

INTERNAL AND EXTERNAL NETWORK ENTERPRISES – GENERAL APPROACHES

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ABSTRACT

The aim of this paper is to make distinction between multiple uses of the word "network" considered both inside and outside the enterprise. Starting from the reference literature on supply chain management, logistic, networks of enterprises, this article presents the main features of internal and external enterprise networks and investigates their impact on enterprises' organization manner. We also explore the relationship between networks and innovation deployment.

KEYWORDS: *enterprises network, external network, internal network, network head.*

JEL CLASSIFICATION: *L14, L22, M19.*

1. INTRODUCTION

The network notion is a very complex one, with multiple valences. In order to render the amplitude of this concept, certain authors are using the word “metaphor”. Thus Flachskampf (2002) states that the network metaphor makes us thinking to many various things such as errors, communications, coalitions, protocols, externalities, vertical integration, economy of scale, enterprise’s limits, decentralized incentives.

But analyzing the literature, we notice that for many authors, there is a correlation between the definition of the supply chain management and the network concept. It is generally considered that the supply chain is a complex network of providers, distributors and clients sharing information about demands, decisions and performance. All of them admit that success for a part of the supply chain actually means success for all parties involved.

Other authors are studying networks at the same time with the supply process. Therefore Cavinato (2002) states that supply processes or networks are a suitable interweaving of the physical resources with the financial, information and relational ones, all being in a strategic context of competition on the market.

Another approach considers that network concept actually designates the enterprise’s logistics. This includes suppliers, production facilities, warehouses, distribution centers, as well as the raw materials under processing and final products that are circulating between these facilities (Simchi-Levi et al., 2000).

The objective of this paper is to show the main features for the internal network within one enterprise, meaning its internal organization manner and for the external network of enterprises, as a reunion of autonomous entities.

2. INTERNAL NETWORK OF ENTERPRISE

Flachskampf (2002) makes distinction between the concept of supply chain management on the one hand and the network one, on the other hand, noticing that they have a common point, meaning their integration potential. But the supply chain management focuses on the independent enterprises

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integration, while the enterprise internal network appears within those entities having production, storage and distribution facilities, situated in several locations, as shown in the figure 1.

