

# Impact of Crisis on Logistics Management

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## *Abstract*

*Is the current situation facing the whole world and we need to adapt to withstand a fierce weather. Because the supply, which can be seen both as a sale (the manufacturers buy from suppliers) as well as a purchase (customers are supplied by producers) is the center of activities, we believe that a interpretation and a strategic direction to increase the competitiveness of extended supply chain, represents an initial starting point to save the current situation.*

*We must understand that do not survive the nicest, smartest or the strongest, is the future of those who adapt best to change. In the global crisis context we must consider first the potential and not the market. Apparently the market is in a total collapse, but the potential still exists, even at minimum capacity it should work. Now they will be able to support only companies that eliminate almost all their losses and best manages their resources and activities.*

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## **Introduction**

Integrated supply chain management is a business philosophy that focuses on improving and coordinating business processes, on the integration of these elements at the organizational and inter-organizational systems level. Integrated supply chain management covers the flow of information, material flow and monetary services from suppliers of raw materials to factories and warehouses and from here further to the final consumer.

"Competition between manufacturers is becoming increasingly less effective in terms of production and product quality - comparable evidence - and increasingly fierce in terms of stock problems and speed with which it is distributed on the market." John Kasarda, Forbes, October 18, 1999. This quote reinforces the belief that supply chain management will be the main determinant of the ability of producers to compete.

A comprehensive definition of the term of supply chain management says that it is everything that happens in a company "from dirt to dust." To discuss this issue, the first step is to try to define the term of supply chain. It includes more than just a way from the extraction of ore from the earth to it returning also there. It also includes information, rotation of money, and also the creation and utilization of intellectual capital.

Joel Sutherland tried to define the terminology supply chain using three approaches:

1. "Supply chain" is just another way to define "logistics"
2. Supply chain also includes other functions such as purchasing, development, manufacturing, financial, marketing and other control activities that complement them.
3. Supply chain includes all the activities described in definition 2 and moreover, the activities of the suppliers of suppliers company or customers of customers company - extending beyond the boundaries of a single company.

To complete the concept, we propose to consider this from the narrowest interpretation to a complex interpretation.

a) From the functional point of view, the supply chain is considered a baseline in each company. Performance assessment in companies is focused on cost. Supply division focuses on acquisition costs. Sales department believes that it is productive when they have large receipts from customers. Collaboration between departments is at a minimum, most improvements taking place being established local. Often, these local improvements are affecting global optimum.

b) Supply. The largest efforts of companies are often focused to minimize supply costs. Many companies are losing enormous amounts of money because they create many job places for purchasing agents. Companies realize that they are dependent with the firms of the start of supply chain, and thus they provide significant amounts of money for purchasing initiative programs, reducing the number of suppliers, as well as selling programs based on the stock. Initiatives seen here are based on collaboration with suppliers, and thus on the reduction of existing stocks in warehouses.

c) Logistics. The idea that all companies are related occurred in the logistics department, department including also transportation and warehouse management.

d) Information. Information provides the link between companies through software implementation. A barrier difficult to overcome was, over time, lack of integrated applications. In this way, it eliminates the need for sales forecasting.

e) Restructuring of business processes. Six Sigma is an approach to improve quality, very close to the restructuring of business processes. This implies that processes must follow the structure and process technologies. It is the intention of the restructuring.

f) Strategy. Supply chain is a component of the strategies adopted by companies to increase competitiveness. The capacity to compete is based in fact, not only on the product obtained but also on the operations that give rise to "extended product". [6]

Taking into account these views, we see that relations between suppliers, logistics and information system support customer satisfaction. Costs, also very important, go now in second place.

Supply chain is under the impact of fast changes, its inability to cope with change entailing many dangers.

### **1. With the beginning of crisis...**

Peter Drucker said: *"The times of turbulence are dangerous but the biggest danger is the temptation to deny reality."*

Think that dinosaurs once ruled the world, but they have adapted too slowly to change, so they disappeared from the Earth. With an efficient integrated supply chain, with a sustainable supply chain, we can react to environment.

Is the current situation facing the whole world and we need to adapt to withstand a fierce weather. Because the supply, which can be seen both as a sale (the manufacturers buy from suppliers) as well as a purchase (customers are supplied by producers) is the center of activities, we believe that a interpretation and a strategic direction to increase the competitiveness of extended supply chain, represents an initial starting point to save the current situation.

