Management in the Internet Environment

Summary
IT revolution and the transformation of industrial society to knowledge society globalization marked the most significant, influential and most comprehensive business trends and the emergence of the modern era. The intensive development of the Internet as a global business infrastructure has led to substantial changes in business strategy, but little attention has been devoted to developing new models of management capable of implementing the terms of the global, networked business environment. However, in the era of globalization, where new opportunities may arise in any part of the world, the greatest pressure lies on the management, who must possess the knowledge and skills needed for success in the global environment. It is precisely this issue that is examined in this work.

Keywords
information and communication technology, the Internet, globalization, management

1. Introduction
The basic form of organization of companies in the New economy is organizational structure characterized by horizontal organization, a high degree of decentralization, democratic style of decision making, high level of flexibility and adaptability to constant market changes. Given that customers are drivers of today’s economy, it is logical to focus on organizational efforts in order to meet their needs. Therefore, the hierarchical organization can be completely inverted and thus create an inverse hierarchical pyramid in which all employees are directly connected with customers and able to quickly respond to market needs. Such a change requires substantial reengineering of business and new internal and external “communication range”, based on intensive use of information-communication, and Internet technologies. Decisions are made on the spot, and each job requires an appropriate level of autonomy, independence and entrepreneurial thinking.

Managers lose their exclusive right to control the outcome of the trust in colleagues and encourage entrepreneurial initiatives at all levels of an organization. These organizations are characterized by a very high level of adaptability, willingness to change, a wide range of communication and orientation of inductive logic, innovation, education and continuous learning. Management in these circumstances, the New economy, based on Internet technology, should meet multiple criteria and cover all areas of organizational activity: planning, organizing, managing, communicating, controlling, motivating, effective action, creating a pleasant and stimulating environment, innovation, recognition of talent, management human resources etc.

2. Characteristics of Management in the Internet Environment
The time in which we live indicates the amount of internal, fundamental change in modern economic theory and practice. The recurrent issue is the New, digital or IT economy. A clearly visible manifestation of such change is economic globalization, which is on the increase from day to day. Economic globalization, as a general trend, is characterised by the transformation of national economies into a single global economic space, where artificial barriers caused by various, primarily political factors are disappearing slowly but surely.

Technological progress is both the cause and a consequence of economic globalization. Imposing a new, unique and universal standards of conduct, it directly stimulates technological, and then globalization of civilization. At the same time, globalization of civilization imposes the need for further technological progress.

Numerous previously separately and independently developed technologies become closer together, or converge. Digitization is therefore emerging as their common denominator. Internet, which is in its original form represented only as a network of computers, has developed into a global multimedia network and virtual space where very diverse technologies can compete, but cooperate and complement each other, and they
are focused on one common goal - meeting businesses’ and private users’ communication needs.

An especially important step forward in the digital convergence technologies are the successful examples of connecting stationary and mobile communication technologies. Thanks to these technologies, it is now possible for users not only to make connections in residential locations, (workplaces, homes, etc.), but also on the go, at variable locations. In such conditions, the spatial constraints that are imposed by landline communication networks simply disappear.

Information and communication technologies have merged into a single, Internet technology, which affects the change in the economic structure of the national and international economic system overall. It works on all dimensions of economic life, while maintaining the standards developed in the era of the industrial economy, but also leaving the possibility for the expression of individual, regional and national particularities.

Interactions between entities in the Internet space are resulting in a number of synergies, creating new quality of relations between businesses, products and services. New forms of cooperation create within the framework of virtual organizations, based on the extranet. Network externalities are created as well, but it is difficult to accomplish in the traditional business environment. However, what emerges with increasing frequency is the digital divide, i.e. divide into those that can leverage the competitive advantages of modern information and communication technology and those who cannot.

