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MANAGING DEMAND & SUPPLY

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Abstract

The best analysis of the current situation is to have a clear vision of existing systems in Romania compared to other systems abroad. The purpose of the analysis consists of defining business existence in which we are involved, why we exist, what we do, how we act, how they add value to the business while we achieve our goal. Therefore to know the situation we use a number of tools and logistics management. We can say the companies have designed and developed logistics organization, oriented mainly to transport and storage activities, which included logistics managers control more than 70%, followed by ordering and delivery, inventory, control and supply.

Analysis Tools for Logistics Management (ATLM) can be made by various measurements and analyzes, after which it collects and analyzes data, obtain immediate feedback to solve problems and improve performance. Subject to any Romanian industries is the manufacture of products as varied and complex as, for food and non-food consumption.

Key words: *flexible processes, information flow, visual management, logistic tools & methods.*

1. INTRODUCTION

The author has conceived a macro analysis to highlight negative aspects and possibilities of development at five different companies, analyzing logistical methods currently used and therefore this solution is an important contribution to the current state logistics.

The solution is based on differentiation from other companies, even if they are totally different. Most of the solution is to use as many methods of management, each with a established goal. They will serve managers as tools (weapons) against failure while the business. Details of the case studies are included in order to prove that this solution could lead to future profits. This paper focuses on customized logistics solutions in order to improve the performance of the companies poor. Maybe it is difficult to see such an analysis, managers of firms they shall say that numbers are not real, but that's why I put percentages and not numbers.

Business success today depends not only on the ability to meet market demand quality and quantity, but can be long-term business strategy. This is taken into account only transnational or multinational companies.

"Regardless of the considered industry, construction, economy, services, technical and economic system typology is very diverse, with both internal and external ramifications analyzed domain. Design and preparation of classification aims to highlight common elements of different types of systems, depending on certain criteria. Categories identified, is of interest for theoretical work, but also practical in situations where an entrepreneur builds and defines the own technical-economic system. It must be outlined perfectly still at the design stage, something that requires accurate knowledge of all existing features and capabilities so that future developments do not significantly affect the initial construction." [2]

2. IN ANCIENT TIMES

We started with the ancient trade because I find like now. Logistics science added over time, representative names which helps logistic staff today.

Seemed to me important to mention, the starting point of logistics, said the military has developed this branch. I say that no, she has developed much faster, although logistics concept was first used in the military sphere.

Logistics is regarded as a part of arts of war, is regarded as the practical application of the art of moving troops. But I wonder part theory, which says how to do to win the battle, before the final consumer? And, here comes the strategy.

Very interesting is the arrangement / occupancy, the ship and organization rowers. Most to a ship counts as cargo to be equally distributed to counterbalance not ship. Moreover, using the FIFO system as transporting perishable food goods. "First in - first out" (FIFO) is a method of processing and retrieval of data. In a FIFO system, first introduced elements of the system are the first to go. In other words, the elements are removed in the same order in which they are placed so that they have a shelf life. Phoenician ships were loaded with amphorae filled with products, distributed products so not to overturn the boat and to anchoring in various ports to exchange products by FIFO and LIFO, just now.

Old logistics involved: staff group activities and coordination - transportation, warehousing, order processing and even storage.

"The best seafarers and ship builders of the ancient world were the Phoenicians. The Phoenicians made important contributions to the marine science, having been credited with the division of a circle into 360 degrees and having reliable celestial reference points.

The Phoenicians were traders rather than warriors whereas the Greeks were concerned with territorial expansion and therefore used sea power as an instrument of conquest. These different priorities naturally affected the types of boats favoured by the two emerging maritime powers. However the area now known as the Levant had been a meeting place for warring races for millennia. It should not be surprising, therefore, that the ships used by the Phoenicians incorporated features drawn from variety of sources." [7]