We must understand that do not survive the nicest, smartest or the strongest, is the future of those who adapt best to change. In the global crisis context we must consider first the potential and not the market. Apparently the market is in a total collapse, but the potential still exists, even at minimum capacity it should work. Now they will be able to support only companies that eliminate almost all their losses and best manages their resources and activities.

If a business does not work, we say that "something does not bind". Supply chain provides the link between all moments of a business, from purchasing materials from suppliers, to delivery to customers. Actually, it represents the essence of what we need to know in detail to make our business a successful solution.

Materials present crisis will get worse and we will have reuse requirements. This will force the industry to consider higher-order supply chains, which refers to recycled materials.

The main issues to be studied in the context of the global crisis are those related to minimizing the risk, to collaboration and visibility into extended supply chain, to identifying the sources at local and global level, to manage the supply chain orders, to funding opportunities for it, but also to the implications that occurred rises may have, ex. energy.

In these turbulent times is crucial to be rational, to know the situation upstream. If until now we were most interested in the state of resources and supply capacity of downstream organizations in the extended supply chain, we must now focus on analyzing the financial situation of the company that starts the entire business. Its financial failure will multiply and reach a bankruptcy at all other levels of the supply chain. We must ensure integration of all activities and

resources with no voids, which can develop any bankruptcy case. It must also support the design of a web portal, which should be made up of a database of accounts of the largest suppliers. Total transparency is needed to restore the situation.

In this context we consider essential that each of the vendors must operate on the principle "must survive" and not "must have profit."

The global economic crisis occurred because of a lack of extended supply chain integration. For this reason, the products came to be sold and resold among the same consumers with exorbitant prices unjustified. Thus it came to run money that actually does not exist, counterfeit money, money owed to a lack of cooperation and a lack of transparency. We can talk about a sick economy, an economy hungry after a good profit and not a good functioning. Proper integration solutions for supply chain, primarily for large organizations, will be major opportunities in order to overcome the situation.

The crisis has forced the need for short-term thinking. Almost all investments have been held and decisions on new investments were reviewed at the corporate level.

Sustainability is not on the agenda of the field of logistics. It is however noted that sustainability goes hand in hand with cost reduction.

The economic crisis has forced the need to adjust costs in relation to declining demand. The main problem is that some major corporations, that were part of the supply chain, could be removed. The challenge for the managers in this area is their attempt to reduce costs through innovations and improvements to processes within the supply chain. This will not make supply chain more efficient in the short term, but will provide a competitive advantage directly, immediately after getting out of the crisis. [1]

Finally, in response to the high cost of creating and maintaining links outside the company boundaries, organizations tried to put the disparate elements of value creation chain under the control of the same relationships. Concentration processes across extended supply chain is necessary, that the movement of production factors seem less expensive than buying them from elsewhere.

Furthermore, new skills gained have enabled more and more the replacing of vertical integration with virtual integration. Virtual exchange of information reduces the time and personnel needed to perform transactions and coordination activities that take place between units of a firm.

Life experience has proven to everyone, that integration into the environment is vital. If you are a person who can adapt to your environment, you will become an outcast. By integration, we mean that we must adapt to others, we must integrate to a social network, and must do things so people can be able to adapt to you and to your work.

The largest companies are aware that it is important to know their suppliers and customers well. The same is true for suppliers. So, in a larger picture, we must understand that the roles are changing constantly. Those who are now suppliers will become customers. Customers will be suppliers, and so on. It is as easily as

human nature. Now you're a child and you have parents, but in a few years you'll be the parent and you will have children.

The most successful innovators viewed the supply chain as a strategic tool for changing the rules of the game.

If we have a well defined supply chain, the problem that appears in the result, will reflect exactly who is responsible. We will not be affected by negative changes, and we will benefit from positive change. Nowadays, if someone makes something better or faster, this advantage is lost as a result of the silo mentality, and due to this the second phase of the process is designed so that it can start at a set time, based on a result set from the previous phase. So the positive effect is lost. If you have a negative effect, this will influence the next step, because either it will not have the necessary resources from the previous level, or it will have to wait after the delay already caused to another level. So if you gather up the negative effects, you will affect the outcome.

