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# <u>Decision-Making</u> Centralization and Segmentation in Administrative Structures

Decision-Making Centralization and Segmentation in Administrative Structures

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# INTRODUCTION

This study's principal objectives are to analyze, understand and discuss how a decision-making system functions inside

different administrative structures, primarily as concerns the quality, types, conditions and results of positions taken in the private and public sectors, small or large companies, in trade goods, company services or non-government organizations.

# Politics and technical aspects

Beyond developing a view of decision-making and its framework, this study presents an overview of political and technical aspects in part as an influence of an organization's culture.

The other objective is the participation and power-sharing at the top levels of an organization or administrative structure to link up with the current controversial debates involving employee or citizen participation in choosing the right direction. We feel the main findings are highly relevant to these topics and could help organizations or sectors to formulate policies and initiate the necessary preparations to make it work.

# Situation factors

The decision-making process has several components, but a highly important one is that of the situation factor, for example, short term decision-making, restrictions, environment uncertainty, personal experience, education and maturity.

These factors have direct influence on the quality of decision-making and they are responsible for insuring position.

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We need to understand the direct impact of each components and the influence in the workplace, and how can the relationship of all theses variables influence decision-making process to make it easier and more proper.

The analysis of administrative synergy involving all the psychological, technical and environment aspect, is the main purpose of this paper.

Exploring the various factors of organizational development and identifying situations that are relevant to the ever more difficult problem of helping structures to remain effective in an increasingly turbulent environment are also pertinent.

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# 1 Presentation and definitions

First, before discussing the efficiency and insurance of decision-making inside a segmented or centralized structure, we need to understand several interference factors as well as the concepts of decision, risk, uncertainty, dynamics, ethical and moral aspects.

# 1.1 Decision

Decision: the act of deciding or settling a dispute or question, the act of making up one's mind, a judgment or conclusion, determination, firmness of mind.

Decision is taking a position with the goal to solve one question, it's choosing one direction to follow.

Decisions process imply choices among alternatives. They form an important part of our experiences. In some cases we make automatically or in a programmed , manner.

However, when someone doesn't engage in decision-making, it's a definition of position. Not choosing is third option, that was not available before, this is made possible, and can cause different results.

Inside the concept of decision-making the idea of change is implied. This suggests altering some aspect or behavior considered normal to the situation.

This change can involve people and processes, raising the importance of attitudes and personal fulfillment in the decision-making process.

The insurance of decision-making is connected with the decision-makers' personal psychological aspects, their technical knowledge, the quantity and quality of available information and time constraints.

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#### 1.2 Risk

The concept of risk must entail a degree of freedom in order to take risk one's own life and limb. Risk is an important component of all decision-making and involve costs, benefits, probabilities, the notion of acceptability and above all, the question of choice.

Calculating the frequency of past occurrence and the probability of future recurrence, of a particular event, requires an application of the scientific methods associated with technological development.

However, when the control of risks is the responsibility of the government, people's behavior must be limited in the

interest of others, which requires sanctions that only the State can process.

The idea of acceptability of risks opens the controversy debate because it involves the weight of opinions and political events. This reluctance to alter the criteria of acceptability of risk in the face of economic and social repercussions can be a main problem for effectiveness, and indeed, the survival of administrative structures and democracy.

## 1.3 Environmental conditions and Uncertainty

Environmental conditions are variables economics, politics, socials and market aspects, for instance, that influence in decision-making process.

These environmental conditions change all time, such as frequent deadlines or time pressure. These changes create the uncertainty, complexity and turbulence.

When we work under normal environmental conditions, we tend to use one particular decision style most frequently; however, when the conditions change, we shift out of the style normally used.

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Various studies have investigated the relationship between environmental turbulence and organizational structure. Usually turbulence is defined in terms of uncertainty, unpredictability or complexity.

Most of the evidence points in the direction of systems tending to adjust and differentiate their internal organizations to the environmental conditions and demands.

Uncertainty is associated with the unknown, and future events without a predictable end. This obscures the way we need to anticipate actions in order to solve future problems proactively.

#### 1.4 Information

Some people need to be certain of all everything, while others see the world in shades of probabilities and possibilities rather than hard facts.

There are many ways in which people's decision-making styles differ. Some like to take risks, while others go to great lengths to avoid risk. Some like to go it alone, while others seem to want to make decisions only in groups. Some people rely heavily on intuition, while others proceed only on the basis of detailed analysis.

One of the principal aspects of decision-making, which appears to provide the way to describe the key differences in types of decisions, is information.

Naturally, there exists a tendency to limit their information use that contributes most rapidly to the understanding of a problem.

But, the excess of information and number of steps for this information to pass through until the end result may not be practical for the time it takes to consider it all.