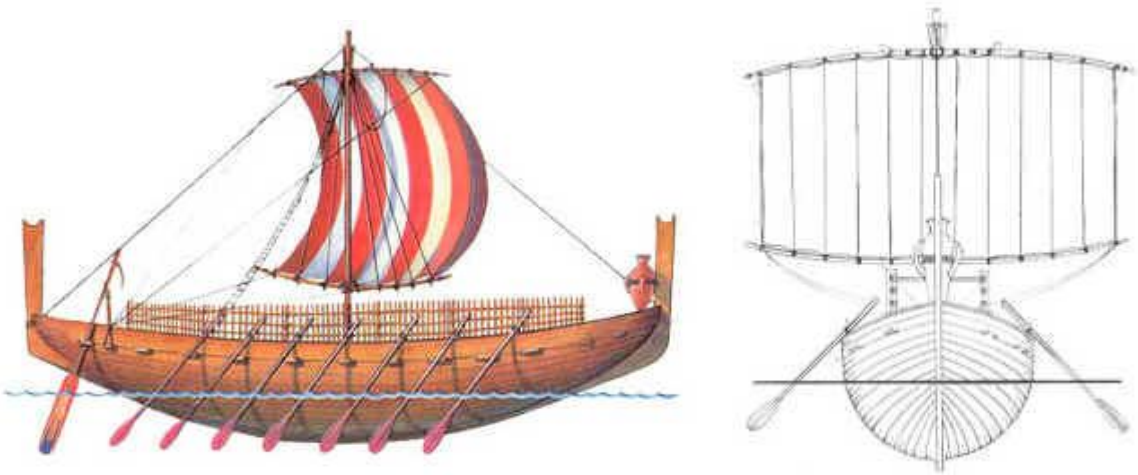


Fig. 1. A Phoenician trade ship of about 1500 BC.[7]

3. THE 5 COMPANIES – ECONOMICAL & FINANCIAL DATES

"Following the concerns existing on national and international level, industrial companies have been forced to develop and implement efficient management methods specific for production systems, in order to become lean organizations. In any organization, these methods are the basic elements used for efficient management of production systems, optimal allocation of resources, optimization of production costs, waste elimination and reducing the time between receipt of customer orders and final product delivery." [3]

Turnover (CA) is often an important detail of a business plan is estimated on the basis of forecasts. At some point it can become a barometer projections and coordinate important marketing strategy.

$CA = VB + VA$, where:

VB = turnover in the basic activity of the company and refers to the sale of products from the basic activity of the company;

VA = turnover refers to the overall product sales.

In the companies we are interested in the situation when the turnover index is greater than the index of manufactured products. Ica ≥ Iqf

Relationship between CA / Product Manufacturers, reflect the change stocks of finished products. Static ratio is determined based on absolute measurements, but this analysis I will do in the next article. [4]

3.1. Company producing paper

Company A. is a trade company specialized in paper manufacture for corrugated board, using paper and board waste products as 100 % raw material. In this way they contribute to the protection of the environment. At the present moment, with an existence of over 150 years, Company **A** finds itself on the top of paper manufacturers for corrugated board from all over the country. [5]

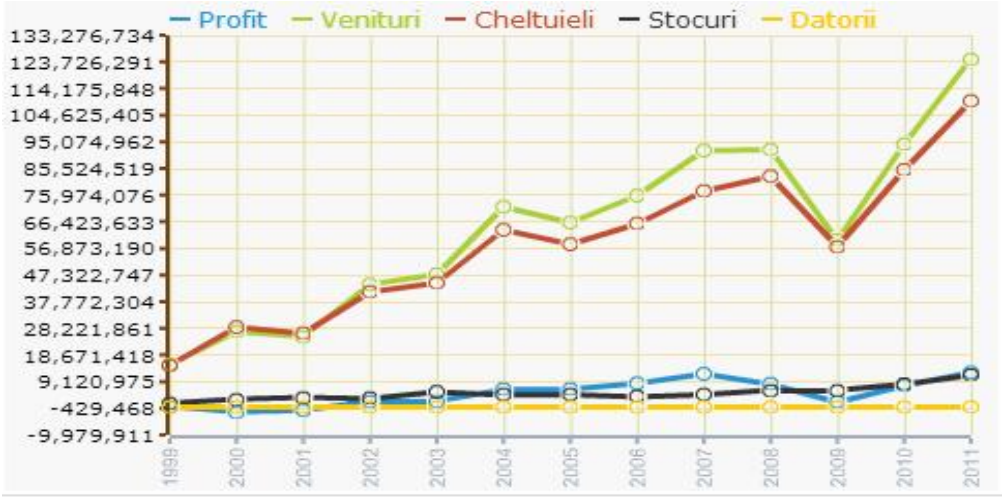


Fig. 2. The company's financial data [6]

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3.2. Industrial thread manufacturing company

Company B. offers many years, on a global scale, range of sewing thread and embroidery thread with technical services designed to provide professional solutions for its customers improve efficiency by increasing the quality of products made and optimization of manufacturing processes.