Too often, companies do not take into account the impact of their actions on the supply chain, on their long-term competitiveness and profitability. A silo mentality "I win, you lose" may be evident when we choose the cheapest provider, with very little attention to customer needs and allocating a few resources to a new product or to the design of services.

In the context of a global economic crisis in full swing, all areas try to resolve existing problems.

How do we know when we need to change and how do we do in order to not have the need to change? It's simple: when you have a runny nose, you know that you are ill and you need aspirin. Unfortunately, you are already ill – you are in the middle of the phenomenon and you have to overcome it as soon as possible with the lowest costs and the least serious consequences. It is important to know what caused the dysfunction in order for you to be able next time to avoid it, in our example, staying in current. Not desirable, sometimes it happens that a runny nose is a trivial sign of old disease, chronic, a profound dysfunction of the body, and the current was only an enabling element. And also in the bankruptcy case in an organization, it may be found that the initial reason is an ineffective remuneration system, due to the misunderstanding in the interdepartmental relations.

We must realize that in this crisis period, we can not talk about a halt in sales, but a slowdown, and about the necessity of an accurate management of resources and production, to avoid losses or surpluses, because organizations will not afford them.

## **2. A possible solution...**

We are dealing with a conflict between client companies and service providers. Due to the crisis, the first would like to extend as much as possible the payment time of invoices issued by vendors/service providers, and the second would like that the bills to be paid as soon as possible.

Thus, it was the need of developing a very innovative solution (in Romania is not yet practical) to try to resolve the conflict between vendors and their customers.

This solution is called Supply Chain Finance (SCF). What it composes this solution? From the client to the vendor, we add an institution financial-banking and an electronic platform of management and processing data, able to link all the organizations mentioned before.

What are the primary benefits of this new solution to customer business?

- Low-cost procurement cycle
- Optimization actual cash flow vs. forecasting cash flow
- Shortening the payment time of invoices by contractors, without directly affecting the cash flow.

The United States already are discussing this integrated solution and companies are already in the trial stage in its use.

### ***Challenges in restarting the business***

Many companies are now facing difficulties in coordinating the supply chain and ensuring favorable transport arrangements. Given the drastic need to reduce costs, many companies have already used safety stock and thus increased their dependence to the suppliers, making business more sensitive to fluctuations raised in orders. [2]

Some companies maintained their capital, while the stocks of other have fallen significantly. This allows strong companies to have advantage in this situation, to improve it portfolio.

Out sourcing mentality has changed and many companies try to maintain the needs within the company, because out-sourcing firms attract the involvement of collaborators, whose status can not be precisely defined in time of crisis.

Environmental efforts are effective. By reducing costs, we attempt to reduce energy consumption, which leads to the use of green energy in order to reduce dependence on oil.

To improve operations in the chain, companies will increase collaboration with suppliers and customers. Using collaboration and communication systems, the relationship between business services will allow and require closer links in the chain.

Integration between production and supply became a necessity. Production Operational Management will acquire a growing importance, as companies begin to look across their operations in a holistic manner.

### **3. The supply chain after the “crisis”**

The crisis has influenced everyone. Companies have to muster in the crisis terms in order to control better the costs. Customers have become more aggressive in the relationship with suppliers, which mean justifying the costs. It was a “top-down”, customers came to manufacturers, they went to suppliers, they renegotiated contracts, so that ultimately result in crisis was not a disaster; the crisis helped them to have better management.

Customers have had the same growth as last years. Customers had better managed their relationships with producers, requiring greater control.

It is important to bring the capacity, the business in which you invest, at the level of a forecast. If you align a large installed capacity to a forecast that turns out to be wrong, you will be in the situation that you must pay, the machines cost, people cost and you have no place to sell. If you have contracted too much business and forecasts prove to be incorrect and in the other side, the order of the client is much higher, you can not handle it. The customer gets angry, the logistic company enters into turmoil, angry customers are turning to other suppliers and you perceive as an operator who can not control your business.

