

Information technology and management

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Abstract

The rapid development of information technology has influenced informatics as an important role in business development and management. Manifestations of computerization in the current economy mostly reflect the application of information systems for planning and strategic different analysis, especially when making long-term decisions. These systems consist of several information systems and management control systems for decision support. The construction of these systems was originally a requirement for the strategic planning of top managers (the highest level of leadership) having as a primary goal the easier access to important information, especially those that were classified as critical for success in business. Expert systems for example offered the possibility of linking information technology with other telecommunication channels which makes them possible to identify many problems.

In this context, this paper will focus on presenting the great importance of information technology as a powerful tool to manage business problems precisely because information systems provide exceptional business value. Information Technology examines the reasons for the problems and offers solutions to manage and reduce them.

Keywords: *Information technology, management, business, decisions, planning.*

Introduction

Information Technology is the science of introducing electronic machines for the construction of sophisticated computer systems to better manage material and human resources. In the recent years, world-wide economy is undergoing fundamental changes as a result of the rapid development of this technology. Especially the dynamics of the development of informatics and its products and business development opportunities are based exactly in the use of Internet technology which has enabled the growth of the role and importance of using information and communication technology in business processes and management in new economic conditions or digital economy. In most cases, computing technology is seen as a system composed of people, equipment and procedures to collect, arrange, analyze, evaluate and disseminate information at the right time of making a decision. Otherwise it is also a formatted computing system that can collect, feed, process, and report data from various sources to provide the information necessary for management in the process of making decisions (Hicks, 2003, 25).

Information and Communication Technology known as ICT technology has become the main tool in business activities in the modern world (Dimovski & Škerlavaj, 2004, 636). The main contribution of ICT technology in the last decade has focused on the management processes (especially organizational) and business. ICT has gained great importance when it comes to the success and efficiency of business helping business

processes in the following areas:

-Information Technology positively affects the reduction of management costs, because its application improves the quality of management;

-In addition to revenue growth, ICT facilitates the communication between managers, by saving time and quality of communication within the enterprise;

-Through internal network and enterprise information the distribution between workers and managers at the right time and at the same time also affects the growth of their knowledge;

-ICT affects the reduction of workers in occupations where knowledge is not required;

- ICT increases the demand for knowledge workers;

-ICT and the use of computer networks affects revenue growth;

From this presentation, it became clear that ICT has a tremendous impact on reducing costs and increasing the quality of management of business processes.

Literature review

In the world of free trade where competition grows, speed of action is vital for the economy, especially in the production process, management or other business processes. Since the business environment is constantly changing and evolving, the business itself changes all the time and with its growth comes also the information exchange. At the same time computing systems need to support the economic growth, change and development. (Vakola & Wilson, 2004, 112-120).

Using information technology companies have the opportunity to improve the efficiency of their operations and performance in providing assets and management, and enabling them to increase competitive advantages in certain areas, making competitive movements and consolidating resources and opportunities (Sethi, King & Chan; Huff; Barclay & Copeland, 1994, 1601-1627). Information Technology has an intense influence on changing the role of management in business systems, and which is manifested by increasing control over the functioning of the system. The main role of management information system during the process of decision making is to provide timely information, distribute them and this way to give better management solutions, if possible (Namani, 2004, 83).

Computing system linking subsystems present information in a unique whole structural and conceptual way for the enterprise. The information processed in the management information system of interconnecting all levels of government ranges from high-level planning and strategic placement, planning and tactical deployment, as well as planning and deployment of operational control (Mustafa, 1995, 229). According to Uren & Voïç, management is a process of reconciliation, security, distribution and utilization of

potentials and human resources and other potentials in the organization, with the aim of achieving certain objectives. (Ramosaj, 2007, 16). According to Fayol (1841-1925) governing actions are supported by five specific functions, which determine the definition of management of a manager: planning, organization, command, coordination and control which includes all forms and methods of measurement and evaluation of results in accordance with the plan and purpose of the company.

So for successful management of information technology in business processes, IT is the main instrument, in the sense that IT is the main indicator of success and business efficiency. This finding is present when we consider that in contemporary business the number of data and information is growing exponentially, and efficient business decision making is possible only if the necessary information is fast, accurate, qualitative and managed by an adequate staff.

Information technology and management

Management is the process that deals with planning, organization, governance and control of human activities or in other words it is the process of implementation and project orientation to achieve a particular goal or goals. Management represents a relatively universal activity because its principles are applicable in almost all areas of the economy and society, such as: production, banks, commerce, agriculture, sports, military, art, business etc. The computerization of the economy effectively integrates the organization of employees, management, technology for the flow of information, materials, and findings in the ongoing effort to produce high quality, low price and excellent service and a clean environment. The new economy is based on competition and the capacity to create new products or services with high quality and less cost and with the ability to transform businesses into entities that weren't imaginable yesterday, but tomorrow may be obsolete.

