Translated from Portuguese to English - www.onlinedoctranslator.com
c Journal O Saber.
ISSN: 2675-9128. Sao Paulo-SP.

Year IV, v.1, n.1, Jan./Jul. 2024. | submission: 03/04/2024 | accepted: 03/06/2024 | publication: 03/08/2024

PRODUCTION CHAIN: NETWORK VISION AND DECISION FACTORS AND NETWORK MANAGEMENT.

PRODUCTION CHAIN: NETWORK VISION AND NETWORK DECISION AND MANAGEMENT FACTORS.

Juvenal Laurinda da Silva Chadreque
Malaquias José Manhiça

SUMMARY

The increasingly globalized market has demanded greater flexibility from companies and the adoption of innovative instruments in Supply Chain Management, especially in the management of relationships between the actors involved. Customer-supplier relationships have been undergoing profound pattern changes, due to new trends imposed by global markets. The scope of customer-supplier relationships is expanding, giving rise to other more evolved theories, such as cooperation networks, in which suppliers' suppliers and customers' customers also participate. Companies, on the one hand, are implementing plans in their decision-making process to reduce human labor and replace it with machines, as the maintenance cost is cheap. On the other hand, companies do not argue before the human person, who has the right to work, to free choice of work, to fair and satisfactory working conditions and to protection against unemployment. The methodology adopted to develop this work is descriptive exploratory, which is based on existing works and documents on the subject. It is concluded that there is a need to create synergies. In the decision-making process, companies must look at all aspects inherent to the productivity chain and network management.
Keyword: Productive chain; Decision; Network Management.

ABSTRACT

The increasingly globalized market has demanded from companies a greater flexibility and the adoption of innovative instruments in Supply Chain Management, especially in the management of relationships between the actors involved. Customer-supplier relationships have undergone profound changes in pattern, due to new trends imposed by world markets. The scope of customer-supplier relationships is expanding, giving rise to other more advanced theories, such as cooperation networks, in which suppliers of suppliers and customers of customers also participate. On the one hand, companies are implementing plans to reduce human labor in their decision-making process and replace them with machines, as maintenance costs are cheap. On the other hand, companies do not argue before the human person, who has the right to work, free choice of work, fair and satisfactory working conditions, and protection against unemployment. The methodology adopted for the development of this work is the exploratory descriptive, which is based on works and documents that exist on the subject. We conclude that there is a need to create synergies. In the decision-making process, companies must look at all aspects inherent to the productivity chain and network management.
Keyword: Productive Chain; Decision; Network Management.

1. INTRODUCTION

In the globalized world, the market has demanded more flexibility from companies and the adoption of innovative instruments in the Management of the Production Chain, the decision-making processes in the management of relationships between the actors involved. The customer-supplier relationship has been experiencing changes in its pattern, due to new trends imposed by world markets.

Similarly, internal analysis and decision-making processes have been undergoing continuous mutation, in order to assimilate changes in competitiveness variables as quickly as possible as they occur. Several studies have attempted to incorporate the changes, suggesting more flexible performance monitoring and control systems. A model for decision-making must, in this case, foresee the implications that may occur in a production process with the constant need for coordination of different actors with different dynamics and, quite possibly, interests.

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.

Due to constant evolution, it is possible to notice the emergence of non-exhaustive models, capable of provide companies with information and tools in order to understand and promptly change their strategic positions and ensure competitiveness in the environment in which they operate.

The present work intends to present and discuss the productivity chain: network vision and decision-making factors and network management, which, given the changes in the global economic situation, creates a need to deepen the understanding of relationships and understanding the guiding assumptions, identifying a hierarchy of importance for consideration in a decision-making system. The approach is composed of three conceptual approaches, Simultaneous Networks, Classification of the Level of Dependence of Relationships and Density of the Business Network. An application context was formulated that could enable the analysis of the formation of strategic alliances and partnerships between suppliers and customers, the degree of depth and possible contributions to increasing the competitiveness of companies.

