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What generates competitiveness in organizations?

PIANA, Janaina

Universidade Federal de Santa Catarina

Campus Trindade – Centro Sócio-Econômico

Florianópolis – SC – Brazil

janainapiana@hotmail.com

(55) + (48) 8424 8602

ERDMANN, Rolf Hermann

Universidade Federal de Santa Catarina

Campus Trindade – Centro Sócio-Econômico

Florianopolis – SC – Brazil

erdmann@cse.ufsc.br

(55) + (48) 3721-7082

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1. Introduction

The competition global dimension has required that industrial companies start to manage manufacturing under a new perspective, a perspective that takes into account the relations among different organization areas. Therefore, it is necessary to observe which competitive priorities surround the areas and lead the organization to reach higher levels, thus leaving the constant pursuit of practices that generate competitive advantages to the organization.

Because of that, it was noted the need to search, in the administrative literature, for features or essential features to the generation of competitiveness in organizations as a way to prepare them in order to predict the environment nonlinearities.

The priorities or competitive advantages may be defined as a consistent set of performance characteristics the company will have got, and through them it will increase the organization competitiveness (CASTRO *et al* 2008).

That concept, according to Castro et al (2008), became important in the production after the work of Skinner (1969), which indicated common standards for measuring the manufacturing performance. Skinner (1969) has demonstrated the following characteristics: attending shorter cycles of product deliveries, having products with quality and reliability, complying with the delivery promise, being able to produce new products quickly, having flexibility to adjust changes in the volume and getting low costs.

After the works of Skinner, competitive priorities have adapted to the new environment and have become more numerous. There were, though, differences among some competitive advantages. Even some advantages, which appear to be different, have aspects on the basis of their concept, content and/or training process showing among them very similar characteristics just remodeled by the way authors conceive the

organization and understand its functioning.

Several authors have developed a series of studies in order to identify the competitive priorities that manufacturing must have to develop and sustain the long-term competitive advantage.

Several authors have developed series of studies in order to identify the competitive priorities that manufacturing must have to develop and sustain, in the long-term, a competitive advantage.

Slack (1997) defines five factors that contribute to the organizations competitive advantage: Reliability, which means to produce and deliver goods and/or services, timely and within promised deadline; communicate clearly the dates to the customer, delivery on time; cost, which means the capability to produce goods and services at lower costs than competitors can manage; flexibility, which means being able to meet the changes on products or services, delivery time, production volumes, enlargement or reduction from the variety of products or services, ability for changes when needed and with enough celerity; quality, which means doing the right things, deliver goods or services according to specifications or customer needs, manufacturing products that customers really want without making mistakes and with good quality ; speed, which means the time a client should wait since the order issuance until the effective product reception. According to the author, by achieving those five objectives, the organization manages levels of superiority in the market.

Davis (2001) also considers beyond cost, quality, flexibility, delivery and service as competitive priorities. Delivery is consistent with the speed factor of Slack (1997), because it is related to supply products quickly. Service refers to how products are delivered and monitored. The author also notes a priority tendency on offering products that are environmentally friendly and produced by the same characteristic of processes.

Stevenson (2001) considers flexibility as the ability of responding to the changes. Time: as the speed of processes improvements, speed of new products development and supply to the customer. The quality is related to the buyer prospects about how well the product or service will fulfill its purpose. Price is conceptualized by the author as the amount a customer must pay for the product or service. The author also considers product differentiation as a competitive priority. He refers to that priority as any special feature that makes a product or service become perceived by the buyer as more appropriate than the competitor's.

However, this article intends to cover aspects already consolidated, but also current about competition generation and analyzes the authors approach on the topic.

2. Methodology

Books, journals and annals have been consulted to identify the elements that generate organizational competitiveness. According to Godoy (1999), the documentary research is appropriate when we want to study long periods of time, seeking to identify one or more trends on the behavior of a phenomenon.

In total, 19 (nineteen) magazines and 3 (three) annals of academic origin have been analyzed or linked to research institutes, of international, national or regional circulation; besides 8 (eight) books, whose content deals specifically with Production Administration. Journals, annals and books that integrate the used material are listed in Chart 1.

In the study, three different stages have been performed to identify factors that generate competitiveness.

Books on Production Management have been selected, in the first stage. All books entitled as Production Management and renowned in academic circles have been

selected.

In that literature, it was tried to find elements or goals considered influential in the competitiveness generation. So, it was checked in the books indexes, titles referred to the subjects on competitive advantage. From that observation, it was possible to select 8 (eight) books that are described in Chart 1.

