

SCM - easy to understand theoretically, difficult to implement practically

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SCM – easy to understand theoretically, difficult to implement practically

- *Administering the suppliers/distributors chain is a game easy to learn, but difficult to handle.*
- *Fortunately, the rules of the game – materials' description, their variety and the manner in which they must be placed in space and time are easy to understand.*
- *In essence, the chains of suppliers/distributors **are made of economically dependent production and sale units, but juridically independent, connected through means of transportation**, their reason for existence being to sustain the **flux of demand, offer and capital**.*

SCM – easy to understand theoretically, difficult to implement practically

- *The difficulty in administering suppliers/distributors chains comes from the **complexity of the structures they are made of** and from the **variability which characterizes material, financial and informational fluxes**.*
- These two characteristics - **complexity and variability** – most of the times determine the transformation of a game at beginner's level into a game difficult to manage and to implement, if the play area is at international level.

The units forming the logistic chain and the links between them, necessary for their functionality

- The units forming the logistic chain are usually divided in two categories, depending on their main activity: ***production units and storage units.***
- Usually, the production units may have maximum three types of stocks:
 - ***stocks of raw materials which may be used in the production process,***
 - ***stocks of semi-products,***
 - ***stocks of finite products containing goods which may be delivered following a demand.***

The units forming the logistic chain and the links between them, necessary for their functionality

- *Each means of transportation is a unique mixture of speed, cost, validity and capacity.*
- *Transportation within a narrow geographic area normally uses a single means – from the source to destination or combinations of the like.*
- *The same as production units, transportation main lines contain stocks; the difference between stocks in transit and the other two types the organization comes in contact with are no longer visible in practice.*

The units forming the logistic chain and the links between them, necessary for their functionality

- *The transit units are used only to move goods between trucks, they do not keep separate stocks.*
- *The distance from the raw material – product to the client is called main line, being used to move stocks between units with a specific means of transportation, using a specific combination of vehicles and containers.*

Demand, offer and capital – the elements opening fluxes in logistic chains

- *The fundamental purpose in administrating the suppliers chain is to obtain an ordered flux of goods from the extractors of raw materials to the final consumers.*
- *In time, transportation administration has merged with a related function – materials administration, in order to create the border discipline of logistics and implicitly of management.*
- *The demand is the one causing the movement, and the capital is the motivation for the movement.*
- *The great secret in administrating the suppliers/distributors chain resides in synchronizing the goods fluxes.*

Demand, offer and capital – the elements opening fluxes in logistic chains

- The basic operation of a suppliers' chain is given by the demand *moving along the chain and triggering the movement of the offer in the opposite direction.*
- *After it reaches the suppliers as destination, the capital moves in the opposite direction along the chain and covers the spending of the suppliers.*
- *The demand is usually passed on through orders, the offer through transportations and the capital through payments.*
- *The largest part in administrating the suppliers chain deals with balancing the exchanges between the size and the frequency of these packages.*

Demand, offer and capital – the elements opening fluxes in logistic chains

- *The orders open the goods' flux, but, depending on the production strategy, they may or may not trigger their immediate production by the supplier.*
- *In a stock production strategy, the supplier makes the products before the demand and keeps them on stock, satisfying the demand from that stock, as the orders come in.*
- **In the order based production**, *the supplier does not produce a good until it is ordered.*
- *In reality, an intermediary strategy may be used, to assembly depending on orders, when the good is partially produced, before the demand, but the final assembling is delayed until the order is received.*

Demand, offer and capital – the elements opening fluxes in logistic chains

- *The capital flux is the one receiving the least of attention - the suppliers chains exist to move products, and the orders are the ones triggering this movement.*
- *But the capital is the coordinator of the entire process; if we took it out of the equation the entire operation would stop quite quickly.*
- *Besides the three main fluxes, there is something else moving along the chain - information.*
- *Actually, information is implicit in the three fluxes:*
 - ***the orders are information about the imminent demand,***
 - ***certain products can be transmitted as information,***
 - ***even the capital can be exchanged as information.***

Demand, offer and capital – the elements opening fluxes in logistic chains

- *The information can move along the chain at any time, without being part of a certain transaction and it is not forced to move sequentially up or down the chain.*
- *On the contrary, it can be transmitted simultaneously to any subdivision of the chain, making sure that they all operate on the same information at the same time.*
- *Within suppliers chains the information can be many times replaced with the stocks.*
- *Instead of asking each member of the chain to maintain a safety stock in order to cover the unpredictable variation of the demand, this variation can be reduced by transmitting information between the members in order to anticipate the changes in demand, offer and capital.*
- *Information is much more cheaper than stocks and has the advantage of being in several places at the same time.*

Distribution and provisioning as basic activities in the logistic chain

- The central part of a *suppliers chain business* is *distribution*, being in fact a matter of coordinating the flux of finite products from the factory to the consumers in a cost efficient manner.
- When several units of the distribution are under the control of a single company, managers most of the time try to maintain an ordered distribution network using only the main links. In this case transportations are not allowed to skip units and each destination receives only transportations from a superior unit.

