

## **ROLE AND IMPORTANCE OF TASKS AND TECHNOLOGY IN BUILDING APPROPRIATE ORGANIZATIONAL STRUCTURES**

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### **ABSTRACT**

*The basic goal of any profit-oriented enterprise is generating and maximizing added value for its owners. In order for a company to survive in the market, management must ensure his continued development and growth. Development implies a steady increase in competitiveness that effectively and efficiently meet the needs of customers from the competition. Building an adequate organizational structure of the company largely contributes to the achievement of effectiveness and efficiency. There are many factors that determine the creation of appropriate organizational structure, including the tasks and technology occupy a special place. That is precisely why this article aims to raise awareness of the importance of tasks and technology in organizational development, and thus achieving the defined goals of the company.*

**Keywords:** objectives of enterprises, management of technologies and tasks, technological complexity, organizational structure, effectiveness and efficiency.

### **1. INTRODUCTION**

Technic and the technology appears in the double role as a factor of organizational structure. On one hand it is an internal factor of the organization when they think of the type of technology that a company uses, and on the other hand, the external factor of the organization when they thought the technology available that organizations can use, but is not used. As soon as the trendy technologies are available on the market, which some company already owned, it is immediately appears as an external factor of the organization for all other companies from that sectors or branches. Technology has, therefore, a great influence on modeling the organization of company. For one technology will be adequate functional organizational structure, for the other the concerned structure, for a third organic, etc. Also, technology determines range of controls in the company and thus the number of hierarchical levels of management.

Today, at the time of globalization, a time when we are more and more away from manufacture, handicrafts and industrial methods of production, when we head towards to the modern technology, automatizations and flexible manufacturing systems, the organizational structure of company also changes. It is less traditional, classical, bureaucracy, and more becoming organic, flexible.

### **2. DEFINING TECHNOLOGY AND TASKS IN THE ENTERPRISE**

The objectives of the companies are desired situation where a company seeks and must be clearly defined, and that is the condition for defining the tasks that a company should make. Defining of the problems implying determination of carrier task execution, determining the necessary time to complete the tasks and determining the cost of completing tasks. The objectives of the companies and the tasks from which these goals arise are in correlation. Defined tasks of companies are implementing through various technologies. *Technology is knowledge about how to do something.* Company uses technology that transformed the input-s (raw materials and energy) in the output-e (products and services). It significantly affects the organizational structuring of the company, and this influence is the most visualized in the operative field (production). The term technology is not limited only to the technique that is commonly thought, but also include the necessary knowledge, skills,

procedures, programs. Often, by a technology we mean the *production processes* whose impact on the organization are large, especially in terms of automatizations and microelectronics. Information technology has contributed to the impact of technology on the organizational structure of super. Technology in itself involves *machines and procedures*. There are strong correlation among the types of technology and organizational structure of companies.

In order to better understand the impact of technology on organizational model it is necessary to be familiar with the technologies classification: *a) from the standpoint of technological complexity and b) from the variability and sophistication of operations.*

**(a) Types of technology from the technological complexity.** With this viewpoint we can differ: programmed and non-reprogrammed technology. *Programmed technologies* are those technologies that can be precisely predefined procedures for convert input into the output, so that assignment can be standardized and the whole working process can be predictable. For example, McDonalds use a programmed technology for the production and sale of hamburger, while Ford use his programmed technology for a cars production.

On the other hand, technology used by some company in the field of management consulting is not a programmed, because it is very difficult to say how the process of management consulting will be conducted. And that is its primary business. Each cobbler that using non-reprogrammed technology for his production, cannot guarantee that the two pairs of shoes that he made has equal characteristics and quality. This means that with *non-programmed technology* is not possible pre define procedures for the conversion of the input into the output. Also it is not possible to standardize the assignment and the working process cannot be predictable. Bearing in mind the technical complexity of technology, it can be divided into three categories: *individual and production in small series, production in large series and mass production and manufacturing process.*

**(b) Types of technology from the variability and sophistication of operations.** “Technological complexity is a direct result of two basic dimensions of technology: variability and sophistication of operations” [4, p.216]. Each technology imposes labor tasks a certain level of sophistication and the variability of which is then derive specific implications for organizational structuring of the company. *Operations variability* imposed by technology represents degree in which one and the same work activity in the technological process may fluctuate from one production cycle to the other. Degree of complexity of operations determines a level of sophistication and skills knowledge necessary for their practices. This determines the level of sophistication and the level to which work assignments are subject to analysis. “Based on the sophistication and variability of operations as a key dimension of technology, it can be done typology of technology on: *routine, professional engineering and flexible technology*” [3, p. 234].

### 3. HIGH TECHNOLOGY AND ITS IMPACT ON THE ORGANIZATION CONSTRUCTION

Today's technology is exponentially rapidly evolving and its impact on the organizational construction of extremely large. However, the development of techniques and technology is not equally intense in all areas. So we have a classical technology that is slowly changing and that do not have any significant changes in the larger time intervals. On the other hand, we have the technology from propulsive sectors where technological change almost daily. Among the sectors of high technology a primarily place belongs to the electronic industry.

Many foreign companies are included in the cooperation and joint investment in the field of research and development in order to provide more efficient exploitation of new technological knowledge. What is most important to achieve in the new technologies is a *time of their application to products*. Usually it takes some 15-20 years that technological innovation came out from the laboratory and became the part of the products that are placed on the market. Today, the world's companies in the though market game struggling to shorten this time and it will seem even more aggressive in the future. In the further elaborate of the impact of high technology on organizational and construction we will try to give answers to very important issues that affect the interdependency of high technology and companies organizations, such as: *a) What are the specifics (characteristics) of organization and management in companies of high technology? b) What is the impact of technological innovation and technological change in the organizational construction? c) What is the special impact of information technology on organizational structure?*

**(a) Characteristics of the organization and management in companies of high technology.** High technology companies are in many ways different from other companies in the national economy of any country. To avoid the risk and uncertainty, high technology companies build some specific mechanisms of organization and management which enables retention of a high position in society, "elite". They are highly focused, concentrate on one product line and dominate the market in a narrow production program. However, these firms are often found in the dilemma to resolve the conflict between *stability and flexibility*, and between *continuity and fast changes*. High technology companies abandoning the traditional bureaucratic organization, because for them are better *adaptive* or *organic structures* that are based on communications between all levels of the organization.