Then, the chapters related to the topic were read. That reading sought to extract words or terms indicating the organizations competitiveness generation. Next, it was created a board with the results found, and they were organized according to groups of authors who had common aspects as competitiveness generators.

After that first survey, the second stage looked for articles in academic journals and annals widely known in academic circles.

The search was conducted electronically in the Brazilian Portal of Scientific Information (Capes journals) indexed in *Scielo, Gales, Emerald, Wilson, Sage, Science Direct, Inform and Ebsco*. In order to find articles of interest, the search was orientated through the following keywords: competitiveness, efficiency, effectiveness, profitability, productivity and performance.

Books
BUFFA, Elwood Spencer. **Administração da produção.** Rio de Janeiro: Livros Técnicos e Científicos, 1972- 2 v.
CORRÊA, H.; CORRÊA, C. A. **Administração da produção e operações**. 2º. Ed. São Paulo: Atlas, 2006.
DAVIS, M.. **Fundamentos da administração da produção**. Porto Alegre: Bookman, 2001.
GAITHER, N.; FRAZIER, G. **Administração da produção e operações**. Trad. José Carlos Barbosa dos Santos. São Paulo, Pioneira Thomsom Learning, 2002.

REID, Dan R.; SANDERS Nada R. **Gestão de operações**. Rio de Janeiro: LTC, 2005. SLACK, N. et al. **Administração da produção**. São Paulo: Atlas, 1997. SHINGO, Shigeo. **O sistema toyota de produção do ponto de vista da engenharia de produção**. Porto Alegre: Artes Médicas, 1996. STEVENSON, W. J. **Administração das operações de produção**. 6 ed. Rio de Janeiro: LTC, 2001.
Journals
Revista Pesquisa e Desenvolvimento Engenharia de Produção; Química Nova; Revista de Administração Creupi – RACRE; São Paulo em Perspectiva; Revista de Administração Contemporânea – RAC; Produto e Produção; Revista Produção; Revista de Gestão Industrial; Revista Pesquisa e Desenvolvimento em Gestão de Produção; Revista Produção *on line*; Ciência e Agrotecnologia; Parcerias Estratégicas; Gestão & Produção; Revista Gestão da Produção; Revista Ciência da Informação; Revista Eletrônica de Gestão – REGES; Sistema & Gestão; Polímeros: Ciência e Tecnologia; Revista de Administração da Pontifica Universidade Católica de São Paulo.
Annals
Encontro Nacional de Engenharia de Produção – ENEGEP; Encontro da ANPAD - ENANPAD; Simpósio de Administração da Produção, Logística e Operações Internacionais - SIMPOI.

Chart 1: Books, journals and annals used in documentary analysis

Source: Primary

Through electronic researches, it was consulted every journal between 1994 and 2009, according to the criteria described above. From this procedure, it was found 103 (one hundred and three) articles in Portuguese and 296 (two hundred and ninety-six)

articles in English. So, the works in Portuguese language were only selected for content analysis. In that analysis, it was conducted a first reading of the articles. That reading was based just on articles abstracts, trying to verify whether the article would deal with matters related to competitive advantage. If in the article abstract was not possible to identify that issue, it was discarded.

From that, 50 articles that would address exactly the topic and point out competitiveness generators components were identified.

So, the third step tried to analyze documents to extract keywords that could influence the competitiveness generation and terms that affirm such assumption. Thus, the steps for documents analysis were:

a. Complete reading of the document;
b. Key words identification (factors) of competitiveness generators. In order to select the key words, it should be adopted some of the following guidelines:
    - increase the productivity;
    - improves the performance;
    - means competitive advantage;
    - increase efficiency/effectiveness.
c. Identification of the article's passage that justified the competitiveness generators for a given factor;
d. Creation of a spreadsheet to organize data, containing the keywords (factors), key words justification and reference. The justification was chosen through the text passages interpretation, and it was chosen the most representative to the competitiveness generation.
e. In total, 107 (one hundred and seven) words or competitiveness generating factors were found. Then, it started the analysis of those factors.

