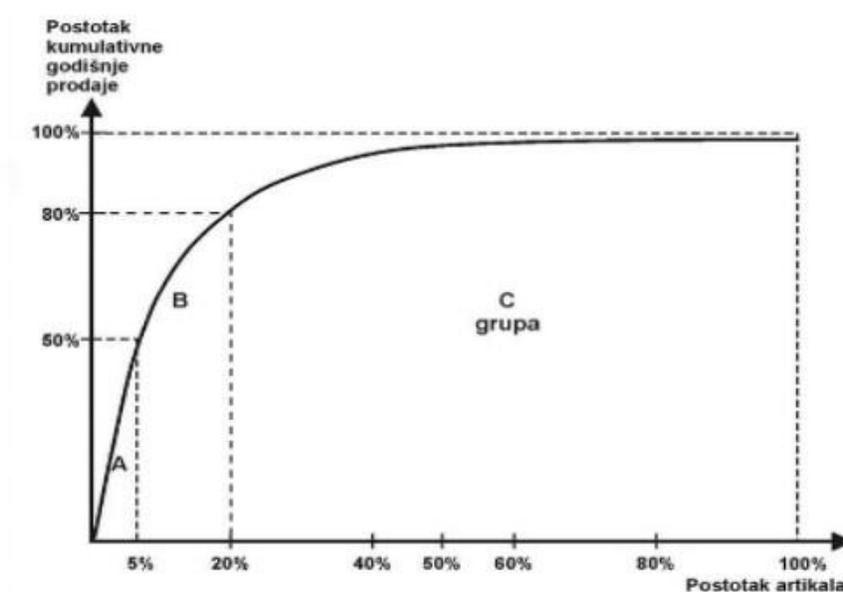


Figure 1. Graphic representation of ABC analysis[5]

Source: Mario Šafran, *Inventory Management*, Zagreb, 2015

From the graphical representation of the ABC analysis in Figure 1, it can be seen that 5% of the items generate 50% of the year's cumulative sales. These items need the most attention in planning, because they bring the most profit. These products are ordered online. These are items from group A. Then 15% of the items make up 75% of the profit and these are items from

group B. They have to keep an eye on the order and planning periodically and their order cannot be left on any system. In the last group C, 80% of the items make 20% profit. Their order must be precisely calculated and planned.

Thus, ABC analysis is a method of classification in which inventories, i.e., the materials, are classified into groups. Each of these groups has a different role and a different meaning, and according to the importance, the handling of the inventories is determined. Having that in mind, in ABC analysis, inventories are ordered according to their importance to the business. That importance is determined as part of the total sales value.

It is generally considered, when articles are classified in groups A, B and C, that:

A items bring 80% of the earnings,

B items bring 15% of the earnings, C

items bring 5% of the earnings.

In Table 1 the general rules that apply when working in ABC analysis are shown.

Group of items	Rule
A	For A items, it is necessary to work on a detailed analysis, tests are performed frequently and demand data is updated in detail.
B	For B items, it is necessary to perform routine control and routine updating of demand data.
C	For C items, it is not necessary to perform regular reviews, but articles can be periodically analyzed and data updated.

Table 1. General rules of ABC analysis

Source: Made according to Mario Shafran, "Inventory Management", Croatia, 2015

This table shows the time and effort that must be put into working with items from groups A, B, and C. Obviously, most attention must be dedicated to items from group A. They should be constantly monitored because they bring the most benefit. Group B items carry intermediate benefits and should be routinely monitored. Group C items have the lowest value, and these items should be handled periodically.

ABC analysis has three stages of implementation.

- In the first phase, it is necessary to include data on the annual needs and consumption of materials in the last year by types. Then the consumption value is calculated by multiplying the quantity of individual material by the average purchase price of that material.
- In the second phase, the material is sorted in descending order according to the value of the annual consumption. After that, the percentage of the value of each material in the total value of annual consumption and cumulative percentages are calculated.

- In the third phase, the cumulative percentages of the annual consumption value are compared with the percentage of the number of types. Then, each category and groups A, B and C to which the material belongs can be determined. [6]

ABC analysis is important because it tells how many resources (time, material, human resources) need to be invested in each group of items. Considering limited resources, it is pointless to spend the same time on items that generate 80% profit and on items that generate 5% profit. ABC analysis is the basis for a more efficient allocation of resources.