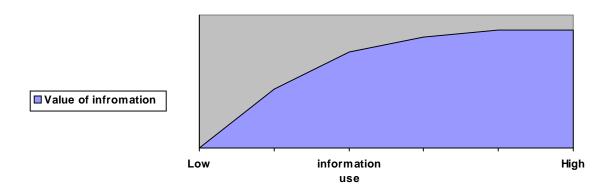
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Inside the behavior of information flow analysis, we should consider these important aspects:

- The high cost of information management;
- The quality of information;
- The reliability of information;
- The amount of useless information;
- How it is dispersed;

Some systems are at these extremes and do not have success in making the best decisions. Instead, we go on using information until we are sure that it could really give new value to the problem. The figure below shows the behavior of information use.

# Quantities of Information x Useful Information



## 1.5 Responsibility

One feature with many matrix organizations is the great disparity in their effectiveness. Most have been failures, but there are cases of success.

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The difference between successful structures and others is the building of an organization capable of coordinating actions across units. Almost always the difference is the people who work in teams, exert influence without authority, and feel comfortable in a variety of settings.

These structures use information systems and planning processes to solve conflicts. Lateral organization is a means to gain flexibility and thus competitive advantages in an uncertain world.

The major priority of organizational capability is to increase investment in intangible assets, invest in R&D, education, training, management development, processing and software. This results in knowledge products of the brain, where the competitive advantage will be man-made (Thrurow, 1992).

Managers at several levels were asked to describe the skill requirements of their own job compared with the skill requirements of another job, using the following attributes:

- 1. Knowledge of technical skills
- 2. Close contact with people
- 3. Knowledge of human nature
- 4. Imagination
- 5. Self-confidence
- 6. Responsibility

- 7. Decisiveness
- 8. Tact
- 9. Adaptability
  - 10. Forcefulness
- 11. Intelligence
  - 12. Initiative

# 1.6 Participation

What are the respective meanings of these terms: decision, risk, time constraint, turbulence, uncertainty and other concepts in decision-making? Why and how does it happen? How might we configure the structure of the choice process for decision-making?

A widely accepted explanation for sound decision-making, has been to attribute specific positive behavioral consequences to what is called participation.

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In large work group, where a manager has under his span of control larger number of immediate subordinates, participation is important aspect in decision-making process.

However, what seems to happen is the leaders who assume formal responsibility for relatively large numbers of managers? There is necessary to has a good and easy communicate process.

A leadership issue is made decision-making process clear, trustworthy and proper, sharing tasks by many, delegating authority and charging responsibilities.

Systems that allow subordinates to participate in the decisions-making process achieve better results than those that keep subordinates at arm's length.

The widely accepted explanation is that participation increases satisfaction, which in turn improves people's willingness to do as they are told. The consequence is the

increase of responsibility, which is turn increases output and effectiveness.

PARTICIPATION	SATISFACTION	LESS	RESISTENCE	EFFECTIVENESS
		MORE	COMPLIANCE	PRODUCTIVITY

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#### 1.7 Decision-Making in Brazil

The decision-making process in Brazil has the same structure and components: information, choice and risk. It is subject to the same uncertainty variables and environmental turbulence.

However, we can consider two characteristics of Brazil: first the recent democracy history and second the inflationary environment that the country experimented for twenty years.

In military republic, from 1964 until 1989, the country was under of increased authoritarianism and further centralized political power. The military regime dominated society almost totally in this time.

Because this situation, Brazilian's society couldn't exercise the activity of freedom of choice in totally, one of important risk component and principal requirements of the decision-making process.

At this time, besides there being little freedom of choice, the society was living under strict State's rules and regulation. The State was deciding how, where, why and when the things were happening.

This period interfered with cultural growth, producing reflexes in several areas of the economy. It was usually a strong tendency to control everything and everyone.

After the military regime, the country entered in an inflationary process that punished the nation for 20 years, where decision-making processes were driven to short and extremely short terms views.

In an inflationary economy the people have particular reactions, they looking for immediate solutions in stead of long term planing. The inflation process produces some inversions of values, as well as saving and consumption, which have different means in stable economies.

This reality alter the decision-making behavior, the society look for short terms results, afraid of uncertainty variables.

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# 2 Decision-Making in Administrative Structures

#### 2.1 Decision-Making in Local Government and Public Service

One of the main priorities of organizational structure is to improve the quality of product and service. How can public companies do this through the decision-making process?

In the previous discussions about the quality of decision-making we analyzed the individualistic framework. In the judged perspective, each person reacts differently when making decisions.

Each participant needs to access the best available knowledge of the causes, its probability of occurrence and consequences, probable costs and benefits of the given risk in comparison to those arising from other possible actions, being free to choose whether he will expose himself to the risk or not.

In the public interest, the alternative is based primarily on the needs of society, where the assessment of risk need to be handled more objectively.