An exploratory, descriptive methodology was adopted, which is based on research and edited and unedited documents associated with the matter. It was concluded that there is a need to create synergies and automation to make the production chain more efficient in decision-making processes, it is necessary to consider the presence of the human being as a key to all processes that generate the production chain.

Bibliographical research was used to assess theories already developed by authors on production chains, decision-making and network management. The qualitative approach adopted aimed to obtain descriptive data that would allow understanding the network's interactive processes, through direct contact with employees of the companies involved.

The proposed model was applied to a practical example in two companies in the auto parts sector, highlighting their respective positioning in the network, relationships with suppliers and the automobile manufacturer. Semi-structured interviews were carried out. Each relationship was classified according to the criteria defined in the theoretical approaches and launched in the synthesis table created to provide a panoramic view of the network.

The analysis of the results obtained constituted sufficient material to evaluate the participation of each participant in the chain among the actors forming part of the network, their respective influence on the competitiveness of the companies involved and the relative importance as a point to consider in a decision-making system. with the breadth of the network.

two. PROBLEM

Nowadays, it is noted that human intervention in the life of companies tends to reduce through automation. With the pandemic associated with Covid-19, the high rate of contamination arose the need for social distancing and other preventive practices, companies were forced to redesign or reinvent new ways of ensuring continuity of day-to-day activities under penalty of paralysis of activities, which generated large investments with the aim of safeguarding human life.

Although the scenario provides a reduction in human intervention, it proves to be challenging in that, in addition to just bringing advantages, it raises the management challenges in managing the various electronic platforms, adopting and managing intra-organizational networks as well as connecting internal networks. with the rest of the environment in which companies operate.

In addition to bringing more management challenges, networks also bring the component of reducing the number of people in the labor market and the need for improvements in the skills and abilities of professionals in the course of their respective activities in order to respond to the demands associated with the use of technologies in a unique way and also in the connection of the different networks in which organizations may be connected.

That being said, the following research question arises:

Does the production chain impact the connection decision in network management?

two 3.METHODOLOGY

According to Gil (2008), indicating the methodology to be adopted in a research is important to the extent that, in addition to guiding the researcher's work, it promotes connectivity in the focus of the work without diverting the researcher's efforts.

The methodology adopted to develop this work is descriptive exploratory, which is based on existing works and documents on the subject. It is concluded that there is a need to create synergies. The adoption of a productivity model that is essential for both human beings and companies. At the

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.

decision-making process, it is necessary to take into account the presence of the human being as a key to all the processes that generate the production chain.

The proposed model was applied to a practical example in two companies, focusing on their positioning in the network, their relationships with suppliers, using the proposed model, each relationship was classified according to the criteria defined in the theoretical approaches, with the verified results being released in the synthesis table created to provide a panoramic view of the network.

4. LITERATURE REVIEW

For Castells (2000), a production chain is a set of consecutive stages, where several Production inputs undergo a certain transformation until the finished product can be a good or service. For the author, the production chain can be considered a succession of integrated operations, carried out by several units interconnected as a chain, from extraction and handling or even technical stages of production and distribution.

According to Agostinho (2018), the production chain is a chain of modifications of the material raw materials, with economic purposes, starting from the exploitation of raw materials from their respective natural habitat, until their return to nature, passing through production, consumption, recovery, treatment and disposal circuits in the form of waste.

Agostinho also advocates that the service and input supply sectors, machinery and equipment, as well as the production, processing, storage, distribution and wholesale marketing sectors for retailers or extension agents, support services (technical assistance, credit, and other foundations).

4.1. Stages of the production chain

For Castells (2000), in a production chain, each product has its particularities and each company involved performs its role in its own way with different stages, namely: extraction of raw material, transformation of raw material into product, distribution of the product Final.

Castells also maintains that, in the production stages, there may be intermediate stages such as quality control, storage and transport, which will guarantee the good condition of the materials.