3.1.2. XYZ analysis

In XYZ analysis, the rule for classifying the subject of analysis into three different groups is also applied. The XYZ analysis allows a more detailed interpretation of the results obtained from the ABC analysis, with a kind of complement to the ABC analysis, or secondary analysis. The items in the XYZ analysis are classified according to the stability of product demand.

When we are working on XYZ, it is necessary to take into account a large amount of data:

- The cost of goods sold – it must be taken into account what is the annual turnover of the products that were sold by different items during a year.
- The sales value of the goods – the annual financial turnover must be considered by different items during one year.
- Average sales – the average sales over a year must be taken into account.
- The standard deviation in the period is also monitored.
- Average purchase price – the purchase price is obtained by dividing the total costs by the total quantity of products sold.
- Average inventory value – the average amount of inventory multiplied by the purchase price over a period of one year.
- Coefficient of variation – defines the standard deviation and average sales in the observed period. This coefficient shows us the stability of demand for a certain product. [7]

In table 2, the characteristics of the articles that are classified in groups X, Y and Z are listed.

Group of items	Rule
X	Sales of item X do not change significantly over time. The demand for them is mostly stable, so it can be predicted for a longer period. Considering the stable demand, the inventories of these items should not be too large, but should be determined by the time it takes to order new X items.
Y	The sale of Y items is not constant, nor occasional, rather it is constantly changing. Considering the volatility of demand, it should be monitored whether demand changes more at certain times of the year. The order of Y items needs to be constantly and repeatedly planned.

Z	Item sales are occasional – Z items are not used regularly, and in some periods there is no need for these items at all. Considering that, it is very difficult to determine how many products will be ordered, so detailed calculations must be made.
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Table 2. Characteristics of XYZ items

Source: Made according to Mario Shafran, "Inventory Management", Croatia, 2015

From table 2 it can be seen that the articles in groups X, Y and Z are associated with certain characteristics. Items from group X are the easiest to order and plan in terms of inventory, and for items from group Z it is almost impossible to plan the required inventory.

It is generally considered that, considering the continuity of consumption, items are classified into groups as follows:

Group X – items that are consumed continuously. There are no big deviations with them, so it is possible to accurately calculate the future consumption. Deviations in consumption are less than 10%.

Group Y – items that are consumed discontinuously. They have deviations in certain periods up to 25%, so that it is not possible to accurately calculate the future consumption. It is possible to calculate the average value of consumption.

Group Z – items that are consumed occasionally. The deviations are large (over 25%). It cannot be calculated accurately for them, therefore they have low accuracy in calculating consumption. [8]

In Figure 2 the XYZ analysis is graphically displayed.

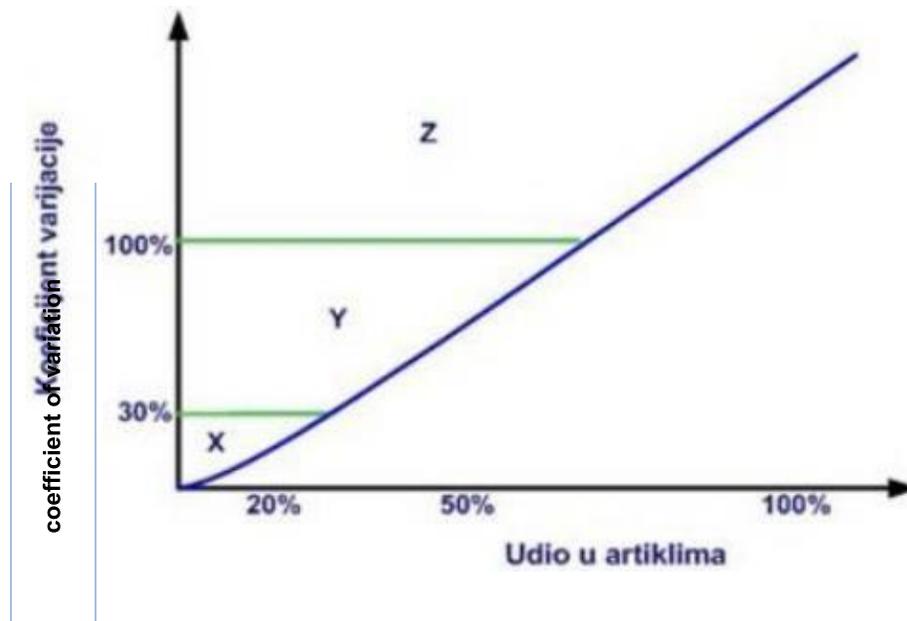


Figure 2.