Attempts have been to create a precise mathematical science of risks, include assessment cost and benefits, but this field is far from straight forward. Which groups of people at risk will one include? How many of the possible causes of risk should be reckoned with?

Because of this confluence of factors, we can analyze the problem in a detached pratical manner. Usually the public service does not have a good quality of service. In comparison with private sector we find low efficiency, little technical knowledge and low effectiveness.

Two aspects can contribute to public service and local government to get better performance: stay close the citizen and improve the decision-making process.

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For example, the United States, which is noted for a rich variety of local institutions, presents also a varied picture of NGO-Non Government Organizations. The spectrum runs inside the "little city halls" and "community boards". The situation would certainly be incomplete without the federally initiated decentralization schemes.

The representative community councils created by society to discussed the now-familiar goal, the trend to make the maximum feasible participation of residents of the area and members of the group served.

The democratic debated required the establishment of special local planning councils with broad community participation as a condition for federal financing of the programs.

One of the important explanations of behavior or attitudes lies in the different cultures in different countries. Culture refers to deep-set characteristics of personality, habit and value patterns, tradition, and the social heritage of a community transmitted from generation to generation, becoming the fundamental factor to proper decision-making.

It is sometimes claimed that the activity of management, wherever it takes place develops its own habits, traditions

and patterns of thinking. It is plausible that the existence of such a relative uniformity of behavior and attitude could considerably strengthen and promote great changes in the world.

The public sector's second task is improving the decision-making process through sharing-power, participation and responsibility.

Those citizens and their advisors who must have trained themselves in the technical aspects of decision, are liable to be scorned by the qualified experts in spite of possessing full competence on the problem in question.

Finally, the choice of the right sort of acceptability is a crucial policy act and it will result in better quality of society life.

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#### 2.2 Decision-Making in Private Sector

The history of industry reveals a logical progression toward greater involvement of the entire company. The purpose is to reach designated quality and improvement of corporate performance resulting in survival of the company need.

This fact, in and of itself, serves as sufficient justification for a company's search for return on investment benefits. These benefits drive improvement of the organization.

The primary return the company realizes from its investment is performance improvement, which is admittedly difficult to predict and measure.

The level of performance improvement the company will realize reflect accurate measure of the risks and through of quality decision-making process.

Performance improvement will be realized in the form of return of investment. Consequently, the quality of the products manufactured and service provided will improve.

Make profits, reduce costs and increase business levels and market shares, driven by otherwise unachievable improvement which results.

The private sector is oriented for results, which means taking risks, bearing all the responsibility for and correcting mistakes as soon as they are known.

On the other hand, the public sector is oriented for procedure and not for taking risks or having any relative responsibility for failure, because the decision-makers involved are often removed from the problem.

Taking risks, for instance, creates the need to survive, efficiency and improvement of processes, translated in efficacy and effectiveness. It's evolution.

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In the last few years, the private sector has been obtaining enormous advantages through the result of the implementation of programs in management area, at first may cause some problems, but in the long run the benefits are extraordinary.

Downsizing and empowerment are administrative programs which have a considerable effect. However systems such Learning-Organizations really revolutionize the company, totally changing the sense of effectiveness in the businesses operations of the company, producing the most durable benefits.

In difficult moments, where the uncertainty of the environment increases pressure for results, competence and professionalism drive the company to efficiency.

At this time, through measure performance systems, the company makes market revaluation, rethinks politics and promotes necessary adjustments to insure their survival.

Summarizing, the company needs to learn how to minimize risks, assess uncertainty and find solutions fast to improve the chance of survival in a hostile and competitive environment.

All these factors contribute to a faster evolution in the private sector, when compared to the public sector.

However, the public sector, in general, doesn't suffer such pressure or have to face the same types of difficulties, resulting in slower improvement in administrative processes. In addiction, the private sector has a better capacity to relocate the executives and employees in closer positions to the problems in question.

With larger mobility and freedom of action, these factors contribute considerably to the rapid response time to improve quality the decision-making process.

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## 2.3 Responsibility and Involvement

Despite of the cultural behavioral set, it is important to verify the different types of psychological factors deep inside our personality in natural decision-making processes.

People are very different and respond in different manners to the same problem or environmental stimulus. Some of us are concerned about short term, others long term. Some of us pay more attention to price, other to quality.

These variables could change when our involvement level changes, as shown in the figure below.

INVOLVEMENT	TERM	PRICE	QUALITY		
		importa	importance		
	Short	high	high		
	High				
	long	high	high		
PERSONAL INVOLVIMENT					
	short	medium	low		
	Low				
	Long	low	low		

The principal aim of the establishment of neighborhood councils, can easily be associated with the realization of democratic ideals. But the important point about municipal decentralization is precisely that it is not a unique event.