3. Analyses and results

Based on the results found, it was possible to group the factors according to similarities in the expressed messages of competitiveness and indicating the same logical concept. For example, if the researched item presents as competitiveness factor processes and products environmentally correct, in relation to the logic underlying those principles and the environmental responsibility; if they are aimed at factors such as state of the art technology and modern facilities, their competitiveness logic is in the technology. Thus, 14 (fourteen) factors groups were found: Flexibility, Cost, Reliability, Celerity, Customers relations, Quality, Technology, Integration, Environment Responsibility, Innovation, *Benchmarking*, Lean Production, Training and Information. Those groups along with their associated factors are shown in the chart 2.

Accordingly, a first feature or verified logic consists of texts trend presenting a concern with a new world scenario faced by the organizations. Within that context, it is vital the role of a resource always present in the companies, but now is gaining increasing prominence: **information**. Besides, that scenario is characterized by the disappearance of borders between competitors and enterprises, and the space is no longer a barrier to the entry of new competitors. That is, mainly, due to advances in the use of information and communication technologies. Those technologies have reduced, considerably, the transaction costs involved in the relation among economic agents.

In other words, there was a greater connection among people, processes and organizations, due to an improvement in the communication of the system as a whole. Thus, it was noticeable in the researched texts terms such as: informational environment, knowledge, information architecture, information technology, communications, internet, strategy, strategic orientation, strategic planning of human resources and knowledge management. The authors of those articles believe such

factors are essential in the quest for competitiveness by the organizations.

Factors	**Related Factors**
Information	Informational environment, knowledge, information architecture, information technology, communication, *internet*, strategy, strategy orientation, strategic planning of human resources and knowledge management.
Flexibility	Fast exchange of tools, equipments efficiency.
Integration	Relation with suppliers, internationalization, interorganizational networks, networks and collective efficiency.
Cost	Quality costs, cost/price, cost and price management.
Speed	Setup time, delivery and time.
Quality	Products quality, continuous improvement.
Innovation	Innovating activities, research and development, technological innovation, differentiation of products and new products.
Lean production	Efficient management, setup time, fast exchange of tools, equipments efficiency, continuous improvement, exhaustive programming, value definition, flow generation and chain of value.
Ecological responsibility	Cleaner production, sustainable development, environmental management, waste treatment efficiency, socio-environmental risks, cleaner technologies, products and processes ecologically correct.
Relation with the client	Customer satisfaction, consumer satisfaction, clients needs, social conduct, clients concume, market segmentation, market orientation, focus differentiation and customer service.

Training	Skills and working experience, life quality, ergonomics, management attitude, labor relations, internal structure, human capital, education and management attitude.
Technology	Adaptation to new technologies, technological innovation, information technology, modernization of machinery and methods, technological leadership, modernization and technological management.
Reliability	Relations with suppliers and equipments efficiency.
Benchmarking	Management through performance indicators, performance measurement and costs management.

Chart 2: Grouping

Source: Primary

It is also realized in the surveyed texts, a concern for **innovation** in the organizations. That concept is closely linked to the changes described above in the world scenario. In order to remain competitive in this new world order of constant changes, the organizations need to adopt innovative positions in their productive processes. Within that context, it came up terms such as: innovative activities, research and development, technological innovation, product differentiation and new products.

It is important to consider the concern about **ecological responsibility**. Once viewed only as an element of law enforcement, the environment concern in the productive processes has been gaining more attention in texts discussing ways to enhance competitiveness. The adoption of environmentally responsible measures may improve the performance of manufacturing processes and organizations productivity. In this sense, it appeared terms such as: cleaner production, sustainable development, environmental management, efficiency on waste treatment, socio-environmental risks,

cleaner technologies, products and processes ecologically correct.

Integration is based on organizing principles seeking to articulate relations with competitors companies, distributors and suppliers of raw materials and equipments, in order to distribute risks and increase the competitive capacity. Its factors reflect on: relations with suppliers, internationalization, interorganizational networks, networks and collective efficiency.

Other factors were based on principles that seek to keep the organization in accordance with current levels of technology, with customers' expectations and the most advanced techniques of management and production. Those are linked to the **technology** item. Among factors characterizing those principles, it can be mentioned: adaptation to new technologies, technological innovation, information technology, modernization of machinery and methods, technological leadership, modernization and technological management.

Quality supports principles seeking to meet the customers' expectations regarding products, services and technical needs of the organization: error reduction and related costs. Its indicators show the way by which the organization obtains standard quality in products, processes and also meets its clients´ expectations through the adoption of controlling programs, errors reduction and flaws in processes and products. It includes products quality, continuous improvement and perfectioning. It is linked to factors such as: products quality, continuous improvement and continuous perfectioning.