Graphical representation of XYZ analysis
share in total items

Source: Mario Shafran, Inventory Management, Zagreb, 2015

The XYZ analysis graph shows that the coefficient of variation increases with the increased share of inventory. The smallest part of inventory has the least variation and these are the items where sales can be predicted. For items that have a higher coefficient of variation, it is not possible to predict sales, so it is necessary to invest a lot of time in a precise calculation of consumption.

3.1.3. Combined application of ABC and XYZ analysis

When the ABC and XYZ analyses or their results are combined, groups of items are obtained that have the characteristics of both analyses. A major advantage of the combination of ABC and XYZ analysis is obtaining more accurate data, which is useful in planning the necessary supplies. By combining these two analyses, the following benefits are obtained:

- Better availability of items
- Basis for more efficient inventory management
- Reduction of non-moving items
- Better delivery schedule[9]

Using a combination of ABC and XYZ analysis makes inventory planning better, more accurate and more economical, because the combination gives much more accurate results.

3.2. Modern methods of inventory management

3.2.1. Method of material requirement planning – MRP

The method of material requirement planning is based on the work of Dr. Joseph A. Orlicki. Orlicki who was an American engineer employed by IBM. MRP is defined as "a time-shifted software system responsible for planning and monitoring production and inventory in companies." [10]

MRP is used to be able to calculate which parts are needed, at what time and in what quantities, by testing flow time or lead time so that production or delivery can run smoothly. [11] For each delivery and for each individual product MRP is carried out separately.

MRP is based on three assumptions: the production and sales plan must be known and time distributed, there must be certain norms of material costs for each individual product, and it must know everything about the product in inventory at the particular moment.

Graphically, this can be shown as in Figure 3.

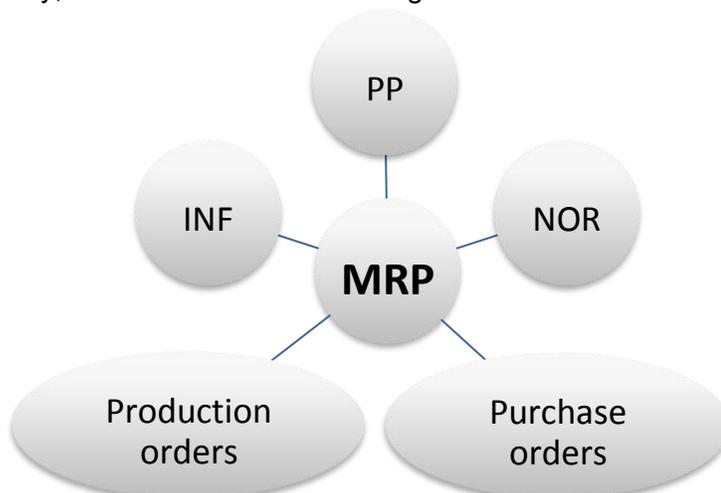


Figure 3. Graphical representation of MRP assumptions

Source:Shamanovic, (2009)

In Figure 3, the label PP represents the production plan, which is divided into periods until the product is finished. The INF mark represents the information system that contains data on the current state of the warehouse and the ordered parts for manufacturing the products. NOR indicates norms (time, material and human) required to produce products.[12]

Therefore, the main task of the MRP system is to precisely define all deadlines and precisely determine the future need for items (products, semi-finished products...). Thanks to MRP it is possible to ensure that the organization always has in inventory the items it needs.

The main advantages of MRP are:

- Enables to improve business results.
- Enables improvement of production results.
- Enables improvement of production control through more accurate and timely information.
- Enables inventory reduction, thus reducing the possibility of obsolescence of the material that is in inventory.
- Increases readiness to deliver in line with demand as orders manage the production process.
- Reduces production costs.
- Increases efficiency.

The main disadvantages of MRP are:

- It does not optimize the costs of purchasing materials because it allows for more frequent and smaller orders. This sometimes increases the costs of purchasing materials.
- Increases transportation costs and reduces quantity discounts because it allows for smaller orders.
- Production can be closed or slowed down in case of disappearance of materials needed for production.
- During planning, it does not take into account the production and distribution capacities.