It's an international phenomenon that must be counted as a part of the wholesale refurbishing of local government which, to a greater or lesser extent through more or less coordinated reforms, is taking place in all modern states.

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For six decades, it was strongly recommended that the individual countries take the initiative to decentralize municipal government.

The terms "local democracy" or "self-government" can hardly be applied to municipal authorities where a hundred elected councilors represent a million people.

The only remedy for this state of affairs is internal decentralization within big towns and urban centers, and the institution of an urban community that will separate local authorities and decentralized powers in order to function as independently as possible.

The largest challenge for the public administrative structures is to know how to balance the several interests, ideological, political and economical, while protecting the community's interests.

#### 2.4 Culture and Education

The great consensus seem to be that education is the leverage of the development, improvement and welfare for all societies. This would drive the country, society and companies to survive in the future.

Starting with an objective of measures, significant and very consistent, the relationship between education, qualification and experience on the one hand and participation on the other, we find the direct proportion between of then, and it grow when the responsibility is shared among several levels of organization.

Even more convincing is the result from cross-level analysis, leading to easier sharing of power inside the organization. When subordinates have high qualifications, abilities and skills, their superiors use participative methods. When subordinates have lower qualifications the superiors use more centralized decision methods.

Qualifications and skills are even more strongly and consistently associated with participation than another aspect. There are good reasons for this. Man's actions are motivated by thoughts, beliefs, and perceptions. If a senior manager believes, rightly or wrongly, that his subordinate has relevant skills and experience, then it would make sense to encourage participation.

Subjective judgment of skill requirements is a more reliable predictor of participative behavior than the objective assessment.

A manager's university qualifications, his extensive reading of the literature, his attendance at many fine training courses, and his membership of professional associations may not be known to his superior.

Moreover, even if these qualifications are known to him, he may not consider them relevant or valuable; in fact, he may even feel threatened by them.

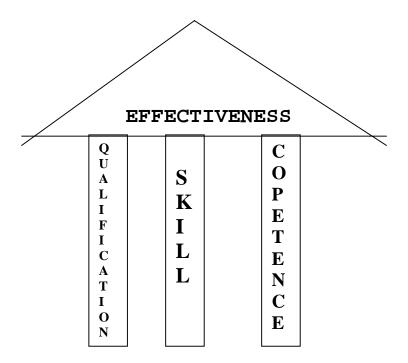
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It is possible that the relationship between competence, skill, qualification and participation is the single most important finding in decision-making. It shows that, among our samples of successful senior managers, participation should be used with discrimination that is to say not because it is fashionable or because it is alleged to give people a better feeling and make them more loyal to the company, but rather that it is mainly used to improve the quality of the decision-making process.

This can only be done if people have relevant skill, and managers seem to be aware of these factors and to act on them.

Again, high level qualifications of the systems allow participation. Participation requires competence and result in satisfaction. Satisfaction results in less resistance, more compliance, productivity and indeed effectiveness, for all organizations.

Participation needs people with good skills and competence.



# 3 Decisi

# **PARTICIPATION**

Decentralized

# Structure

#### 3.1 Types of Structure

Decentralization is a mechanism of general management decisions to a group of people from different organizational units that are affected by an issue. Multiple-system organization is used when it results in decisions that are faster and superior to those the general manager could make.

However, inside the simplest organization exists informal organization. It is a voluntary organization because it is formed at the initiation of those comprising it. The managers perceive a situation and spontaneously communicate among themselves to resolve the issue or control some situation.

Top management may be informed , but otherwise not directly involved. Hence, the collective action is informal, yet it is organized, an can orient toward proper way or not.

On the other hand, many strategies do require the additional decision-making capacity provided by a formal group. In order to guarantee coordination and increase accountability, top management may create a group to act in some capacity, such as a product team.

Because the informal organization may not spontaneously arise for every company need, some formal or top management-created group will be required.

The formal group usually has a name applied to it, such as a board, council, or team, and they usually require more work. Since the formal group does not volunteer for the task, some effort is usually required to get the members to work as a team.

The organization needs to make more decisions more often; it needs both the informal and formal groups to supplement the general manager. It is difficult to balance the power structure, in both types of groups, to get the better performance.

A great deal of interdepartmental activity that takes place in the organization is spontaneous and voluntary. In this scenario, the organization experiences unplanned decentralization; that is, an unanticipated event occurs, and the people close to marshal the resources deal with it. This kind of voluntary behavior is usually referred to as informal organization.

However, the organization can use this practices to help build a network of relationships, that can form the basis for the cooperative organization. Such practices as interdepartmental rotation, physical location, cooperation, information technology networks, and interdepartmental events all contribute to the formation of the network.

Additional leverage can be obtained if structures across departments mirror each other and if consistent reward and measurement practices are used, that could be taken to increase the probability that people in different departments will naturally and voluntarily communicate, cooperate, and take collective action on an ongoing basis. The result will be a decentralization of across-structure or general management issues.