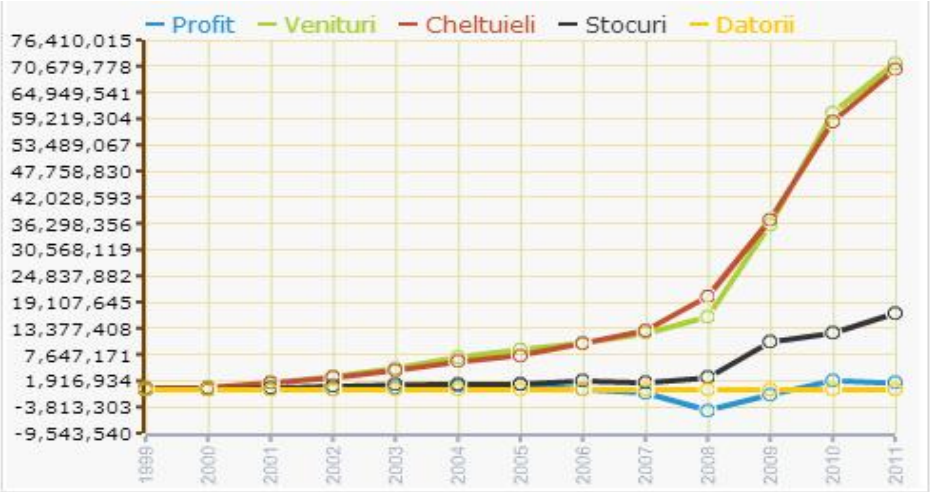


Fig. 3. The company's financial data [6]

3.3. Bread and bakery company

Company C. is the biggest bakery producer in Brasov County, offering, in addition to the nationally distributed lines of products, products specific to the area, including sliced potato bread, pretzels and assorted 1.1-kg pound cakes.After its acquisition in 2005, the company began an intensive program of modernization. By 2008, The Company C, had become the main supplier of high-quality products prepared under maximal food-safety conditions to the four counties. [8]

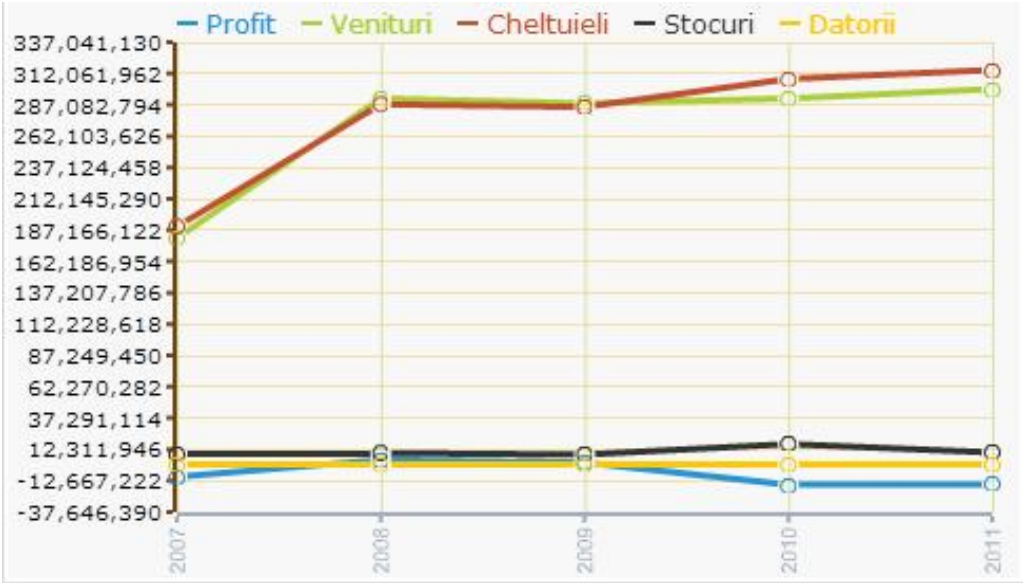


Fig. 4. The company's financial data [6]

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3.4 Car dealer – Sales

Company D. - Trading company cars, one of the first companies appeared on the market in Brasov.