3.2.2. A method for planning production capacity - MRP II

The production capacity planning method (MRP II) was developed from MRP. MRP plans the quantity of materials or products needed and this method introduces other aspects of the business system such as finance, product development and procurement into the planning process. An extension of MRP II planning is focused on determining production capacity, controlling the flow of production and determining the capacities necessary for production to continue uninterrupted. Figure 4 shows the organization of the MRP II method and the information flow system provided by this method.

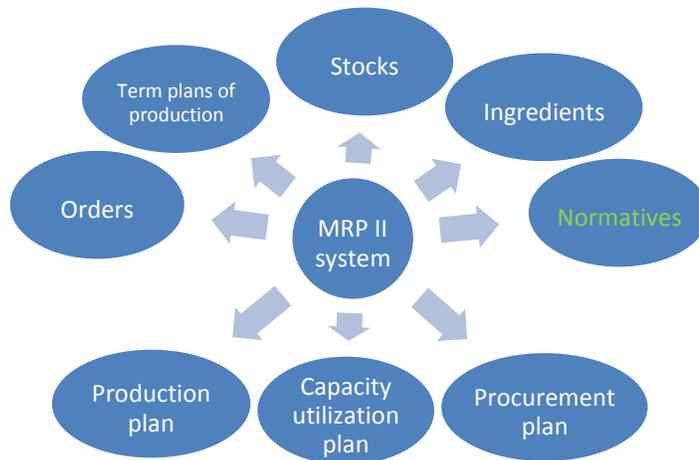


Figure 4.View of MRP II organization

Source:Žič S., "Optimization of supply chain inventory management", Rijeka, 2014

3.2.3. Method for distribution requirement planning– DRP

The DRP (Distribution Requirement Planning) method is a method based on demand forecasting. Two methods are used: exponential fitting and the moving average method. The second method is used more often because of its simplicity. The moving average method calculates the average consumption or production in the previous period and based on it predicts the production or consumption in the future period.[13] DRP is used as a technique to determine the optimal inventory quantity. In other words, DRP determines how many products are distributed at an exact time and tries to predict how many products will be needed in the future. This way, the optimal quantity of the necessary goods can be calculated at any moment. Figure 5. shows the order scheduling system in a multi-unit system.

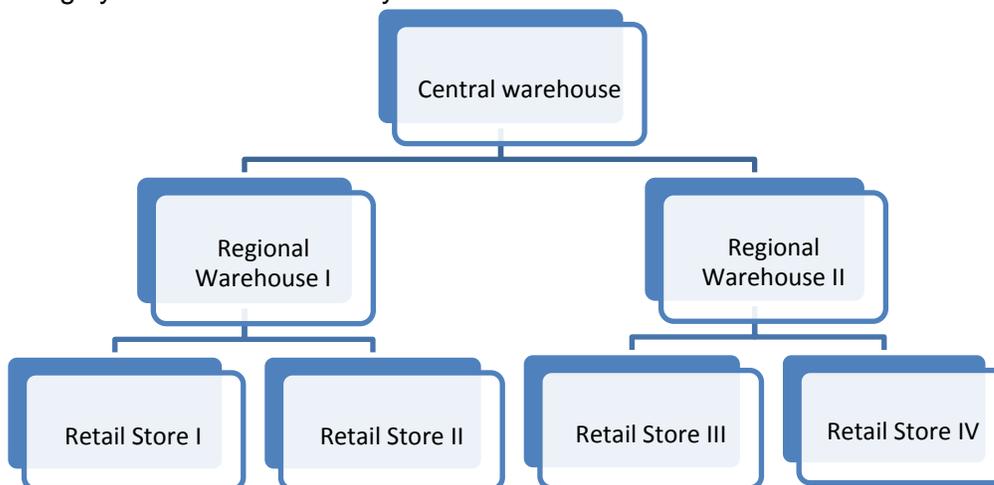


Figure 5. Display of the order scheduling system in a multi-unit system

Source: Kovach I. , Planned quantities and procurement dynamics – MRP and DRP, Zagreb

In figure 5 the products distribution system is shown graphically. The main warehouses deliver items to the regional warehouses, then the items are delivered from the regional warehouses to the retail stores. Considering that this method is very complex, today it is fully computerized.