**(b) Impact of technological innovations and modern technology on the organizational building.** Under the technological changes we consider changes in production technologies, i.e., manufacturing assets and processes, but also changes in other technologies that keep the other business functions in the company. Technological changes in the production process results in low-cost production, either by reducing the time of production or otherwise reducing the cost of production.

One of the most common changes that technology causes with employees, is that they all more and more free from recurring and routine operations, but leaves them room for creative tasks. In this regard, the new technology of employees requires new skills and knowledge, so that today almost all employees must educate, prequalify and to improve to the demands which in front of them sets the new technology. All of this represents a more or less effort for the employees, for which they are offer resistance. Today, the investment in people, in order of importance, are in the first place, even ahead of profit. Technological changes lead to changes in the field of management. All kinds of distributed data processing encourages increasing decentralization and organizational style "without head" [1, 188]. Computer and communication links provides information and thus the decision-making on all organizational levels at any time and any place. The need for middle-level managers is reduced because their functions is take over by information technology. The only thing they remain as a job is controlling the conduct of the workers. Organizations in the greater extent atomizes, and workers are working in small business units.

Technological innovations and technological changes lead to significant changes in the organizational structure of companies. More and more disappearing traditional and pure forms of organization, and introduces new, that are based on a combination of different types of organizational structure. Company with high technology must be *innovative* and ready to constant technological changes, because only thus can retain the innovation and high attribute of companies. The goal of innovation is to get a competitive advantage in the longer period. High technology companies are becoming "imaginative company" that experienced by combining the production and marketing management lead their customers going in front of their needs.[2, 199].

Technological trends can be in the rough lines divided into two groups: a) technological changes in the operative field and b) technological changes in information technology. Both these types of technological changes have occurred as a result of a real revolution that has occurred in microelectronics. For instance, thanks to finding and using silicon semiconductor (chip) provides that processed huge amounts of information in a short period of time.

In the operational sphere of the modern technology develop three basic trends have changed the way that the product designs, the way in which materials are handled (logistics) and the way that manages the production, which are: *Computer added design (CAD)*, *Computer added materials management (CAMM)*, *Computer integrating manufacturing (CIM)*.

**(b) Technological changes in information technology.** Trends in information technology have considerable influencing changes in organizational structure of companies. Information technology in conjunction with telecommunications has changed the way of life throughout the world. World more than ever before becoming a "global village". The most important changes that occur in organizations (under the influence of information technology) would be the following: 1) the traditional organizational structure are replaced with new structures, non-traditional organizations, such as network and virtual organization, 2) leaving the classic organizational division by functions with a pronounced hierarchy of management in exchange with the team non-hierarchy organization, 3) reducing the number of levels of management as well as the number of middle-level managers, 4) creating the new opportunities in design services, 5) the information flowing freely electronically replacing massive "paperwork", 6) organizations are becoming shallower, and the decision-making

process in them is decentralizing., 7) *the increasing importance of communication* gets instead of the *previous range control*, 8) leads to greater mobility of labor, 9), it is possible to work without physical interaction, and proximity to the accommodation of workers, such as the possible maintenance of teleconferencing or electronic meetings.

Implications of the use of modern information technology on organizational structure are very visible but in some areas controversial. The most impact of IT was the number of hierarchical levels in the organizational structure of companies. Hierarchy in classical organizations had a very clear role and it has consisted in the transmission of orders from above to below, and transfer of information from bottom up. Middle managers in the organization perform the role of communicational channel which is connected by lead companies with its operational base. Since the role of communications channels that transmit information from the operative field to the top management and vice versa, successfully took over the company information system, gone is the need for hierarchical levels and middle management of companies. Organization structure is becoming more level so that the smaller number of hierarchical levels and a larger range of control of managers. Since the middle management is decreasing, it often creates resistance to the application of information technology.

#### **4. CONCLUSION**

Technology has great impact in shaping the organization of the company. One technology will be adequate functional organizational structure, the second subject, a third organic, etc. Also, technology determines range of controls in the company and thus the number of hierarchical levels of management. Various technologies are affecting the different ways of giving and groupings of assignment in the company. Also, different technologies are require a different conception of leadership. Some seek a deeper, and some superficial in the hierarchy of the organization.

It is especially pronounced impact of high technology to the organizational construction. This influence is particularly visible if the knowledge of specifics (characteristics) of organization and management of high technology companies. Technological changes in the production process results in low-cost production, either by reducing the time of production or otherwise reducing the cost of production. The aim of technological change is the greater efficiency of production. When it comes to technological change caused by the introduction of information technology and develop an information network throughout the company, it is the largest contribution of technological change in creating the foundation for rapid business decision making at all levels of management companies.

Technological innovations and technological changes lead to significant changes in the organizational structure of enterprises. More and more traditional and pure forms of organization are disappearing, and introduces new, that are based on a combination of different types of organizational structure. Company of high technology must be innovative and ready to constant technological change, because only thus can retain the innovation and high attribute of companies. The goal of innovation is to get a competitive advantage in the longer period. High technology company are becoming "imaginative company" that experienced by combining the production and marketing management lead their customers going in front of their needs.

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