Training includes the following factors: skills and workers experience, life quality, ergonomics, management attitude, labor relationships, internal structure, human capital, education and management attitude. Those principles seek to demonstrate an organization's goals will be achieved successfully if they are focused on the

enhancement of human capital through training, social integration of individuals and motivation. According to Lima and Urbina (2002), there is a consensus on the organization: if it does not provide conditions to satisfy its members´ needs, it will face serious problems of performance and efficiency.

The principles of **speed** are based on fast working. That is to say, making time interval between the beginning of the manufacturing process and client's delivery shorter than the offered by competitors. It means to reduce the lead time of the company, in other words, reduce the flow of information, materials and operations (Slack, 1997). The factors linked to that concept are: setup time, delivery and time.

Organizational principles attempting to know and satisfy customers´ needs and expectations, as well as loyal **customers' relations**. Its factors reveal the importance given for customers´ relations and the company's concern to meet their expectations and needs. They are: customer satisfaction, consumer satisfaction, clients' needs, social behavior, clients' consumption, market segmentation, market orientation, focus differentiation, service and care.

Factors related to the actions taken to modify procedures or the product by looking for the reduction of its final price, through products manufacturing with few details in the completion and greater functionality, simpler and standardized forms and made with cheaper materials, thus demonstrating the principles of **cost**. It is included in that logic: quality costs, cost / price, cost management and price.

Factors linked to **reliability** are related to the relations with suppliers and equipments efficiency. They follow the principles about keeping the promise on delivery deadline, have a plan to prevent surprises; control the occupation of the resources and monitor the production activities.

Several factors can be considered as more related to the organization **lean**

production. They are elements related, for example, to the adoption of practices for waste reduction, efficient use of resources, continuous improvement and value-added to the production stages. It may be considered in that group, the following factors: efficient management, setup time, rapid tools swap, equipments efficiency, continuous improvement, hard programming, value definition, flow generation and value chain.

Another group of factors are: management by performance indicators and performance measurement. Those principles are based on concepts of operations comparison from the company with those of other companies, that is, the **benchmarking** practice

As for the constant and sudden changes in the organizational scenario, flexibility seems to be the answer to that. **Flexibility** is also considered as a group of factors, it aims to develop the capacity of a rapid response from the organization to environmental changes. Its factors are: rapid tools swap and equipments efficiency.

Therefore, the literature review suggests aspects that deserve attention when it comes to competitiveness. Those aspects could be grouped into ideas: Flexibility, Lean Production, Benchmarking, Cost, Training, Customers Relations, Quality, Technology, Integration, Reliability, Speed, Ecological Responsibility, Innovation and Information.

We realize many of the factors included in a particular term could be also included in other groups. However, due to the need of establishing standards to facilitate the analysis, it was chosen the groups detailed above.

3.1 Practices vs. Results

Through those established patterns or profiles, it was possible to see a large concentration of competitive factors that were differentiated in two major groups. From this observation, it can be made a new grouping based on concepts of practices and

results as it is shown in Chart 3. The first ones represent patterns or profiles of organizational practices that reflect in the results.

PRACTICES	RESULTS
Lean Production	**Flexibility**
Information	**Cost**
Technology	**Speed**
Ecological Responsibility	**Quality**
Training	**Reliability**
Relation with clients	**Innovation** (resulting from practices)
Integration (between the company and the environment it operates)	
Benchmarking	

Chart 3: Practices and Results

Source: Primary

Both groups, results and practices, confer performance to the organization. The first ones (results) are very important features, which according to Slack (1997) are vital for the organization, in order to be successful in the long run and, therefore, highly desirable.

Now, practices are attitudes, efforts or skills the organization must have and check the results characteristics.

Results characteristics are capable of providing competitiveness, in a direct form, to the organization: costs (low), flexibility (product and process, if high), reliability (of the product in use, delivery, if high), speed (of delivery, service provision, if high), quality (product and process, if high) and innovation (products and process, if constant

and arouse interest).

The way practices are applied it will configure the adopted efforts, which will be able to compose the results characteristics. That is to say, they are means to achieve results (flexibility, innovation, quality, reliability, speed, and cost).

Training: training practice leads to quality improvement (both process and product). It is through skill developed by training that enables the production of goods and services from high quality. This includes avoiding mistakes, which leads to lower costs. Also, training practices include works designing that encourage the staff to improve their functions, in order to create innovations in processes that eventually can generate greater flexibility and production quality.