3.2.4. The enterprise resource planning method– ERP

The enterprise resource planning method (ERP) is a method that enables the flow of information between all functions in the company; production function, logistics, finance and human resources. ERP is the main information system of the company. The point of ERP is to gather all the company's business data in one place so that there is no duplication and accumulation of data. Information can be entered into ERP only once, then all parts of the enterprise can perform their business tasks.[14]

The main task of the ERP system is to increase productivity. When production is seen as a continuum, and not as a system of separate tasks, planning is facilitated.[15] Namely, if we see production as a system of separate tasks, then it is impossible to see production as a complete process. When planning production as a system of separate tasks, there is a waste of resources and efficiency.

Figure 6 shows the ERP system.

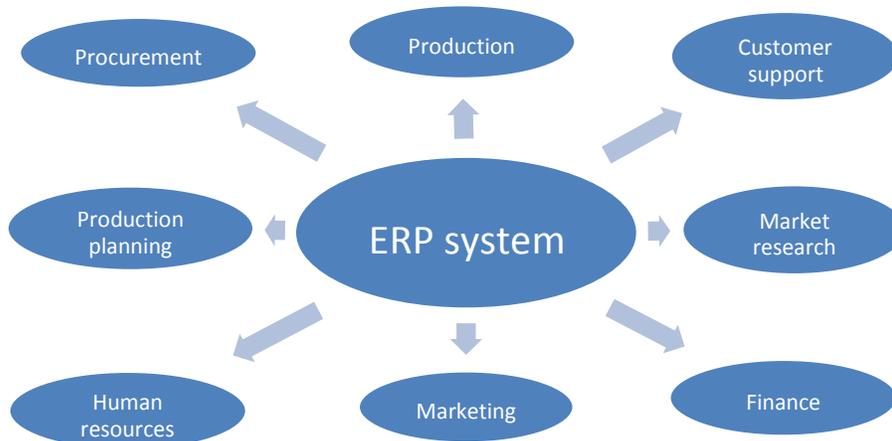


Figure 6. Display of the ERP system

Source: Žič S., "Management optimization with stock of supply chains", Rijeka, 2014

Figure 10 shows that the ERP system includes all company resources: procurement, planning, production, human resources, production, marketing, finance experts, market research and customer support.

The ERP system has numerous advantages, namely:

- Turnover of assets is accelerated, because certain processes are automated, so they are considered as inventory costs (up to 40%)
- As it provides timely information, customer satisfaction increases
- The automation of the system allows for greater inventory accuracy (up to 98%)

- ERP enables significant time savings through planning available material and human resources
- The quality of the product has also increased by reducing the amount of waste and products that require finishing
- The possibility of timely collection is increased because the ERP can automatically print a list of customers with debts, so these customers can be blocked[16]

3.2.5. Just in time – JIT

The "Just in time" (JIT) method is based on the idea of self-service and allowing production progress without downtime. This method is comparable to everyday life because its main principle is that they must take certain actions if something needs to be done at a specific time. In production, this method means that, if you want to produce a certain product on time, they need to order materials for production on time, to hire staff, etc. The main advantages of this method are reduction of inventory, increase of capital turnover and reduction of storage costs.[17]

One of the definitions of the method says that: "JIT is a system of inventory management and control, at the same time an instrument for controlling the quality and quantity of waste, as well as the dynamic arrangement of machines in the factory and a mechanism for involving and motivating employees."[18] This method requires a close connection of all participants in production, transportation and sales. A system with target to enable customers to get the desired product at the moment they need it. In principle, the system is based on the matching of supply and demand, but so that the synchronization works smoothly.

For the JIT method to work successfully, the following assumptions must be met:

- Both parties must consider the work important.
- Buyers and suppliers must be constantly connected.
- It is necessary to ensure the durability of the demand.
- All participants in the supply chain must communicate accurately and consistently.
- It is necessary to provide some time to establish trust.[19]

If the company succeeds in implementing the JIT method, it provides numerous advantages. The most important advantage is the reduction of storage and handling costs because the products do not go to the warehouse, but directly to the place of delivery. Also, increases the company's liquidity and competitive advantage.

Inventory, as already mentioned, can be managed using traditional and modern methods. There are differences between traditional and modern methods of inventory management. Traditional methods of managing work processes and inventory planning try to maximize the objectives of each business function. This, when talking about inventory, would mean trying to encourage constant sales readiness, i.e., procurement and sales, so that a very high amount of inventory is encouraged. The modern way of managing business processes and inventory planning try to reduce the total costs of the society, while maintaining a high level of service quality.[20]

4. Signs of poor inventory management

Sometimes a company judges that there is too much inventory in the warehouse, so management decides that it would be best to reduce all inventory equally. This mistake occurs in cases, where management authorities consider all inventories to be equal. When a company finds that it has too much inventory, three basic questions need to be resolved:

1. To reduce inventories
2. To decide which inventories and how much to reduce
3. To plan how to maintain optimal inventories so that the same problem does not arise in the future.