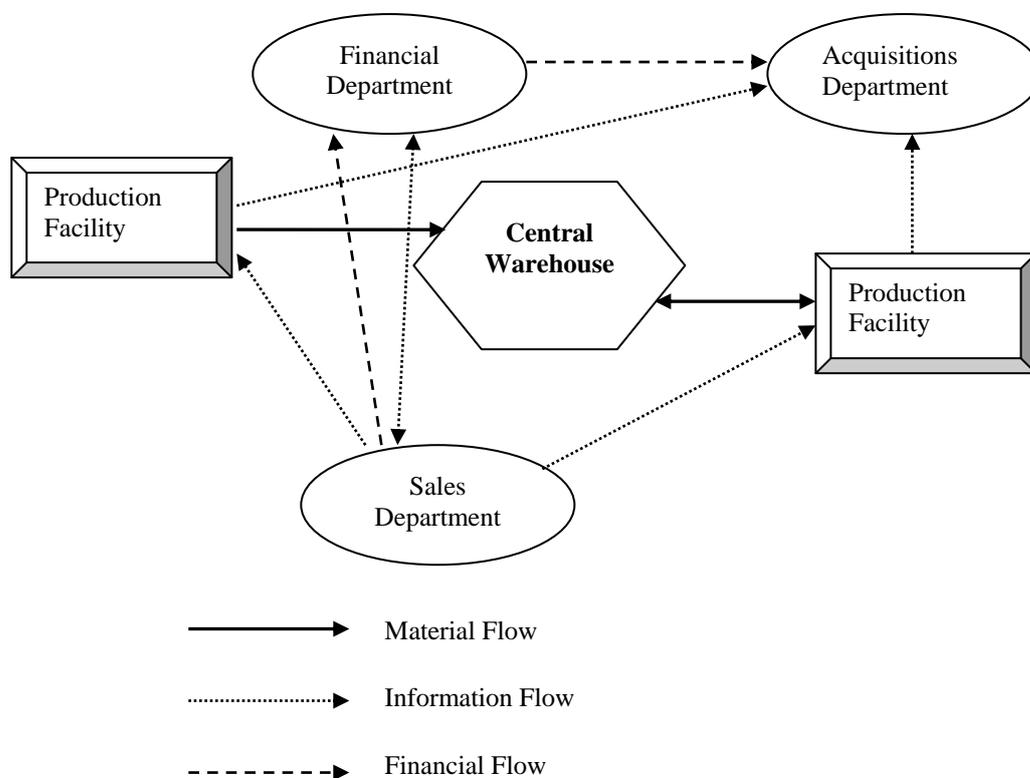


Figure 1. Internal network of an enterprise

Source: adapted from Flachskampf (2002, p.1)

Various flows are being established between the component entities of the enterprise internal network. For instance, between production facilities and the central warehouse material flows are being established. They may have one way or two ways, depending on the production process specificity. Between the sales, financial and acquisitions departments information flows may exist. In a fully integrated network, surplus value is created for the whole enterprise. But if the network is not integrated and if transparency is missing, each component entity tries to obtain the best results by itself. The supposition according with the amount of the best results for each component may lead to the best results for one network is not always valid.

Various scientists (Ostroff, 1999) consider that processes within enterprises, such as orders, production, sales, post-sales services are cross-functional processes, as well as integrated logistics. Integrated logistics means the management of the whole logistic chain seen as one entity and not as a separate management on every enterprise function (<http://www.businessdictionary.com/definition/integrated-logistics.html>, retrieved May 11th, 2013). An enterprise organized as an internal network of one enterprise may be of several types. Therefore we can distinguish between *integrated networks* and *commercial networks*.

Integrated networks belong to one enterprise and the best example is the National Society of the Romanian Railways (SNCFR). *Commercial networks* put in common only one part of their resources and keep their judicial independence, for instance a franchise network such as McDonald's. Commercial networks may be *hierarchical* and *cooperative*.

The *hierarchical* networks, also called complementary networks are made of the subcontractors of the production system of one industry (car industry, for instance). The subcontractors participate to the production of the same product, but each of them occupies a precise place in the value chain, and their exchanges are based on a monetary transaction.

The *cooperative* networks actually designate the franchise networks. Between network members there are competition relationships, but they take advantage from using common resources in order to increase their commercial visibility and to diminish their costs.

3. EXTERNAL NETWORKS

3.1. General features of external networks

The network concept is a complex and polysemantic one. While the network organization form of enterprises is wide-spread, it is necessary to make distinction between network as a formal structure and any other kind of structure.

Nowadays reducing the production costs and increasing internal effectiveness are capital objectives for any enterprise, giving the strong competition environment. Thus enterprises networks appeared as a viable alternative to the previous organizational partnerships such as holdings and strategic alliances. Flexibility of network enterprises allows them to easier adapt to the environment variations and to get improved economic results.

In order to better understand the complexity of networks we have to specify that "*organization in network*" does not necessary mean "*enterprise organized in network*". Actually organization in network (figure 2) is characterized by the following elements: joint resources, interdependence, and centralization.