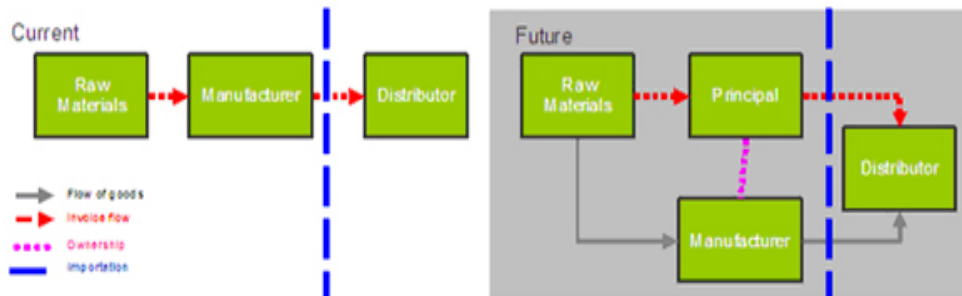
Now we are working with short and medium term forecasts, whereas long-term prediction can not be done because of fluctuations. The crisis has caused fluctuations from one month to another.

In times of crisis, logistics market is not seasonal. Now is a fairly large fluctuation from month to month, sales were unexpectedly high or low in different weeks, just the opposite history that we had before. Before, there was seasonality.

Not always, a month with many orders proves to be profitable. A good month is a month in which plans and forecasts met. It can be an extraordinarily high sales month, but it can turn into a small disaster for our business, because we have to bring extra resources and equipment that must be paid, we must find the surplus space, which, taken in short period, has higher charges. Finally, a month with a great volume can bring losses instead of profitability. A month out as planned and within the margin of +/-20% flexibility is a good month.

#### 4. Warning! The biggest mistake!

Under stress conditions there is a trend that every company should try to transfer their profits at a higher level in the value stream. This, however, can lead to price increases for goods, or increasing fees. When profit is shifted from one supplier to a manufacturer, the final price of goods is increasing and often result increased fees, paid according to the manufacturer that focuses on import.



**Figure 1 Migration and consolidation of ownership intellectual property and it payments, can result in obligations, more debt and registration efforts**

Why the companies did not remove the processes that were not part of the key processes, while their boats sank during the crisis? For one simple reason: they froze at the top. Not sure which path the economy will take, many executives did nothing.

Due to the crisis, supply chain acquired two tasks:

- It is faster
- It has a lower intensity

Chain speed is given by the need to create supply without storage and interruption, without having activities that are without value. Low intensity is due to the obvious decline in demand. The dynamic of logistics is under the sign of one fundamental conflict: "Who is more important? Demand or offer? ". How can we undo the knot created?

Lower intensity is due to the chain backwards road. Customers no longer have the receipts and this is transferred up into the supply chain, decreasing its intensity. Battling for competitive advantage, it is sufficient to be just a step ahead of competitors, as this will attract customers.

## **5. Supply chain management - a defensive and an offensive weapon**

There are many hazards that may arise if we ignore the importance of supply chain. Such a chain is composed, hypothetically, of a flow that is based on suppliers sending the material to the factory, and also other materials, not requiring processing and going directly to shop's deposit. Distribution centers sustain in this way the customer demand. But these reviews are not a homogeneous mass; each of them may have different preferences about the use of the product, about the extended product corresponding activities, about maintenance and technical assistance after the purchase. Often, companies do not recognize such segments, and are based on a supply chain which, in their opinion, "meets all requirements". Thus, a compromise is dedicated to customer requests, and it reaches the situation where no segment is satisfied properly. But the threat occurs when a competitor takes place. He studies who is the most attractive customer segment and creates a specialized supply chain. The result is loss of this customer segment, which is often the most profitable, because competition "is always doing its homework", and knows what weaknesses can be attacked. This threat can be also an opportunity. In this way, supply chain management can be used both as a defensive weapon and as an offensive one.

*Supply chains are driven by demand at command.* The actual trend is forecasting demand. Many companies are losing enormous amounts of money in their attempt to forecast demand. However, the key lies in the ability to respond quickly to emerging demand. So, in the supply chain, the direction must be reversed. We must change from the forecast-supply direction, to the direction in which the demand is driving and it is pulling results from upstream.