When solving the inventory reduction problem, a mistake often occurs in companies, and that is that they reduce all the inventories. In that case, a new problem appears, so there are still inventories in the warehouse for which there is no demand, and the company has a huge shortage of inventories where there is a greater demand. Inventory planning should be done thoroughly, considering which inventories should be kept in larger quantities and which should be reduced. So, the problem arises when the management authorities decide to reduce all inventories.[21] Therefore, in the process of inventory reduction, it is necessary to apply inventory management methods.

Furthermore, often it is very difficult in business to determine whether inventory is being managed appropriately.

Certain signs, which according to David J. Bloomberg, indicate poor inventory management are:

- The number of returned orders is increasing, which indicates a shortage of products
- The number of back orders is constant, and investment in inventory is increasing
- Customer turnover is higher than normal
- The number of orders cancelled by buyers or intermediaries is constantly increasing
- Storage space is shrinking (or even disappearing) because there is too much unsold inventory
- Increasing the number and monetary value of obsolete products[22]

So, the basic signs of poor inventory management are an excessive amount of inventory that cannot be sold for various reasons such as obsolescence, perishability, poor storage conditions, etc. and too little inventory that does not meet production or sales needs.

5. Inventory Policies

We know that timely inventory control helps to reduce the risk of a large number of incorrect records. In addition, a large number of policies can be used to strengthen the inventory control system. All of them are divided into several subcategories, such as: policies for correct records, policies for improving the accuracy of records, policies for improving the accuracy of inventory valuation, policies for keeping inventory according to their obsolescence, etc.

The first division is for proper records and inventory storage, which according to Prof. Dr. Janka Dimitrova, is divided into three policies, such as:

- *Received inventory should be recorded immediately after receipt and inspection* – with this policy we make sure that the quantity and quality of inventory is checked before it is recorded. With that problems are avoided that may arise later due to not having the correct inventory quantities, such as shortages or overstocks.
- *Inventory received on consignment should be kept separate from that owned by the company* – this policy protects the company from artificially increasing the inventory of products received on consignment.

- *Consignment goods should be identified in inventory tracking systems* - this policy protects the company from artificially inflating sales by recognizing shipments sent to resellers, that are actually still owned by the company.

The following policies are helpful in improving inventory record accuracy:

- The manager who manages the materials is responsible for their accuracy.
- Conduct a complete physical inventory at the end of each reporting period.
- Enumerators should continuously review the accuracy of products and identify related problems.
- No transactions should be made without being immediately recorded in the perpetual inventory database.
- Access to products by unauthorized persons is not allowed.
- Only designated personnel should have access to the inventory database and general ledger.

Inventory obsolescence occurs due to excessive purchases of materials or due to changes in product configuration before all available resources have been used. The following three policies resolve these issues.

- Purchased quantities should be based on specific production requirements. Purchasing personnel may sometimes be tempted to buy a larger quantity of inventory because of the lower price even though that quantity may be sufficient for too long a period. This policy requires purchasing personnel to purchase only based on specific purchase requests.
- Procurement of minimum quantities to achieve profitability. This policy requires purchasing personnel to procure from suppliers who deliver the lowest possible quantities. In this way, there are very small amounts of inventory available which reduces the risk of inventory obsolescence.
- Changes in orders should be gradual in order to reduce inventory obsolescence. This policy forces production planners, to take into account the amount of inventory available when determining the change order date.

Inventory control can take up a significant amount of employees' time for materials management if manual systems are used, because they must divide their time between physically handling the products and documenting all activities for record-keeping purposes.

The required control time is significantly reduced when the principle of bar coding is introduced, because all transactions can be scanned very easily regardless of whether products are brought in or out of the warehouse, although this new approach does not separate the functions of record keeping and asset handling. This new approach does not separate the functions of recording and physical manipulation of assets. The system that requires the fewest controls during materials management is the Just-in-Time (JIT) system, although new controls are needed to verify the ability of suppliers before they deliver anything to the company. Thus, the inventory control system differs significantly depending on the level of applied technology and production system.