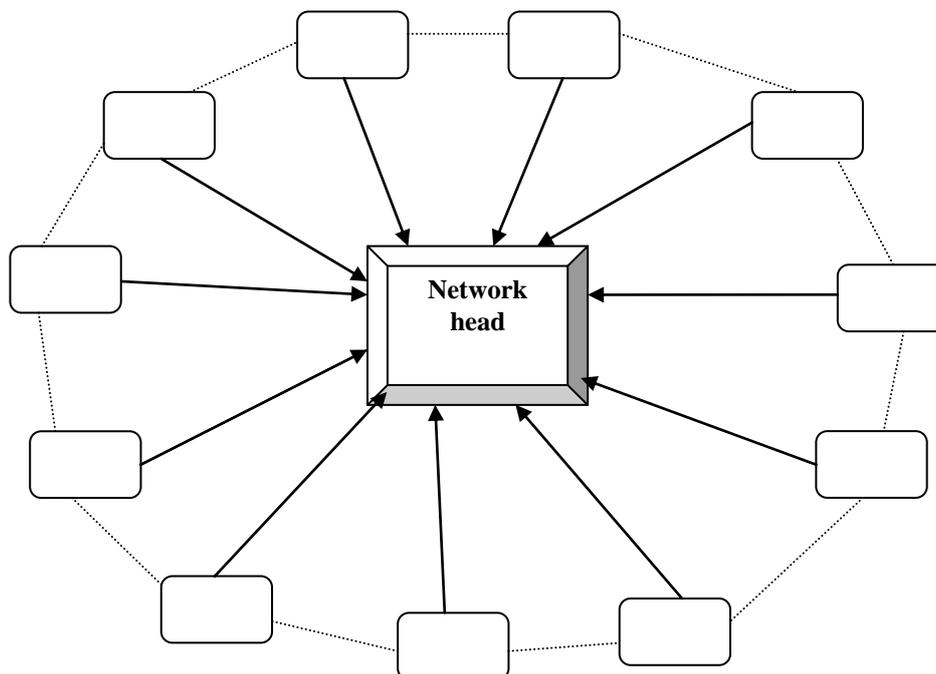


Figure 2. Graphical representation of the network organization

Joint resources (Tournier, 2005) are of various kinds: monetary (i.e. franchise dues), technological (i.e. a joint patent) and human. Interdependence designates the partner enterprises within one network. Centralization implies the relationship between the head or pilot of the network and its component entities. For instance, in car industry, the network head will be the constructor (Peugeot) and the network members will be the subcontractors. The network centralizes joint resources for its

running and ensures the final product or service for the consumers. Analyzing these details, for sure we can state that organization in network means a structured interaction assembly whose interdependency is marked by a strong collaboration.

Organization in network of enterprises has the advantage of being relatively supple, favors synergies between component entities and allows a specific development that would be impossible without sharing one part of resources. On the other hand, organization in networks may become expensive when the transaction costs are higher than the coordination costs. This is the case when for a car constructor is more expensive to work with a subcontractor that to produce itself a product requiring collaboration between its teams of design and assembling. When the component entities of one network have a divergent strategic vision, the network formation risks may be very high.

Networks can be formed between complementary enterprises or even between competitor enterprises. One thing must also be mentioned: trust is a key factor in stability and development of network enterprises (Dinca, 2012). Trust can always influence the networks in a radical way: with trust a network may obtain great performances, without trust, an effective network may disappear very fast.

3.2. Specific features of external networks

External network of enterprises is constituted outside enterprise, as a reunion of enterprises with common features. Therefore, the network has some features that differentiate it from other formal structure.

First, *the network has limits between it and its external action environment*. If the limits are more or less permeable, the network may be an open or closed system. Depending on its type, the resources choice is being done and these may be accessible or not for all network members. Thus network can be competitive or coopetitive. Being coopetitive means that competitor enterprises cooperate in order to get a higher value than getting it by themselves.

A network of enterprises can be easily compared with a running body. This is composed of cells, actually enterprises. At its turn, a body is a flexible, open, autonomous and interdependent system, working interactively. If a component element does not work properly, then the whole network will be affected. The respective element is autonomous, but interdependent concerning its contribution to the ensemble to which it belongs. In a situation like this, the network head or lider has an important role, since it has the suitable lever to ensure the good working of the network. As levers, the network head may use statement of the network shared values, their flexibility and responsabilization. Within a network, if a member having a rare skill is withdrawn, then the whole network bears the consequences.

Secondly, *a network of enterprises disposes of entrance and exits flows, as well as of a survival principle*. The network also has a skeleton and a psychological system represented actually by its culture. The network head is monitoring the network working in order to prevent blockages, which even may damage the network survival.

The difficulties that may occur in a network running are about resources circulation, relationships between two interdependent members or the integration in network of the new comers. Also problems with trust could interfere.

Thirdly, *a network brings together persons with various skills and interests, which make a permanent information exchange*. Most of the times, the exchange is informal. Within the complex relationships system of one network, each of its members has the capacity to evaluate, to learn, to formulate strategies, to negotiate and to make compromises with the other network members. The head of the network will state its legitimacy within it, based on the values, norms and rules of cooperation, trust, flexibility and responsabilization of the network members. The head will use influence, coordination and co-decision as action principles.