4.1.1. Raw material extraction

According to Castells (2000), the ability to extract resources from the environment has always been a recurring concern in human history, the availability of raw materials is essential for production, being the initial stage of the production chain.

Castells maintains that the location of extractive industries is, on a large scale, close to large sources of extracted resources, such as soils rich in minerals or suitable for cultivation, the good performance of extraction activities, and the use of large machinery to guarantee production is required. in bulk in order to feed the entire chain and obtain a significant return.

4.1.2. Transformation of raw material into product

According to Andrade (2002), once the resources are extracted, it is necessary to refine them so that they become suitable for use, with the general rule being reserved for the metallurgical, steel and petrochemical industries who guarantee the purity of donated materials.

For Andrade, there are cases in which an industry is present in the extraction and elaboration of the material- - since the preparation process involves massive amounts of resources and energy, it is preferable that all additional costs be eliminated. The author also argues that with the advancement of technology, intermediate industries have become increasingly automated and flexible due to the increasing presence of non-human elements in the production process.

Castells (2000), states that equipment used in the manufacturing industry has a respective production chain, the production and availability of a product will depend on multiple chains of equipment involved.

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.

4.1.3 Product distribution

According to Andrade (2002), investments in logistics gain space in order to guarantee not only during the distribution stage, but also in the previous stages, all costs involved with production can be affected by inefficient transport that damages or loses your goods. .

For the author, depending on the business model, there may be only one distributor to handle the flow of production, in other cases, focusing on large companies, it will be necessary to have a set of distributors and resellers that guarantee the delivery of products nationally or International.

Andrade also defends the need to adapt the production chain in relation to demand. It is important that the flow of products is sufficient for prompt delivery, as excess production helps to devalue your products.

For Agranofe and McGuire (2001), in analyzes of the productive apparatus, the production chain scheme was used to denote the dependence of a production unit, on the one hand, on the supply of inputs, on the other hand, on the existence of a market capable of release your products. The authors also maintain that from the perspective of project analysis, the importance of a production unit was determined by its bilateral dependence “forward” and “backward”, thus generating greater opportunities and, by its degree of insertion measured by its coefficients of acquisition and sale of inputs provided by input-output matrices.

4.2. Production Chain and network management

Castells (2000) argues that the predominance of networks in the world calls into question traditional categories and concepts, including individualism and power relations. In the business context, a network is considered an alternative to the hierarchical model widely adopted by companies. Networks are multi-company arrangements for solving problems that cannot be addressed, or easily addressed, through a single company.

Castro (2001), maintains that the network can be understood as a set of relatively stable relationships, of a non-hierarchical and interdependent nature, which link a variety of actors who share common interests in relation to a policy, and who exchange resources to satisfy these shared interests, recognizing that cooperation is the best way to achieve common goals. The author defends the existence of two types: i) verticals, seen as a set of suppliers and distributors coordinated by a third company which, although removing the agents' autonomy, ensures strategic control of the production chain; ii) horizontal, in which competing companies establish alliances with each other, giving rise to an organizational format that is characterized by centralizing resources for the execution of certain common activities, maintaining the strategic autonomy of the agents.

For Castells (2000), being in a network is associated with social, political and economic existence as well as wealth and not being in a network is associated with old and new forms of exclusion, misery and violence. In the networked world, identity is influenced by new codes and life - as a result of a network of interactions of different natures - is a flow that runs at an unprecedented speed in a time-
- highly technological space. For better network management, it is essential to create a structure, establish the necessary resources and mechanisms to implement and sustain the network, and try to anticipate the inevitable difficulties that will arise in the planning and operationalization of the production chain.

Castro (2001) argues that the external insertion of the economy can be better understood by analyzing the articulation of national chains with international chains. Export industries inserted as suppliers in international chains, expand the market to activities upstream of the national chain and indicate possible weaknesses or low dynamism in company sectors. Importing industries point out deficiencies in dynamism or competitiveness in activities upstream the chain, signaling areas potentially critical in the event of worsening external restrictions on economic growth.