In the past, information systems have played an important role in the organization and development of enterprise, but today they are oriented more towards the management process, governance and control in particular. High level of enterprise management is focused in the existence or harmonization of long term strategic planning and policy. Managers at this level must have general knowledge about organizational activities, because they are subject to significant risks taking important strategic decisions. Top managers must respond to questions about how the company will be positioned in the vicinity of uncertain business from foreign competition, what would be the trend of development in the next five years, which would be the segment of the market for new products launched, and how to use middle management reports, through the monitoring of the general economic situation, political, etc., hereby top managers use internal information (which shows the lowest level, and the average level of management prepared in form of summary reports) and external information (collected from other sources outside the enterprise) to formulate the strategy of the company in the future (Williams & Sawyer, 2001, 419).

Top managers also receive information from other sources including various documents, meetings, telephone conversations and activities organized in different forums. These information needs are not known in advance, but often originate as a result of requests

submitted impromptu or ad-hoc, in the form of technological development, etc. (Mustafa, 1996, 24).

At this level managers need information that would be based on technical data, because they are responsible for the development of medium to enterprise. Here we can mention the drafting of budget plans, goals and policies of the company, description of procedures for low-level management, including other employees in various departments, then teamwork and various strategic projects management at the highest level, etc.

Decisions taken at this managerial level are semi-structured and structured (Laudon & Laudon, 2000, 110). The information shall be compiled in the form of weekly-, monthly reports etc., transmitted by the low level management of enterprise such as information about certain items in inventory, in the absence of the goods, the formulation of new rules of decision-making etc., which will be applied by operational staff (Mustafa, 1996, 22).

Managers at this level must possess the necessary information to describe and control the specific works. Operational decisions would be permanent control of outcomes and the purpose of taking corrective actions if needed such as sales, production, formation of prices, inventory, various deposits, salaries, credit etc. This level needs daily internal information and simple everyday transactions. These data are prepared in the form of reports detailing the activities carried out, and which in most cases are routine and well structured such as conditions in the stocks, prices, production, etc.

Information systems that support the management in the decision making process in all management levels are called management information systems. The structure of management information systems based on organizational function represents subsystems enterprise computing systems, created by the activities and needs of the enterprise and are organized according to certain structures and on equal basis that enables a conceptual link between computing system and system of governance horizontally, as well as vertically. In the present, different managers have recognized the needs of the organization to design computing systems designed in such a way that this system enables the coordination and combination of computer technology with various forms of applications. Information systems cannot be ignored by managers because they play such a critical role in a contemporary organization. Digital technology is transforming business organizations. The entire cash flow of the 500 most important companies is linked to information systems. Today information technology systems directly affect the decisions of managers. At the same time, they play a strategic role in the life of a firm, because the responsibility for information systems cannot be delegated to technical decision makers (C.Laudon&P. Laudon, 2003, 14)

Management and making decisions

Management is the process of organizing and coordinating the activities of a business, in order to achieve the targets set earlier. Managing a project may seem like an overwhelming task, which requires a lot of experience, knowledge and practice, to reach the objectives along with the segregation of duties. (Panariti, 2002, 13)

Uncertainty is the most difficult situation for managers and which is frequently encountered (Llaci, 2008, 190). In general, the problem consists of solving the critical problem that

takes a business organization. Solving a problem starts with the decision-making process. In this context, a model developed by Simon shares the stages of the decision-making process in three stages: Intelligence, design and choice (Baholli, 2013, 30).

Since managers are responsible for setting goals, they need to make decisions that enable their achievement, and these decisions are connected to:

- Preparation of strategic goals;
- Managing of the implementation of strategic decisions;
- Organization of tasks;
- Determining the resources related tasks and presentation of their use;
- Coordination and supervision of employees and managers;
- Detection and correction of problems if they occur.

Providing timely and relevant information needed regarding the execution of these activities is important for managers in each of the mentioned levels of management. Only thanks to this information the manager can take positive decisions for the three levels of government (operational, tactical and strategic) in which the governing systems perform the duties of planning and control with the help of information systems. Most decisions are followed by some form of cost-benefit analysis (Kenji & Shadlen, 2012, 911-913), where people try to maximize benefits while minimizing costs (Schacter, Gilbert & Wegner, 2011, 369).

Conclusions

Information Technology through management information system would provide advantages in increasing the efficiency and effectiveness of business activities especially during management processes and taking business decisions. Making decisions is very important for the company and therefore a support for the information systems, which will facilitate this process for managers.

Modern information technologies provide innovative solutions for businesses, companies or other scientific institutions, by creating a new working surrounding, that is based on computer communication between people.

In other words, information technologies present new opportunities in solving certain problems and managing a business, especially facts which affect the performance of people, not only in successfully performing physical work but also in the conduct of intellectual works and management of important situations for companies and the society in general.

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