Fourthly, *the network is a cooperative structure characterized by variety, coordination and offer, being different of a classical, traditional structure characterized by order, control and demands*.

Within the network, every member decides whether to put at disposal or not its own resources to contribute to the reaching of the common goal. Resources are coordinated in all networks, exchanges being free between members. Also, within a network, all specific skills and knowledge, statuses and members relations are reunited, this being a real advantage for the network.

Fifthly, about dynamics, we can state that *movement or transformation within a network is much more intense than compared with a traditional structure*. The network is a structure that modifies in time in order to respond to certain finalities, which also could vary from one period to another. Different from a network, a traditional formal structure is deploying constant activities in order to reach constant or stable purposes. By their structure, networks are opposed to the classical hierarchy, this influencing especially their management and leadership. Different from a hierarchical vertical system, an open network is based on trust, free circulation of resources and favors capitalization of the members' key competences. As Parkhe (1998) said: "The higher the uncertainty is, the more necessary is the trust".

In order to answer to the market restrictions and to the turbulent environment, an enterprise may be organized vertically, cross-functional or in network. Certainly it is difficult to pass from one case to another, for instance the vertical management cannot be changed without approaching the cross-functional management. Changing the vertical management with the network management implies a different cultural approach, shared not only by the managers but by the other network members as well.

In a turbulent environment, cross-functional enterprises show their limits, especially if their objectives are changing. In such cases, the cooperative network shows its value, using its members which are motivated, autonomous, interdependent, competent and responsible. If their purpose is a great one, the wish to succeed requires strategic alliances. Enterprises or some of their departments are forced to work in a network to be able to give a fast answer to the sharp competition on the market. A network of skills, knowledge and information favors bigger production, facilitates access to new markets, and reduces the costs.

Within a traditional management system, based on order, conformity and individual performance, innovation and reactivity to the environment meet difficulties, since the persons in charge are busy more to create competitive strategies and less to work in network. It's well-known that nowadays, enterprises wishing to last must create a maximum value through innovation. Therefore, we can state that there is no innovation without one influent support and one cooperative networks. Innovation cannot be done if it is not based on a network, it won't lead to any viable product or service.

On the contrary, the more dynamic and heterogeneous is a network when supporting a launched idea, the bigger are chances for it to become real. A network is a good way to appeal rare skills and knowledge, situated anywhere in the world, outside the formal enterprise's perimeter. In order to reach this objective, it is necessary that the network pilot be able, skillful and dedicated.

After all these arguments, we could state that networks have a major contribution to reach the established objective. In a network, all members are involved in the decision making process, although the most influent of them have a predominant role in it. The network members are using their individual influence and expertise, obtained before the membership, for the network benefit. They are keeping or giving up to their previous relationships, depending of the network purpose or finality.

Within a network, there always is a so-called head or pilot enterprise that manages the relationships with the consumers market. The head enterprise directly negotiates with potential clients and collects orders from them. At the same time, the head enterprise works closely with the other enterprise from the network in order to plan operations and to allocate resources. Also, every member enterprise makes its activity. Therefore a network implies a common identity assumed by its members, as well as a common strategy in order to reach the common economic objective. The final "destination" is the one that is showing the way for the network members. Considering that

networks put in common resources or know-how, member enterprises owe property of the common goods and exerts as a common control on them, as well.

4. CONCLUSIONS

Networks are very much present in the economic environment, being generated by its turbulence. Internal and external network of enterprises are particular organization manners for enterprises. Each type of network has distinct features. Internal networks may be present when an enterprise disposes of several facilities of production, storage and distribution, famous franchises being organized in this way. External networks of enterprises, more often called "networks" by their features are strictly different from other formal structures. They share their resources in order to reach a common goal, but keep their property rights on the resources they put in common. They favor innovation and a better reactivity to the environment, only if their members cooperate based on trust. External networks always have common identity and strategy and are led by a head enterprise in order to reach the common objective.

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