4.3.**Competitiveness**

Merli (1994), the modern customer, in general, tends to no longer accept the same product or service being offered repeatedly year after year, in a continuous search for versions that include higher quality, easier access and fairer prices. Likewise, logistics and process management are now seen as the main levers to meet and exceed such needs and, therefore,

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.

increase the competitiveness potential of corresponding operations.

Merli also argues that the 90s became known as the “Customer Decade”, where the What mattered was satisfying them better than the competition, as a way of acquiring competitive advantage and their consequent permanence in the market, companies have been looking for new systems to make their manufacturing more flexible (SFF), new stock approaches based on production planning methods material requirements (MRP) and Just in time (JIT) and a constant emphasis on quality.

For Castells (2000), to become competitive, companies need to operate according to a certain “profile” of productivity criteria, process quality and technology, with reduced stocks, in addition to trained and participative personnel. This process requires companies to search for integrations with the external environment, which includes suppliers and customers, creating an integrated way of planning and controlling the flow of goods, information and resources, from the acquisition of raw materials to the delivery of the product. to the final consumer.

4.4. **Supply chains and structural elements**

According to Porter (1999), competitive success depends on the creation and renewal of competitive advantages, in an effort aimed at differentiation and lower costs. Competitive advantage, therefore, originates from the set of activities that the company pursues in design, production, marketing, logistics and product support, configuring what it calls a value chain which, in turn, fits into a larger chain of activities, the value system, which encompasses suppliers, distributors and customers. Activities are related through links and, through the management of such links, opportunities open up to obtain competitive advantage.

According to Fusco et al (2004), the use of indicators that emphasize only the financial aspect when there are important objectives not directly linked to profit, due to collaboration in long-term alliances, inherent reduction of the business, obstruction of the entry of new competitors and others. For the authors, many companies seek to join forces in order to achieve advantages of scale, scope and speed, increase their competitiveness in both domestic and international markets, stimulate new business opportunities, innovate and commercialize new products and services, increase exports, form new bases of capital, create new businesses and reduce costs. However, in this context, we cannot fail to mention the physical network, where things actually happen.

Fusco et al (2004) also point out that, in order for there to be efficiency in the physical network, it is necessary to create an action strategy. Strategy can be defined as the process through which an organization differentiates itself from the competition. To do so, it is necessary to relate an organization to its environment, which encompasses both social and economic forces. The degree of competition in an organization depends on five basic forces: threats of entry, intensity of rivalry between competitors, substitute products, bargaining power of buyers and bargaining power of suppliers. However, we cannot fail to mention a sixth force: The State, which increasingly influences the strategic decisions of organizations. The consideration of structural and non-structural elements to guide the definition of the strategic role of companies in a supply network.

For Coutinho and Ferraz (1996), structural elements encompass decisions regarding capacity, installations, machines and production systems, as well as the use of external and internal resources to get operations up and running. Non-structural factors are linked to the market, that is, items such as complexity, business variability and uncertainty, linked to aspects of the economic context make up the so-called “business risk”. Such factors that guide competitiveness and business strategy are extremely important in determining the necessary dynamics that must be considered in the design of the logistics system and supply chain. The authors also advocate that managing the supply chain in a more holistic view, consists of continually monitoring and controlling the dynamics of the processes that result in the values offered to the market, whether the physical processes, of obtaining tangible products and concepts, or business processes, which enable the movements of operations in the competitive context. Perceived value is formed by the following variables: customer need for the product, product quality and after-sales support. It is, therefore, based on the perceived value that the customer's purchasing decision process is developed.

According to Porter (1991), many companies have realized that the decision-making process has been changing the course of management of institutions, which has stimulated the emergence of a new business model, the 'network company', characterized by strong coordination of activities between companies that,

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.

despite being independent, they act strategically aligned. In the new model, it is essential that everyone involved considers the importance of: i) Focus on core competencies; ii) Ability to participate simultaneously in more than one value creation system; iii) Ability to ensure organic connections with other economic agents participating in value creation systems; iv) Ability to work on processes with a high degree of internal integration; v) Internal and external flexibility in the way of doing things.