*Visibility.* The current trend is static vision. One of the greatest challenges of supply chain is its visibility. If you only get information from the market,



separate information that can not be integrated or handled, we call this phenomenon, static visibility, and appear to be ineffective. Visibility must be supported by tools for making decisions, so we can quickly turn information into action. Information becomes important when the whole network can be seen at a multinational scale, they can be analyzed by first line staff to model scenarios "what if".

*Collaboration and coordination.* The current research highlights decisions making for a single compartment, a phenomenon or product. As have become increasingly important the operations of distribution, production and distribution through outsourcing, and also many partnerships throughout the world, collaboration are a basic imperative. We can not make decisions alone, although apparently they will only be beneficial.

*Sensitivity as a differentiator in the competition.* If we analyze the product and the price of the competition, that research will bring added value in terms of competition's sensitivity. Due to growing competition, the struggle for product price is not sufficient. To hold your market position, you must be able to adapt to what the customer wants, when is the moment of his need and all this before the market competition grows.

## **6. Resistance to crisis? Extended supply chain and selling flows**

Precise role of supply chains in the collapse of trade is an unsolved problem. Exchange within the supply chain was more resistant than other types of exchange in the crisis.

Recent discoveries have revealed the creation of a wide rift between the results and trade. Results are expected to fall only 1.1% and 3.4% in advanced economies, but global trade is expected to experience a decrease of 11.9%.

The basic argument is that in a world characterized by vertical specialization, goods are produced sequentially, in certain stages throughout several countries - calling this element extended supply chains. Parts of a final good cross borders several times before the product can reach the customer. At each border, the final amount of the asset is registered as an exchange. As a result, when it is a reduction in world income, exchanges should decrease "not only the finished goods value but also the value of all intermediate flows which are collaborating to create the good." [3]

From this assumption, we will construct a scenario in which a liquid channel led to the moment where the exchange affects very seriously the decrease in demand, the effect of this decrease is much deeper as regards to supply chains, as the flow is driven by financial institutions, greatly affected by the crisis.

There are too many empty spaces in our understanding of the nature of the operations of international supply chains. Once data become available, the crisis will give us important material, so we can improve awareness. Finally, you might discover that without supply chains, things were far worse than is now. The crisis actually has the ability to launch instead of encrypting the process of globalization.

The market is becoming harder to forecast and the customer demands grow constantly and become increasingly difficult to achieve. As supply chain management moves from concept to reality, it will constantly appear new ways of doing business. As changes occur, organizations will need to respond further, while the focus remains on a vision of long term extended supply chain integration. [5]

### **Bibliography**

1. Ayers James B, "Handbook of supply chain management", The St. Lucie Press Series on *Resource Management* APICS
2. Bernard, P. (1999) *Integrated Inventory Management*. New York, NY: John Wiley & Sons, Inc.
3. Bășanu, G., Pricop, M. (2004) *Managementul aprovizionării și desfacerii*, Editura Economică, București
4. Dima, I.C. (coordonator), (1996) *Management logistic*, Editura Didactică și Pedagogică, București
5. Robert B. Handfield; Ernest L. Nichols Jr., (1999) *Introduction to supply chain management*, Prentice Hall Inc.
6. Kotler, P., (1997) *Managementul marketingului - Analiză • Planificare • Implementare • Control*, Editura Teora, București
7. Landvater, D. (1993) *World Class Production & Inventory Management*. New York, NY: John Wiley & Sons, Inc.
8. Nicolescu, O., (2006) *Management comparat*, Editura Economică, București
9. Senge, Peter M., (1990), *The Fifth Discipline: The Art and Practice of the Learning Organization*, New York, NY: Doubleday/Currency. Stack, Jack, 1992, *The Great Game of Business*, New York, NY: Currency/Doubleday
10. [http://www.at.capgemini.com/m/at/tl/Supply\\_Chain\\_Management-Studie\\_2009.pdf](http://www.at.capgemini.com/m/at/tl/Supply_Chain_Management-Studie_2009.pdf)
11. <http://www.bangkokpost.com/business/economics/30540/predictions-for-the-2010-supply-chain> Carlo Altomonte Gianmarco I.P. Ottaviano, 27 November 2009
12. <http://www.emeraldinsight.com/Insight/viewContentItem.do?contentType=Article&contentId=1811645>