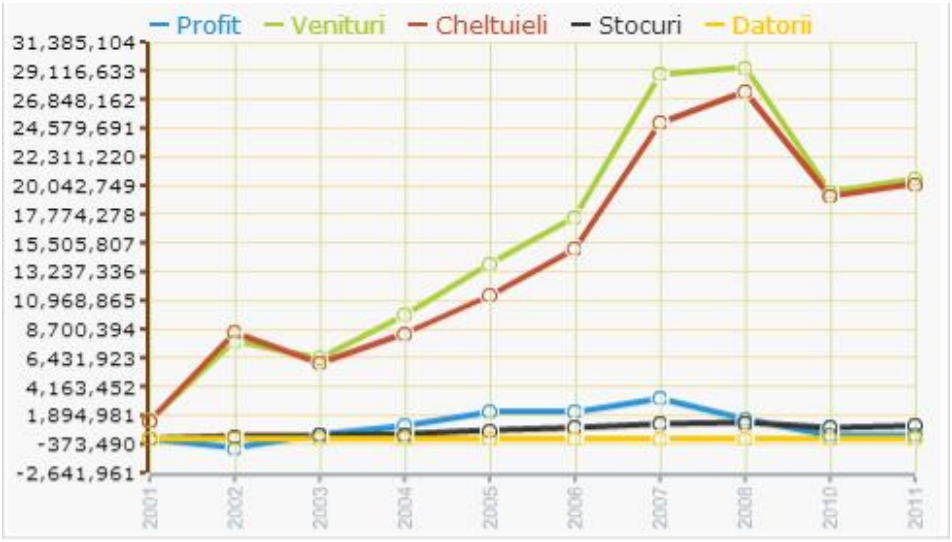


Fig. 5. The company's financial data [6]

3.5 Insurance company

Company E. a small company insurance, working as an assistant in brokerage.

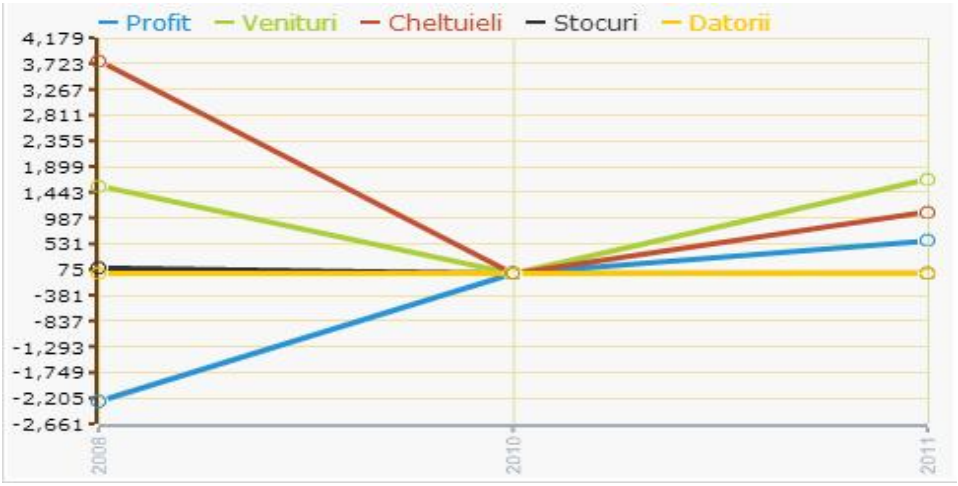


Fig. 6. The company's financial data [6]

"The structure of a system is given by all existing relationships between system components and the relationships between them and whole. Thus we have the following relation :

S = $\{E_{xm}, C_z, S_t\}$, where: **S** - it is the system

E_{xm} - the external environment

C_z - the composition

S_t - the system status [1]

4. DATA ANALYSIS AND INTERPRETATION METHODS LOGISTICS AT THE FIVE COMPANIES

Table 1. Analysis Tools for Logistics Management (ATLM). Case studies from different companies

METHODS	A	B	C	D	E
MRP	100%	100%	100%	100%	100%
KANBAN	30%	90%	-	50%	-
JIT	70%	10%	100%	50%	100%
FIFO/LIFO	FIFO&LIFO	FIFO	FIFO	FIFO&LIFO	LIFO
HEIJUNKA	100%	100%	10%	90%	-
KAIZEN	100%	50%	60%	90%	100%
5 S	80%	100%	100%	100%	90%
JIDOKA	80%	100%	100%	-	-
KANO	90%	100%	75%	98%	99%
PULL/PUSH	PULL	PULL	PULL&PUSH	PULL&PUSH	PULL
ABC	50%	100%	100%	-	-
SMED	30%	50%	80%	100%	100%
TRIP. "A"	50%	100%	100%	90%	80%
OBEYA	-	-	-	100%	100%
SCM	90%	100%	100%	100%	60%

MRP (Material requirements planning) - All 5 companies analyzed have understood that it is necessary to have a production planning and inventory control system used to manage manufacturing processes.

KANBAN – method to control the amount of product flow

Note in the table that the companies **C** and **E** is not passed anything because they do not work at all with stocks, that have stock 0, which is good. The company **A** works with 30% safety stock, which is good, so no storage costs. The companies **B** and **D**, need stock to sell (production lasts long enough): stocks have a vital function, namely to harmonize the flow.