#### 3.2 Centralization and Decision-making

The structure of a centralized hierarchy was conceived and developed to get better decision-making quality, like a pyramidal system which attempts to make the information flow inside the different levels of an organization easier.

In fact, this problem has been solved, the information flows better and faster in the hierarchical direction, managers to subordinates and vice versa.

The implementation of a centralized structure is a mechanism to coordinate activities where portions of task will designed specific purpose to obtain some advantages, like lower purchase cost.

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Most of the time, companies centralize purchasing to try to obtain better price conditions, because of high purchase

volume. Quantity has direct influence on price, when quantity rises, prices drop.

Another advantage to centralize structures is to achieve specialization and standardization.

Centralization increases specialization because repetitive activities have been made in the same unit. This strategy determines which task important are and require standardization and create conditions to promote specialization.

In some cases, for some reason, companies require analysis from a technical point of view, where it is important to maintain a neutral position about a specific problem. In this situation, the best approach is objective and removed from the problems and without personal involvement, which results in cold decision-making.

However, this alternative presents several disadvantages: translation and enculturation, intracultural interpretation of data, less lateral communicating inadequate motivation power and for corresponding centers to collaborate and to identify same problems.

This administrative option, when it is used in a non balanced way causes a phenomenon called the " telescope effect ".

In this case, the system of decision-makers or the responsible unit for a certain decision is too distant from the responsible group for the implementation of the measures or of the group that will be affected by those positions.

The units in question lose the capacity for macro vision of the problem, not being able to see it in a clear way, all the fundamental points that involve the ultimate outcome of the decision.

Decision-Making Centralization and Segmentation in Administrative Structures

There is also an important reflex in centralized structures that can create negative effects like "red tape", slowness, inefficiency and administrative myopia. This combination may result in no compromise.

In addition, the centralized systems occasionally create better environment easily affected by political influence, which fragments their ability to carry out technical decision-making.

# 3.3 Segmentation or Decentralization

A worldwide and interdependent set of economic changes has progressively restricted a global action to allow small systems to have direct access to powerful information. Decentralization or segmentation, in a general sense, to markets and to local actors, has been a key issue in achieving success.

What are the segmentation or decentralization objectives inside administrative systems? We can divide this issue in two different aspects: tactical and strategic.

Nowadays, the expediency in the correction of the directions of the organization is fundamental. Neither can time be wasted nor tempers lost when dealing with the change of the state of the environment. One more day or one more week for crucial decision-making can have a high price for an organization, and if carried out hastily and irrationally, could have disastrous results.

The efficient way of minimizing the problem of the sense of urgency in the decision-making process is to set up systems that allow the administrative structures to be close to the problems, where the information doesn't have to "stroll" around the inside of the organization, resulting in only two or three levels responsible for the final solution - quick decision-making.

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The closer the administrative structure is to the problem, the speedier the solution with the quality of the decisionmaking improving in an exponential way.

The people who are closer to the problems and suffer directly from them are the most suitable for being part of this solution. This factor assists in the public and private administrative structures.

In this manner, the citizens' or employees' participation is fundamental. In the small structures the results can be seen by all in a short time. This results in efficiency and effectiveness in a company or local government institution.

#### 3.4 Some disadvantages of Segmentation

On the other hand, a structure excessively segmented can result in harmful negative reflexes to the performance of the system.

We can show the susceptibility to power groups, in a smaller system. Theoretically more fragile in terms of political force, and external interference on the part of powerful groups can occur with the objective protecting their own interests rather than of the common interest.

Different from the larger structures, the "driest" systems lose their negotiation power in purchase activities. In an inverse way, centralized structures buy in smaller amounts, whereby they lose the scale earnings and with that, they tend to pay a higher price and obtain inferior purchase conditions.

Sometimes, smaller structures have more difficulty gaining access to technological innovations, limited capacity of to get information or data and limited resources to maintain a level of evolution sufficient enough to protect the growth of its own system.

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However, most of these problems can be solved through politicizing the appropriate balance of these administrative structures, creating complementary systems and permanent evaluation capable of promoting the necessary fittings to maintain a level of quality in decision-making.

Today, a great problem of the administrative structures is the management of resources capacity. The great structures or centralized structures, in a general way, manage to obtain better action in the negotiation of the conditions of purchases or macro-balancing of the financial process, but they possess a high level of spent energy and terrible acting

in the allocation of these resources where items remains or elements are lacking.

On the other hand, the small ones or segmented administrative structures suffer from a isolation and dependence from the central areas.

The fundamental factor is the ability to identify the appropriate level of segmentation, that makes possible a certain level of autonomy for independent performance and administration, looking for the balance that best assists the features of the system.