For Harland (1996), it is necessary to link the business strategy that concerns the typical objectives of each company, to the chain strategy that relates to other companies, seeking to meet the priorities of customers of final consumer goods, developing the corresponding skills necessary for this to occur. Such matters must be present in the different agents of the supply chain so that the service and delivery of the concept acquired by customers results in the success of operations carried out in the markets explored.

Harland further argues that to serve as a "bridge" between strategic variables and the so-called "factory floor", models have been developed to help define what exactly should be done by people, internally to production systems. From this perspective, a performance model with five objectives is suggested: quality, speed, reliability, flexibility and cost. The author argues that the purpose of a model of this type is to serve as a type of "filter", translating the needs or conditions to be achieved in the market into parameters, data and information that can be effectively understood within the companies' operational environment. With this understanding, the task of transforming such needs into reality becomes easier, through processes, physical or otherwise, to obtain products or services.

4.5. **Supply Chains and Business Networks**

For Slack et al (2002), economic and technological changes have transformed Supply Chain Management into one of the most important management concepts of the moment. Supply Chain Management (SCM) deals with the integration of the processes that form a given business, from the original suppliers to the end user, providing products, services and information that add value to the customer. These authors state that the Supply Chain is a network of organizations involved in different processes and activities, with the objective of producing value in the form of products and services in the hands of the final consumer.

According to Grandori and Soda (1995), SCM can be considered as an expanded perspective, integrated and updated traditional materials management. SCM covers the management of the entire production chain, assuming that companies must redefine their competitive and functional strategies as a means of strengthening their positions, as suppliers or as customers within the production chains in which they participate. Adopting a systemic approach to managing a supply chain opens up a range of opportunities for analysis and improvements.

For the authors, a Business Network can be considered as an organizational arrangement based on systematic links, often of a cooperative nature, between formally independent companies, which give rise to a particular form of relationships that allows for better coordination of economic activities. Company networks are linked to the management of strategic operations and the search for competitive positioning for the entire collective network, presupposing strong inter-organizational integration and massive cohesion of the companies' business processes. In networks, business focus and collective flexibility prevail, continually increasing company profitability through a narrow range of processes, product technology and core business.

Gnyawali and Madhavan, (2001), in the analysis of the structural positioning of actor relationships, density is a property of networks that allows the extent of interconnection between network actors to be measured. Thus, the greater the interconnection between participants, the denser the network will be and, as Since these relationships have a lower degree of interconnection, the network is considered diffuse.

Barbosa and Sacomano (2001), density inserted in the conceptual analysis of structural positioning, is understood as the intensity with which interconnections occur between network actors. The greater the intensity of the interconnection, the greater its density. An interconnection can be represented by long-term contracts, more complex coordination mechanisms, qualitatively different information, actors' trust and, also, arrangements for resolving problems in other aspects.

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.

4.6. Strategic Alliances

Troccoli and Soares (2003), a strategic alliance is a relationship established between two or more parties, which aims to share knowledge and other resources, which can result in benefits for everyone involved, an alliance is strategic, only acquiring this qualification when established with a view to maintaining or creating competitive advantage.

Thompson and Strickland (2004), strategic alliances are cooperation agreements between companies activities that go beyond normal company-to-company business, but which do not amount to mergers or partnerships. An alliance may involve joint research efforts, sharing of technology, joint use of production facilities, mutual marketing of products or concentration of efforts to manufacture components or assemble finished products.

For the authors, the formation of strategic alliances occurs when an expectation is identified of market expansion, acquisition of technological know-how, business opportunities and improvement of its competitive position, which would not be viable in any other situation.