Training practices also influence speed. Once training allows generating knowledge on activities sequence and autonomy over an action to be decided, it will be a consequent capability of quick response to potential problems in the production process, thus resulting in greater speed on working response.

Training may also affect workers ability to change the nature of their activities. Flexibility, therefore, may be a result from training practices. For example, people in a car factory, who were trained in various tasks (versatility) and use the rotation of tasks in their working group, are inherently flexible resources. Their flexibility facilitates them to make a variety of models and also turns them more adaptable, when new models are introduced (SLACK, 1997).

Every training practice described above will have an effect on productivity and, therefore, on final product costs.

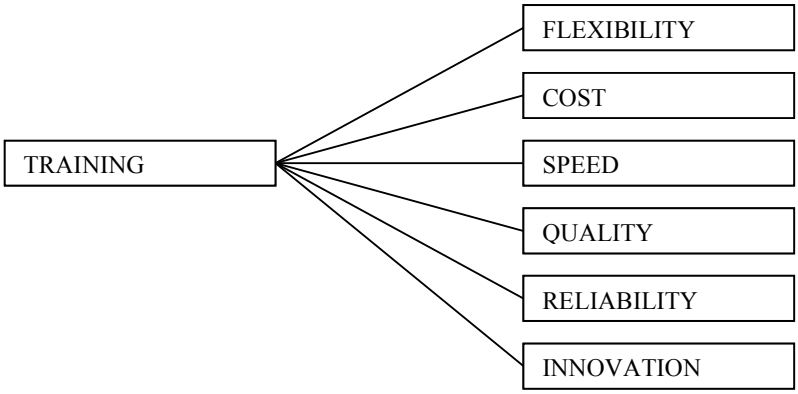

FIGURE 1: Training vs. Results

Source: Primary

Integration: Regarding quality, the benefits of integration practices derive from the productive operation proximity with its customers and suppliers. Through integration, it is possible to realize easily the source of problems, and thus, the solution can be concentrated at the most appropriate point of the network.

In relation to delivery speed, integrated practices may denote a closer programming synchronization, which speeds the passage of information along the network (Slack, 1997). Moreover, being close to suppliers and customers may help the forecasts. That reduces the risk of producing goods or services for which the demand will never exist.

As for reliability, better communications over an integrated network can make better predictions, and they can also result in more realistic delivery promises. Even when significant obstacles denote deliveries can not be made, there will be a better possibility for the company to foresee the problem, so the customer may be notified in the shortest time.

In relation to new products flexibility, integration practices provide the potential

to drive technological developments (innovation). Integration provides the potential to develop products and services that meet more specifically and precisely the customers' needs.

Finally, integrated practices may provide the potential for sharing some costs, such as research, development and logistics.

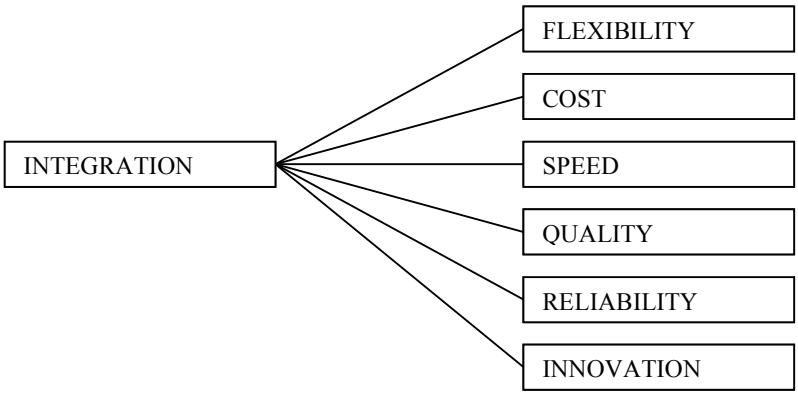

FIGURE 2: Integration vs. Results

Source: Primary

Technology: It represents knowledge embedded in machines and present in people. Therefore, advanced technologies may lead to greater innovation on products, processes, and then, quality in all senses. Also, the use of equipments with multifunctional technologies lead to greater flexibility, since through the same equipment, it is possible to produce different families of products.

In relation to the cost, by using advanced technologies is possible to reduce the number of operations performed and also the time for preparing the machines, which guarantees production saving.