Conclusion

Inventory is the company's capital that has not been converted into financial form because it is in warehouses or vehicles. They enable normal production flow in the production facilities of the companies and the normal flow of sales in the sales companies. No company should tend to create too much or too little inventory. In the case of excess inventory at manufacturing companies, there may be a stoppage of production that would result in material losses. When there is too much

inventory, companies could face inventory obsolescence, financial losses and an inability to stockpile products for which there is greater demand. Insufficient amount of material in manufacturing companies could lead to the impossibility of regular production, which would reduce the amount of available finished products, which would lead to material losses. Companies that have too little inventory, would have the problem of losing regular customers and their demand for the products over a period of time.

Finding the optimal amount of inventory, inventory that would not disrupt the business process, is a challenge of modern business systems. Therefore, there are traditional and modern inventory management systems. These systems are theoretically described and are not necessarily mutually exclusive, so combining traditional and modern systems can improve inventory planning and management. For example, a combination of the traditional ABC and XYZ inventory management methods provides better results than using only one of them. With that we can say that inventory management methods lead to the improvement of business processes.

In order to improve the inventory management process, it is necessary in a timely manner to recognize the signs of poor inventory management. The act of controlling, i.e., through numerous inventory policies, helps to reduce the risk of a large number of inaccurate records. Inventory management and their timely controls make the organization effective and efficient. With timely control, it is possible for the degree of achieved effects to be higher, and with that the organization to be efficient (successful).

References

1. JankaDimitrova, "Organizational and accounting control systems", "GoceDelchev" University, Faculty of Economics - Shtip, Shtip 2019, p. 55
2. Šamanović, Josip, Sales, distribution, logistics, Theory and practice, Faculty of Economics, University of Split, Split (2009), p. 206
3. Šafran, M., Inventory management, lecture notes, University of Varaždin, Varaždin (2018), p.32
4. JankaDimitrova, "Organizational and accounting control systems", "GoceDelchev" University, Faculty of Economics - Shtip, Shtip 2019, p. 57
5. Mario Shafran, "Inventory Management", Faculty of Transport and Traffic Sciences, Zagreb, Croatia, 2015
6. Mario Shafran, "Inventory Management", Faculty of Transport and Traffic Sciences, Zagreb, Croatia, 2015, p.40
7. Mario Shafran, "Inventory Management", Faculty of Transport and Traffic Sciences, Zagreb, Croatia, 2015, p.43
8. Mario Shafran, "Inventory Management", Faculty of Transport and Traffic Sciences, Zagreb, Croatia, 2015, p.43
9. Antonio Zrilich, "Inventory management in six steps", Faculty of Economics, Croatia, 2011, p.17
10. Žič S., "Optimization of supply chain inventory management", Faculty of Technology in Rijeka, University of Rijeka, Rijeka, 2014
11. Mario Shafran, "Inventory Management", Faculty of Transport and Traffic Sciences, Zagreb, Croatia, 2015, p.48

12. Shamanović J., "Sales, distribution, logistics", Theory and practice, Faculty of Economics, University of Split, Split, 2009, p.221
13. Shamanovic J., "Sales, distribution, logistics", Theory and practice, Faculty of Economics, University of Split, Split, 2009, p.222
14. Mario Shafran, "Inventory Management", Faculty of Transport and Traffic Sciences, Zagreb, Croatia, 2015, p.50
15. Žič S., "Optimization of supply chain inventory management", Faculty of Technology in Rijeka, University of Rijeka, Rijeka, 2014, p.29
16. Žič S., "Optimization of supply chain inventory management", Technical Faculty of Rijeka, University of Rijeka, Rijeka, 2014, p.30
17. Shamanović J., "Sales, distribution, logistics", Theory and practice, Faculty of Economics, University of Split, Split, 2009, p.223
18. Shamanović J., "Sales, distribution, logistics", Theory and practice, Faculty of Economics, University of Split, Split, 2009, p.223
19. Shamanović J., "Sales, distribution, logistics", Theory and practice, Faculty of Economics, University of Split, Split, 2009, p.224
20. Habek, M., "Inventory management and warehouse operations", (2002), Zagreb, p.3
21. Antonio Zrilich, "Inventory management in six steps", Faculty of Economics, Croatia, 2011, p. 63
22. David J. Bloomberg, Stephen LeMay and Joe B. Hanna, "Logistics", (2006), p.139