For Gnyawali and Madhavan (2001), a theoretical way of defining strategic alliances is to examine the continuous scale between, on the one hand, transactions in a free market "market" and, on the other, the total internalization "hierarchy", based on the so-called theory of the transaction cost. This scale indicates that the greater the degree of integration, the greater the possibility of forming strategic alliances.

According to Williamson (1985), many companies that enjoy a second place, wishing to preserve their independence, have resorted to alliances instead of merging companies, in an attempt to close the competitive gap in relation to the leading company, representing an intermediate stage between the conventional buyer-supplier relationship format and strategic alliances. In the traditional relationship, which prevailed throughout the era of industrialization, each party seeks exclusively to serve its interests without worrying about the needs of the other party.

For Williamson, in partnerships, some agreements can already be seen that provide facilities for both actors and a relationship of greater reliability in a "win-win" partnership is beginning to develop, favorable conditions for both parties are negotiated, restricted to the field of food supplies. products and services. In this type of customer-supplier relationship, there is still no sharing of each organization's strategies. A certain amount of reserve remains regarding how each company plans to operate in the market.

According to Thompson and Strickland (2004), one of the fundamental requirements for the success of a strategic alliance or partnership is the continuous search for a relationship of trust. Trust is defined as the belief of one party that their needs will be met in the future by actions taken by the other party. Thus, trust is a "type of expectation that alleviates the fear that the exchange partner will act opportunistically". Opportunistic behavior quickly destroys reputation, and reputation has great economic value when establishing relationships, because it is what sustains trust.

For the authors, it is necessary to evaluate a relevant issue, which is the risk of dependence on the treatment of skills and processes in the long term. The source argues that one should choose a compatible partner, choose a partner whose products and markets complement each other, rather than competing with each other for the same customer base, learn as much as possible about the technology and management of the partner company, transferring good ideas and practices for one's own operation quickly, take care not to disclose competitively sensitive information to the partner, the alliance as temporary for 5 to 10 years, and continue the alliance only if it is beneficial.

4.7. The concurrent networks model

For the authors, the difference between the model and others lies in the fact that it is based on the global operations network, or the composite formed by all interconnected companies. The model seeks to define the component subnetworks in a structured way, considering three main basic dimensions that contain companies and the activities they carry out in relationships with the markets explored.[1].

In summary, the following tables present the networks, subnets and their respective activities. typical data, as well as the main actors:

1

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.

Table 1 - Networks and their activities

	Activities or Functions
Business Network	• Measure the needs dictated by a given market; • Discover needs and pass them on to business partners; • Develop and execute activities to facilitate • Determine who does what on the global network.
Value Network	• Develop alternatives to obtain conditions that allow meeting • Assess and measure the achievement of defined values.
Physical Network	• Enable the physical (or objective) fulfillment of needs • Develop alternatives to obtain the condition • Determine who does what within the global network; • Measure the achievement of defined values; • Physical flow of goods or service flow lines • Assess and measure flow variables; • Fulfill order program.

Source: Fusco et al, 2004

Table 2 - The networks and their participants

	Who participates (actors)
Business Network	Retail sales representative Wholesale financial intermediaries Companies with their commercial and "marketing" areas. market research companies, Infomediaries, information intermediaries. Insurers.
Value Network	Companies or actors within the physical network or not; Companies with their product design areas Companies or actors linked to obtaining a certain item of value.
Physical Network	Companies that produce physical or non-physical goods and services Companies that physically or non-physically transport goods and services Companies that distribute them to the market.

Source: Fusco et al, 2004

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.

Table 3 – Strategic responses as a function of the extent of the relationship.