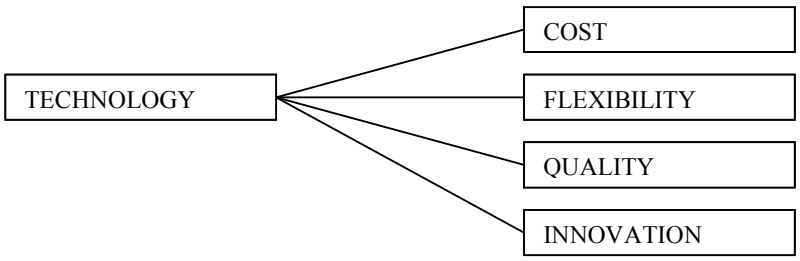

FIGURE 3: Technology vs. Results

Source: Primary

Relation with the customer: Customers´ relations practices reflect in all the results, because, it is through the client's needs information production is shaped.

So, there will be flexibility in both the development of new products (innovation) and the production based on information from the customers' wishes, since he dictates what to produce and how much of it.

Besides, making good quality products is crucial in order to create a relation of loyalty with the customer, because, if the product has got a positive cost-benefit, in the vision of the consumer, it will meet his needs and become a quality product.

Also, it is through pieces of information received from customers´ relations practices that results are developed primarily. For example, if consumers value low prices, the production will happen through results intended to focus on their low cost performance. If consumers insist on products or services with no errors, the production will focus on their quality results. Emphasis on quick delivery will make the quick criterion important to the production, while emphasis on delivery reliability will make the reliability criterion important. If a range of products or services is required, the production will need to be flexible enough to provide the required variety without

excessive cost.

Therefore, customers´ relations practices will influence the search for specific characteristics of the result.

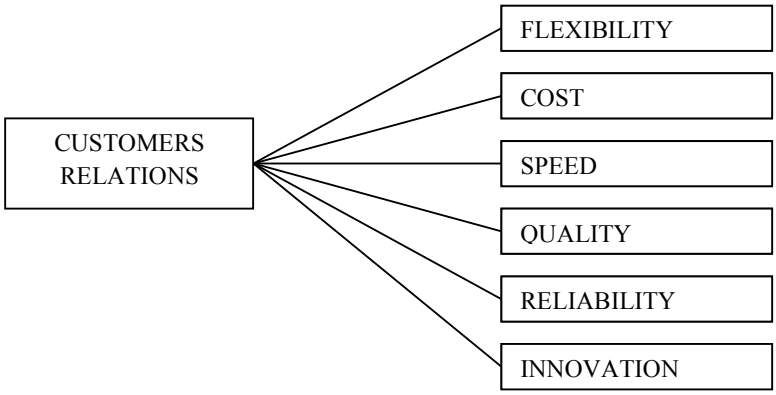

FIGURE 4: Customers´relations vs. Results

Source: Primary

Ecological Responsibility: As for the ecological responsibility, those are the practices making companies adopt new methods that reduce total **costs** of a product or increase its value (Diaz; Pires, 2005). Practices of environmental responsibility generate results like: reduction from the amount of materials and energy used, thus making the processes more economical in a sustainable manner, in other words, at lower cost, pollution prevention, generating less waste, effluents and emissions, which also leads to the costs reduction for waste disposal.

Another example related to costs reduction is the use of such practices during the creation stage of a product design. That is because, in a typical product, 70% of development costs are determined in the design phase. Through the inclusion of environmental considerations during the design phase, efficiency might be increased,

reduced costs of materials and energy, reduced waste and, therefore, costs. Similarly, industrial waste, whether solid, liquid or gaseous can be reused in the co-generation of energy through recycling and eliminating costs. (Lima, Urbina, 2002). Still, those practices can save costs related to the implementation of equipments for the treatment of pollutants.

Thus, it is suggested the adoption of practices environmentally responsible may improve the manufacturing processes performance and organizations productivity, through the innovation of processes and products. The constant search for environmental impacts reduction might also lead to the creation of a culture that seeks continuous processes innovation or quality (Diaz; Pires, 2005).

Then, that practice helps organizations to increase their productivity through the reorganization and improvement of production processes, lifecycle analysis, products design, choice and more efficient use of resources (raw materials, energy, etc.). The productivity increase through the application of those concepts is also possible because the pollution is often an economic waste that somehow hides problems of planning, design, misuse of resources, etc. (Lima; Urbina, 2002).