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#### 3.5 Franchise systems and Business Unity

Franchise is a system in which a firm, with special right or privilege granted by someone, can sell a product or service.

This system looks to join the positive aspects from segmented administrative structure with the quality goal of the decision-making process.

The franchise has high level administrative autonomy, independence and action freedom, inside of their business area. However it is linked with the company mothers strategy, standards and guidelines.

Under the aspect of a segmented administrative structure, the franchises have some advantages, which are usually found in small companies. For example, direct relationship with the market, good capacity to be close to the customer and better quality service. Franchise is a dry administrative structure in general.

The advantages of franchising allowed the firm to overcome resource constraints of limited capital and thin the ranks of experienced managers.

Franchising also provides a means of trading off certain functions. Franchisees are more efficient in performing functions whose average cost curve turns up relatively quickly.

It obviates the need for monitoring because franchisees have invested their own capital and are motivated to work hard for profitability.

This monitoring offers substantial efficiencies in promotion and advertising by leveraging the value of trade market and brand image. It also helps in managing the risk of decision-making, because franchisors can eventually convert profitable franchise locations into company-owned operations.

Another architecture type similar to the franchise system are business units in great companies and multinationals.

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These units of business also have high autonomy, relative independence and a system of result self measurement.

However, the business units needs to outline their business goals and analyze how they can fulfill those goals. This option also include labor Vs capital-intensity, demand variability, importance of repeat customers and the roles of changing technology, usually supported by the main company.

This is an example of administrative architecture with an appropriate system of decision-making. It can help the improvement of quality of the entire system, minimizing risks and answering quickly to the environment uncertainty.

#### Hewlett-Packard Division

In 1985, the Terminals Division at Hewlett-Packard (HP) found itself facing a substantially increased need for decentralized structure. Being two years old, the division had to build the capability while using simultaneously.

The Division was created to design and produce terminals for HP systems, low-end personal computers and video display systems. It located away from Silicon Valley in order to reduce operation cost.

Nevertheless, by 1985, the division was not competitive. Its terminals were ranked high in quality, but were too expensive, it was losing market share.

A key feature of the process was the amount of front-end work devoted to developing skills and teams, and then the immediate use of those skills to plan a new program. A second feature was the communication among 1800 employees to create a mission, plans and objectives.

The first steps were to create teams for implementing the new low-cost products, to plan the business and the new terminal products.

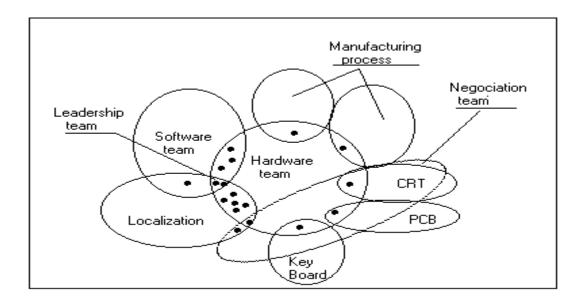
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The program team began their own specific team-building efforts, simultaneously producing a program plan. The planning process is a very disciplined process for creating a hierarchy of goals, beginning with the division general manager.

For each division manager's goal there is a functional subgoal for each functional manager. For each subgoal, a second subgoal is created for the direct reports of the functional manager. In this manner, a hierarchy of goal is cascaded down from each division, and they must be aligned and measurable.

These goals also provide criteria for making trade-offs and resolving conflicts. Participants in teams will have been part of the process to determine the goals, they will know something about why a goal was chosen.

A goal criteria must to be well-articulated and debated by team members for subsequent decision-making. It permits decentralization of choices. Informed team members are less likely to escalate a conflict, and more likely to resolve it themselves. Design of the formal groups followed from decentralized requirements, gives empowerment, responsibility and participation. The total structure is shown below:



Decision-Making Centralization and Segmentation in Administrative Structures

A steering committee was created for fast resolution of common disagreements in. Total cost was the major criterion, but occasionally superior performance will lead to competitive advantage for a product with a customized component.

In this manner, multidimensional groups were formed. Teams were created who responsible for hardware, software, location, purchased components and manufacturing processes.

Finally, division management issued challenges to the engineers: Can you really minimize the number of parts? How low a cost can you achieve? Several application-specific semiconductor designs were also needed. Could the engineers minimize the numbers of semiconductors chips? Management tried to make lowest-cost designs as challenging as high-performance designs.

With the engineers that were selected, management was successful. The number of parts was reduced by 30 percent, and the number of vendors by 40 percent. The overall cost of raw materials and components was reduced by 50 percent, while the number of engineering changes was also reduced by 50 percent.

The decision-making process, using assurance segmented structure, had achieved the coordination.

One of the benefits of compressed development times and pressure of improvement is the possibility of team continuity.