Note that KANBAN system is completed with JIT system.

JIT (Just In Time) - system to produce only on demand

We have here, the company **B** 10%, just launching into production of urgent requests, which means higher costs for the customer. The companies **C** and **E** with 100%, produce only on order, because the manufacturing process of products is very fast, max a day and no additional cost.

FIFO/LIFO (First In-First Out/Last In-First Out) Where production involves a small term of validity, production is clear FIFO and LIFO is where products on stock does not deteriorate over time.

HEIJUNKA – involve leveling of the production time and quantity for a fixed period of time.

On leveling the amount of products, see the company **E**-not using this method because it produces services and the company **C** produces only on command (production which is very fast).

KAIZEN - professional teams to identify and create improvements.

Both companies **A** and **E,** were is 100%, they are looking to develop and implement new things. The companies **B** and **C**, multinational companies, working on standardization implemented globally, therefore have an implementation rate of 40-50%, lower than other companies.

5 S - includes: sorting, stabilization, shine, standardization, change, all this to eliminate bad habits.

The companies **C** and **E** have to implement to standardization.

JIDOKA - involve stopping automatic production line, to detect an error.

This method does not exist at the companies where are production on sales. JIDOKA-focuses on the causes, that determine problems arise in the system. Here, we have problems of work organization at company **A**.

KANO - A model used to measure how well a product of service meets customer requirements. "Kano analysis" is usually expressed visually via a "*Kano diagram*"

The best looks, company **A**, where we have 100%, well developed multinational. In the chapter, "customer satisfaction", company c, shows the worst

PULL/PUSH

PUSH - assume that the market is saturated, offer range of products, but customer choose you because you are under the noses customer product, you can test, you see. Most of the production going on PULL option, factory only if there is demand in the market, they are not overloading the market. Exception to the rule is the company **E,** who manufacture and sell insurance. A successful strategy will usually have elements of both the push and pull promotional methods. If you are starting a new business and intend to sell a product through retailers, you'll almost certainly need to persuade outlets to purchase and stock your product, in this case **C** and **D**.

ABC (Activity-Based Costing) – it is a good visual method, Stock rotation method shows the important or less important products. This method, let me make arrangement in the warehouse, according to my suppliers requirements and show the location of each item. Note that, **D** & **E** , the two companies that produce services not only apply their from upstream suppliers.

Single-Minute Exchange of Die (SMED) or One-Touch Exchange of Die, **(OTED)**

The lowest percentage in the big company **A**, as have to work on standardization. Company **E**, the lowest, adapts quickly, otherwise lose and die.

TRIPLE. "A" : agile, adaptable, aligned - This method measures actually the rigidity of the company, or the agility**. Agile** - the need to respond quickly to changes in demand or supply, to recover quickly and easily from shocks such as natural disasters, computer viruses, loss of markets, etc..**Adaptable** - size-oriented: that evolve over time with changing technology, economic progress and political change in general, any new trends. **Aligned** - aligning their interests in participating firms in which each chain is still responsible for what he produces or provides.

OBEIA - Working with open spaces where they discuss on each hierarchical level face-to-face. The new method, recently appeared to solve problems of production managers and sales directors, is increasingly used to optimize office space. Here, this method is used, only the **D** and **E** companies. Perhaps others did not know how, possibilities of transmitting messages. Those involved, communicate quickly in the same hierarchical level.

SCM - It is a large system, in which each add something and then take. The goal is to make money as a group, united by what they produce. Managing a supply chain is a complex process in a more efficient logistics solution but difficult to control a some factors. From the table, it is observed that there are four companies supply chain, being developed nationally and internationally and the fifth company is conditioned by a single supplier, due to legislation. As the business grows with such chain is higher.

5. CONCLUSIONS

When a company creates a logistics strategy, this goal must be the most cost effective. Therefore, companies will consider relocations, mergers or acquisitions.Because supply chains are changing and evolving, a company can develop a series of logistic strategies for specific product lines, for certain countries or certain clients.

In supply chain, constantly appear updates that will affect every organization. To adapt to the flexibility of the supply chain, companies should develop and implement a formal logistics strategy. This will allow to the company to identify the impact of impending changes and to make organizational or functional changes to ensure different levels of service and of course different costs.

As we have more methods of analysis, reduces uncertainty in supply, we control the demand and supply. Supply executives expect to see continued growth, they are optimistic about their overall business prospects for the year 2013. A decisive factor for global action is: being close to the customers and the market developments.

Some of these methods will be developed analyzed in my future articles and in my doctoral thesis.

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