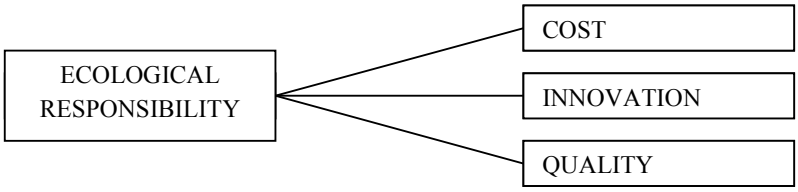

FIGURE 5: Ecological Responsibility vs. Results

Source: Primary

Lean Production: Practices of lean production are directly linked to the principles of quality, flexibility, cost, speed, reliability and innovation. The basis for achieving those results is in the following practices: hard production, continuous flow,

waste elimination, source quality and the quest for continuous improvements (Shingo, 1996).

Those practices need high quality in order to achieve their goals, because production disturbances due to quality errors will reduce the flow of materials, internal reliability of supplies, and also generate the appearance of stocks, in case errors reduce the production rate at some point of the operation.

Speed, in terms of rapid flow from materials, is essential in order to meet directly customers´ demand with the production, rather than through stocks.

Reliability is a prerequisite for a rapid flow. On the other hand, it is very difficult to achieve rapid flow if the supply of components or equipment is not reliable.

Flexibility is important to produce in small allotments, reaching rapid flow and short lead times (Slack, 1997).

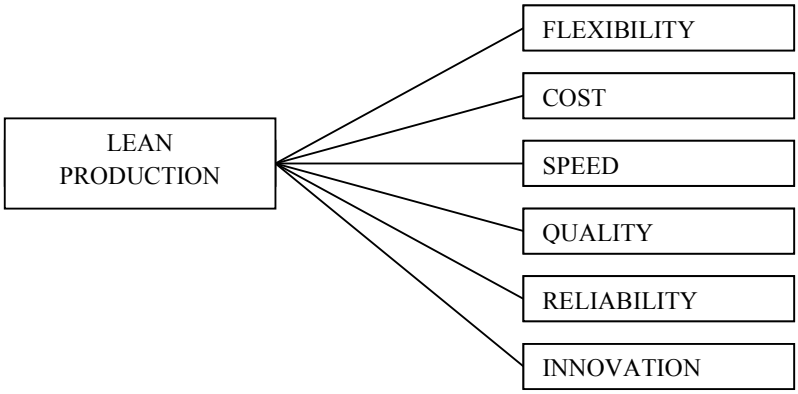

FIGURE 6: Lean Production vs. Results

Source: Primary

Benchmarking: With regard to the benchmarking practices, it is possible to consider they affect, also, all the results (flexibility, cost, quality, innovation, reliability and speed), as it worries about the research for new ideas and practices that can be

copied or adapted and, therefore, they may affect any result, depending on what the company wants.

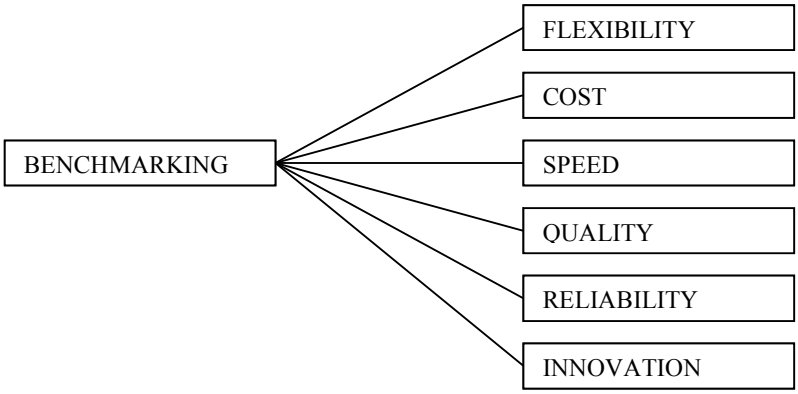

FIGURE 7: *Benchmarking* vs. Results

Source: Primary

Information: It also consists of practices that affect all the results. With pieces of information provided in order to be used, it is possible to manage stocks, set the pace and activities programming, foresee the demand, process orders in the right time and manage the quality. Those pieces of information enable the achievement of all the results.