This process became continuous, resulted in a high level of motivation for the team. As a result, the responsibility gave the team a complete task; within the guidelines of their early decision-making, they set goals to make this the most profitable program at HP.

The ownership of the start-to-finish responsibility and participation has resulted in, and continued to offer, higher levels of team camaraderie and motivation.

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The Division's experience illustrates how an organization can build their capability as it needs. Management invest considerable time and effort up front, they invest in skill-building and immediately employ these skills in improving quality of decision-making process throughout the entire organization.

The success was achieved at great costs of management time and effort, however, the cost are an investment and not an expense, for example, current accounting practice considers such efforts.

The investments of management have created a considerable organizational capability. This capability is an intangible asset. With this intangible asset, public sector and private sector, small or big companies, can get a real competitive advantage.

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# 4 Technology

## 4.1 The Distance - Railroad History

From the end of the  $14^{\text{th}}$  century through the beginning of the  $15^{\text{th}}$  century, Gutenberg forever altered the concept of the information and production of knowledge with the creation of the printing press.

This fact changed in a revolutionary way the importance given for reading and writing. After then, the press multiplied the available information, democratized their distribution and not only altered but created a new culture.

By the 19<sup>th</sup> century, the development of the railroads further revolutionized the world in an overpowering way. With the arrival of the railroads, the sense of geographical distance on the planet "shrank", supplying people with a different vision never before perceived.

Again, in the end of the  $20^{\text{th}}$  century, computer systems changed the world, altered the patterns of behavior as never developed before, in the field of information.

The computer revolution was as intense as the creation of the press, but on a large scale, distributed and democratized the information, dropping political and geographical barriers, altering the definitions of distance and the volume of capacity of information storage.

#### 4.2 Silent Revolution

Nowadays, we are living in a silent revolution, called the revolution of knowledge. Information now is available, anywhere, anytime.

Nearly unlimited access of data exists, but the fundamental problem is how to transform that available information in enough useful knowledge, to generate the welfare state for companies, communities and citizens.

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This is the important contribution of technology. It is crucial to allow technological innovation help create instruments to access information easier, dropping barriers and principal meaning in order to lower the costs of the to transform information into knowledge.

Technological innovation by itself is not a guarantee of maintainable growth for companies, public organizations or for the individual, but it is the very important step in that direction.

Another important point pertains to automation. The automation process has a double important in the current systems.

First, the automation can do the arduous tasks of work, such as heavy industrial services, repetitive tasks or works in noxious environments. In addition, automation increases the efficiency of these systems and fundamentally lowers operating costs.

The second important function of automation is the elimination of mistakes. With the technological improvement, in most of the cases, a machine has the ability of being infinitely superior to human activity, and it liberates the human capital for other nobler tasks.

Today, a sugar-cane harvest machine can substitute for 60 rural workers, it works with larger efficiency, smaller cost and infinitely superior productivity indexes as well as quality.

However, this type of technological innovation, in first analysis, can generating social problems, increase the

unemployment rate and worse the social exclusion that already reaches high levels in the field.

In this process it is necessary to consider the set of aspects in order to understand the situation better. Without a doubt the 60 rural workers should lose their jobs, but the conditions of these workers' are the worst possible. The people work with inappropriate legislation, unacceptable systems of remuneration, terrible conditions of unsoundness and high hourly load. Edging to the slave work, even without consideration of infantile and senior work.

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Actually, we are unable to close our eyes to that immeasurable social problem, but on the other hand we cannot impede the progress of technological innovation.

In this situation it is necessary that we create mechanisms that allow the evolution of the systems, without observe the negative consequences imposed the society.

Mechanisms as such as trainee and education programs, increasing their professional abilities, technical capability and find better option in other areas, for workers who lost their jobs because of this technological innovation.

In this situation it is fundamental maintenance of the operational processes of evolution. It is prices and cost reduction, improvement of the quality of the products and social earnings to population, but it is also necessary to try eliminate or minimize the negative effects.

# 5 Conclusion

In summary, it is unlikely that centralized structures will disappear end solved all decision-making problems. Centralized exists because of the complexities of the information-processing requirements of the large scale organization.

We do not have the information and technological innovation to allow 1000 people to interact, communicate, and decide upon their collective actions in short time frames. There are simply too many interfaces among these people.

The complexity of communication is reduced if one person is selected to represent each group of, say, around 10 people. This selection process creates a second level of 100 people, who are in turn to make the decisions to guide the system, and so on.

Most organizations further select a leader, a senior partner, a mayor or a president to act as head of the entire group. It is a decision-making system option, that involves several and important results.

But, if these system don't work properly, and coordination would be needed, we could create independent teams of specialists who work on a social issues or on specific projects.

When communication within a team is intense, there is a continuous transfer of ideas, involvement and participation, the decision-making process will be accurate.