Distribution and provisioning as basic activities in the logistic chain

- Although it is possible for a factory to obtain all the materials from a single source, this happens very seldom.
- *Usually, the factory provisions from several sources, each of them also receiving provisions from others and so on, to the point from where the raw materials are extracted.*
- ***The essence of quality provisioning is to have everything arrive closest to the production time without paying more than necessary.***
- **The more the suppliers, the bigger the chance for at least one of them to postpone the delivery date and to delay the production.**
- ***Plus, the orders and payments costs increase as the number of suppliers increases.***

Distribution and provisioning as basic activities in the logistic chain

- *An important problem in analyzing the suppliers chain is **identifying the property limits**.*
- *A sequence of units held by the same company form its internal chain of suppliers, and the links not in the property of the company form the external chain of suppliers.*
- *The internal chains usually function more easily than the external ones, because they can be centrally controlled and selling or buying are not necessary for moving goods.*

The fluxes complexity and variability in the logistic chains

- ***Complexity is determined by the way in which the three main fluxes interlink and connect one to another.***
- ***As a principle, it is simple – orders lead to transportations and transportations to payments; practically, the relation between orders, transportations and payments becomes difficult.***
- ***A single production process generates orders to several suppliers and these orders are usually combined with orders for other production processes, which leads to the difficulty in administrating the production activity.***
- ***Invoices usually cover multiple transportations, and payments may also cover several invoices.***
- ***The simple connection between these basic fluxes is rapidly darkened by these groupings and regroupings necessary to efficiency.***

The fluxes complexity and variability in the logistic chains

- *Each transportation resulted out of an order needs its own **documentation**, including packing notes, loading invoices, and expedition notes; also, the invoices and payment cycle generate another set of documents which leads to difficulties in administration.*
- *All these documents **must refer to controlling sales and orders, and all the links between these documents must (or should) be carefully monitored so both companies can be safe – what was ordered has been delivered and what was sent has been paid, to avoid any unpleasant surprises, because these groups operate on different agendas and neither group is responsible for the outcome of the entire transaction.***

The fluxes variability in the logistic chains

- Regardless of how well they are administrated, *all economic activities have a natural variability in terms of time, quality and other features.*
- Daily sales, delivery deadlines, production demands, frequency of flaws, maintenance time and thousands of other aspects of the suppliers' chain, all these vary around an average value necessary to running a chain.
- *Most of the time necessary for administrating the suppliers/distributors chain is devoted to calculating this variation:*
 - *finite products stocks greatly act as a buffer for demand variability,*
 - *raw materials stocks protect us against provisioning variability.*

The fluxes variability in the logistic chains

- *Suppliers' chains are mainly vulnerable to the effects of variability because **they involve long sequences of interdependent activities.***
- ***The intensity and amplitude of provisioning variation may increase up the chain, whereas demand variation may increase down the logistic chain – the effect of strong challenge or lash.***
- *In the early stages of industrialization, the suppliers' chains were made of local companies working together to send the goods on the market.*
- *At present the suppliers' chains include **thousands of companies throughout the planet, complexity and variability having devastating effects on the efficiency of the provisioning process.***
- *The reasons are not subtle, it is only **a matter of mechanics – the bigger the number of those contributing to the making of a finite product, the bigger the possibility of facing mistakes and delays and inevitably, the disconnections become more and more serious with each link added to the chain, as it is similar to a physical chain – its resistance is shown by the weakest link it holds.***

Conclusions:

- In the future, suppliers' chains will not become smaller, but they will be integrated and reintegrated in ever bigger chains;
- Complexity and variability will be substantially reduced with the help of technology;
- The real economic challenge is to admit faults and make the necessary corrections in due time;
- It doesn't take a "genius" to run suppliers/distributors chains, but trust in the suggested solutions, remaining devoted to them and having the necessary patience to truly see the first results.

Thank you!