RELATIONSHIP	**STRATEGIC RESPONSE**
Level 1 High dependence on the buyer High dependence on the supplier	• A common strategy, aligned with the buyer's end consumer. • "Partnership" culture, aligned with the end consumer. • Business Plan for partnership. • Structured communications system. • Integrated information. • Open negotiation. • Personal exchange. • Long term contract.
Level 2 Low dependence on the buyer High dependence on the supplier	• The seller develops a strategy aligned with the buyer's culture. • Seller's tendency to mirror the buyer's culture. • Regular feedback system from seller to buyer rather than two-way communications. • The seller's strategy includes some differentiation to build dependency. • Deadline of the contract. From the seller's point of view, it should be as large as possible.
Level 3 High dependence on the buyer Low dependence on the supplier	• Seller strategy aimed at obtaining synergy with other businesses. • Buyer strategy seeks exclusivity agreements and contingencies. • The seller recognizes the buyer's motivations, but does not necessarily change the buyer's culture. • Prices should reflect the imbalance of interests.
Level 4 Low buyer dependency Low supplier dependency	• Strategic business partnership is not appropriate.

Source: Gattorna and Walters, l996.

CONCLUSION

After carrying out the research, it was possible to verify that the production chain shows that every product or service passes through a production chain, and depending on the complexity of the product, the chain becomes extensive or restricted.

The production chain begins at the primary source of resources to which they will return, begins with the extraction of inputs, goes through transformation and finally distribution, where, at each stage, intermediate stages can be noted, which may be more intense or not depending on the complexity of the product. in cause.

In production chains, it is essential to establish strategic alliances in order to guarantee synergies and increase competitiveness. Companies that establish efficient strategic alliances are able to occupy better positions in the competitive market.

The production chain model and the decision-making processes can create synergies, showing that there is a need for balance between the relationships of the three networks that are operationalized simultaneously. Likewise, any decision-making process must consider the possible impacts on all dimensions of results and on all partners involved in the operations.

The case presented allows us to visualize the usefulness of the suggested approach, since the results reveal aspects not only of the simultaneous networks, but also the interrelationships necessary to achieve a greater balance in the relationships between the actors involved.

Any decision-making process in a network must consider the dimensions that define the relationships between the companies that are part of it. The development of joint operations requires, to be successful, that everyone involved shares the same perspective regarding what is I need to do to be competitive.

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.

REFERENCES

ARBIX, G.; ZILBOVICIUS, M.**The VW Modular Consortium: a new production model.**São Paulo, Scritta, 1997.

AGRANOFF, R.; McGUIRE, M. "Big questions in public network management research". In:**Journal of Public Administration Research and Theory,**n. 11, 2001.

BORZEL, T. (1998) "Organizing Babylon – On the different conceptions of policy networks". In:**Public Administration**, v.76, Summer.

BROOKS, W.T.**Selling to niche markets.**São Paulo: Atlas, 1993.

CHRISTOPHER, M.**Logistics and Supply Chain Management: Strategies for Reducing Costs and Improving Services.**São Paulo: Pioneira, 1997.

ACCOUNTANT, JC**Model to increase Industrial competitiveness.**São Paulo: Edgard Blücher, 1996.

CORREA, HL VW Resende: changes to the original project and a brief evaluation. In:**III SIMPOI - ANNALS,** FGVSP, 2000.

COUTINHO, L. and FERRAZ, J.C.**Study of Competitiveness in Brazilian Industry.**Campinas: Ed. Unicamp and Papirus Editora, 1996.

CASTELLS, M.**Internet and society network.**Universitat Oberta de Catalunya, 2000.

DIAS, CAV The factories of the future in the Brazilian automobile industry: industrial condominiums and the modular consortium. In:**Human Relations Magazine of the Higher School of Business Administration – ESAN.**São Paulo: n. 17, 1999.

FERRO, JR**Paraná Automotive – In consolidation.**Curitiba: Gráfica Capital, 2000.

FRANCISCHINI, PG; GURGEL, F. do A.**Management of materials and assets.**São Paulo: Thomson Pioneira, 2002.

FUSCO, JPA et al.**Operations Management: from strategic formulation to operational control.** São Paulo: Art and Science, 2003.

This is an article published in open access (OpenAccess) under the CreativeCommonsAttribution license, which allows use, distribution and reproduction in any medium, without restrictions as long as the original work is correctly cited.