There are a number of changes, however, we need effort to create the organization capability, which will continue to eliminate dysfunction, increase technological innovations and create higher classes of employees.

The extent of this is when we create larger work groups, place more activities within a group, we can give more

responsibility and delegate decision-making to the group, eliminating the need to coordinate across groups.

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While the average size of organizations has grown smaller in terms of number of employees, they are growing larger in terms of sales volume, competency and market penetration.

Presently, the effectiveness of problem-solving technologies is increasing. Groups of 25 to 50 people can communicate and reach consensus on a problem solution in real time, so, the coordination, communication and decision process groups is likewise reduced in hierarchical across intervention.

Another fundamental aspect is the importance of the reflexes and results produced by variation of the environment. Actually, the environment is very harmful, drive to uncertainty, turbulence and high level of unpredictability.

These factors change the usual system of decision-making process, and worse, this is happening at an incredible high speed.

The first idea to be stressed is the use of organization capability as a competitive tool. In today's global economy, the competition has large possible means. It turns out that capabilities and learning organization are a particularly useful means.

In this way, in the private or government sector, the competition generates speed, flexibility and strong organizational improvement, where the focuses on pleasing the customer or citizen drive business.

It allows a focus on whatever dimension or issue is currently fundamental, making flexible, adaptable and suited for an uncertain and changing world.

The structure has to promote a learning organization, and should be designed around today's strategy to creates a spirit of change which is thereby channeled into the planning process.

Thus the successful implementation process creates a faster-learning. More rapidly changing organization are more likely to succeed and survival.

The human factor influences the analysis at every point, but fairness in decisions and effectiveness in control risks can be approached via the diversity of human interests, values and perceptions, which should always be respected.

The judgment of decision-making involves a considerable numbers of people and environmental variables. The acceptability of decision-making cannot be simply derived from a scientific study of quantified probabilities, costs and benefits.

The use of "intellectual capital" is an almost universal solution to management's ills. Building organizational capability can be achieved through sustained growth, in addition to articulating a strategy, which is intended to gain an competitive advantage and create value for customers and society.

The phenomenon of risks is particularly difficult to study scientifically enough the use of empirical data and theoretical models.

Quantitative statements about risks are in practice little different from the traditional one of producing "public knowledge" in academic research.

For the decision-making to be adequate and accurate, we need to reduce risks, for this there must be constant vigilance and commitment on all sides.

The principal of human frailty state it is impossible for the people always to act properly, in general, but this frailty can be avoided, by monitoring and containment.

A full awareness by those exposed to risks, and education in risk-management, are both necessary for effective control.

In the decision-making it is necessary to understanding the acceptability of risk. The term "safe" is also very ambiguous, referring perhaps to risk that is acceptable in some sense, but, in another, that is believed to be non-existent.

Fair decisions and effective controls require a recognition of the social dynamics of any given situation. This includes the interest, those who create it, those who control it and those that suffer with the problem.

Because each was its own value and perception, it is naive to imagine that three interests should and do have identical views.

Involvement and participation through education are necessary for remedying or preventing risk and improving the quality of decision-making, consequently increasing the responsibility level.

Moreover, responsibility has the additional task to eliminate corruption. In systems where a team is responsible for decision-making, it's more difficult corruption to rise.

Those human factor set also contribute for diminish the necessity of control systems. High level of responsibility help organization minimize mistakes and results in less external intervention.

To improve the quality of decision-making a balancing of risks and costs against benefits, is a necessary exercise. Any assurances that particular future facts are negligible cannot be based on a scientific proof, but must, in the final analysis, sound judgment.

Indeed, it is important to touch in two issue in relationship between dry structures and quality of decision-making process as administrative politics.

First, through the client satisfaction and social welfare, the efficiency, efficacy and quality are a good alternative to increase the survival possibility for private companies and public sector.

Second, it's the necessity turn on organization to work hard for performance and results. These factor, bring for instance, the sustainable growth as a consequence of the system evolution.

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Beyond that, it is important to stress some final aspects that could be useful. As accomplished by research, working parties, conferences, the following could be successfully undertaken in the decision-making process, among them are:

- Learning organization;
- Synergy;
- Capability and Participation;
- Autonomy;
- Interests of the majority;
- Long-term effects of decision-making;

This whole process is important to Brazil for two reasons. First, the country is inserted in this world context and it is necessary to improve the welfare state of their society, get better education and health care, and diminish high poverty levels.

Second, as Brazil is going by an adjustment process and transformation. Issues such as the size of the State, penetration and privatization are crucial to guarantee the future of the nation.

Today, in the digital world, where competitive advantage is man-made, structures will compete by using their organization.

There is no difference if the competition goes with the market to the private organizations or continues to up date for the public organizations. Management needs to build the capability and skill at matching it to strategies that will give it a competitive advantage.

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