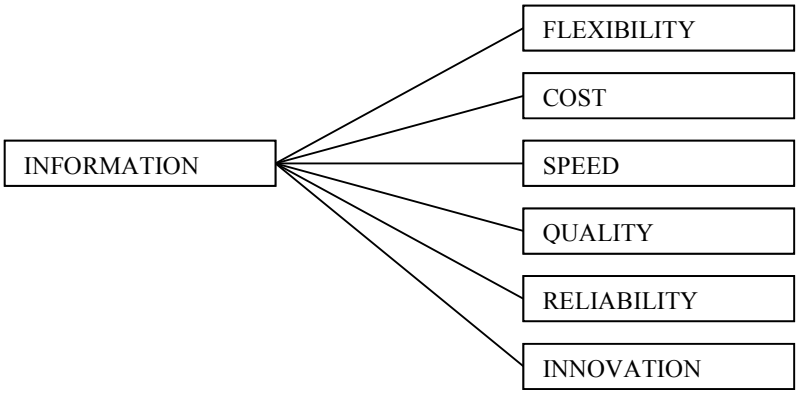

FIGURE 8: Information vs. Results

Source: Primary

The following is the summary chart of analysis from practices and results.

	Quality	**Speed**	**Reliability**	**Flexibility**	**Cost**	**Innovation**
Training	**x**	**x**	**x**	**x**	**x**	**x**
Ecological Responsibility	**x**				**x**	**x**
Information	**x**	**x**	**x**	**x**	**x**	**x**
Integration	**x**	**x**	**x**	**x**	**x**	**x**
Relation with Clients	**x**	**x**	**x**	**x**	**x**	**x**
Technology	**x**			**x**	**x**	**x**
Lean Production	**x**	**x**	**x**	**x**	**x**	**x**
Benchmarking	**x**	**x**	**x**	**x**	**x**	**x**

Chart 4: Resume – Practices vs. Results

Source: Primary

In addition to those interrelations of practices and outcomes, it is possible to note there are relations between practices and practices, results and results. For example, it is realized flexibility as influential on **reliability**, because one improves through the other, due to the fact flexibility helps to deal with unexpected interruptions in the supply. However, that analysis will not be developed due to the time constraints for the execution of this work.

The analysis of those established patterns or profiles allowed concluding, despite the possibility of relations in those ways of practices and results; there are other forms of relations. So, it is possible to realize there are endless possibilities of interactions among factors, and that scenario may be considered as complex. As it is impossible to

cover all the connections, it was tried to analyze the relations through one optic of practices and results, in the quest for reducing the complexity of those interrelations.

According to Luhmann (1996), it takes place abstraction and reduction in the complexity of the environment when there is selection of possibilities, denying others, but without excluding them permanently and remaining as opportunities.

4. Final Considerations

The overall objective of this work has been to identify factors, characteristics or essential aspects to the generation of competitive organizations.

In order to do that, it has been searched in books of Production Administration concepts that could submit to competitiveness. In that stage, eleven (11) factors expressing influence on competitiveness increase have been found. They are: reliability, cost, flexibility, quality, speed/delivery, customer service, products and processes environmentally correct, time, price, product differentiation and innovation.

In the next stage, it was collected electronic articles available in the Brazilian Portal of Scientific Information (Capes), between 1994 and 2009. From those articles, 107 (one hundred and seven) factors generating competitiveness were extracted, with their respective expressions associating them as influences on organizations performance, thereby meeting the first specific goal.

Due to the range of factors found, and taking into consideration the second specific objective, they were grouped according to the same logic of concept. The classification occurred in 14 (fourteen) groups: training, environmental responsibility, lean production, benchmarking, relation with customers, technology, information, integration, reliability, cost, innovation, flexibility, speed and quality.

Responding to the third specific objective, each factor group was described in

order to express the characteristics that granted competitiveness to the organizations.

From the factors description, it was realized those groups were divided in two blocks that were interrelated between practices and results. Practices (training, environmental responsibility, lean production, benchmarking, relation with customers, technology, information and integration) are defined in the attitudes or efforts the organization needs to have, in order to reach characteristics that grant results (reliability, cost, innovation, flexibility, speed and quality).

So, it was verified technological practices reflected in results like flexibility, quality, cost and innovation. Similarly, practices on environmental responsibility interfered in costs decrease, quality and innovation increase. And finally, integration, training, information, relation with customers, lean manufacturing and benchmarking showed to be influenced in all the results.

Due to the research proposal and its execution time, it was not possible to develop further other relations, such as the ones between practices factors and results factors.

However, it is expected the results found may serve as a starting point for deepening in other researches and studies in the area. Finally, it is believed with the theoretical studies deepening, in order to feed back the process of scientific development, managers can be provided by new administration ways on the current society dynamics.

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