The seven major trends in the New economy are often mentioned, which also requires new forms of business management, and new management models appropriate to the digital economy. These are:

- The so-called cyber economy, and especially its most expressive form - electronic commerce, which is becoming increasingly attractive and reduces the cost of business operations. However, such a business orientation involves many unknown elements and dangers which businesses must face and try to respond to them in an appropriate way;
- Teleworking and the so-called Internet workers are a new form of business activity of individuals. In the New economy people have more choice between work in the classical offices or manufacturing facilities and work at home. Therefore raises the need to introduce significant changes in the ways of business management or business management;
- The roles of buyers and their impact on work organization in the New economy are all distinct, to mutual satisfaction. The organization is being transformed from a relatively closed to an open system, i.e. Open Enterprise. Customer satisfaction is increased, because the company is open to independent decision-making in the choice of products and service, which also facilitates the operation of such a company and reduces operating costs;
- Services and information are becoming commodities. This is a trend that actually shows that the value of elementary, basic material products tends to fall, while the value of services and information, such basic products that complement and support, increases;
- The customer is becoming more and more virtual, which means that the dealer has less contact with individuals and is increasingly reliant on information about them. This results in the need for different treatment of customers who are invisible, but vendors still know a lot of them. In other words, importance of intelligent systems for reasoning and methods of knowledge management is growing in the conduct of routine business;
- Creating new types of cooperation (partnership) and the community. In the past, the information was collected from stationary sources (books, records and paper records) that could not accurately reflect the dynamics of the world. Today, you online community can be created in the form of virtual organizations, alliances, consortia, coalitions, etc. Individuals and organizations can find partners in real time with whom they can enter into appropriate (ad hoc), temporary or lasting relationships, of course, in the common interest. Spatial and temporal barriers in the physical world do not play any role; more precisely, they completely disappear. In business terms, this means better coordination, reduced costs, improved
management and, ultimately, better business outcomes;
- Lifelong, continuous or Life Long Learning. Formulating such a global strategy of education before the existence of electronic computers, especially the Internet, was very hard to accomplish. The traditional concept, under which individuals allocate the best part of their life to being educated, is replaced by the concept of lifelong learning, in which a person of any age has the ability, and commitment to learn, improve and acquire new knowledge and skills.

3. Characteristics of Management in the Internet Environment

The business activity in terms of the New economy is causing many changes in many areas of organizational performance. Through the intensive use of publicly accessible computer networks companies accelerate business processes, globalize operations, effectively communicate with the general public and change their behaviour in relation to the unpredictable environment and society as a whole. There are three main factors affecting the changes in organizational behaviour:
- intensive use of information and communications, and Internet technologies in business,
- the general process of globalization, dynamism and uncertainty, and
- substantial changes that take place within the global companies.

Decision-making and conduct of business become especially important when the managerial functions of the business environment are dynamic, unpredictable and uncertain. What knowledge and skills should managers possess to effectively run the business in the new economy? The intensive development of the Internet as a modern business infrastructure has led to substantial changes in business strategy, development and innovation of business models, and new forms of organization of business; however, relatively little attention has been devoted to developing new models of management and development of management models that are matched by global conditions, networked business environment and the New economy. While some managerial functions in the conditions of New economy change, rare studies show that, in addition to their classical functions, managers in the New economy (“e-CEO”, “e-Manager”) need to develop new or improved competence in these key areas (Citrin & Neff, 2000):
- faster decision making,
- readiness for cooperation and partnership,
- creating a successful management team,
- excellent knowledge of Internet technology and its strategic business applications,
- excellent knowledge of electronic business,
- identifying information needs of the business model,
- managing information and knowledge as a key resource of business,
- encouraging the entrepreneurial spirit,
- communication skills,
- orientation to the end user (customer) and their needs,
- visionary view of the future,
- creating a pleasant working environment, motivating and inspiration of associates,
- human resource management, and attracting, motivating and finding talented co-workers,
- "soft" elements of the organizational, management teams,
- encouraging innovation and creativity in business,
- setting an example to encourage employees to adapt to the new mode.

Intensive application of information and communication, and particularly Internet technology in business communication range is expanding; more people within the organization have adequate information and knowledge that allows them to make decisions that are appropriate to their responsibilities and powers. The process of decision making is no longer the exclusive privilege of the management; decision making becomes part of every job, activity and task. The organizational structure is changing and “flattening” because the dynamics of decision making in the Internet environment do not permit the application of command and control principles, and organizational behaviour and culture is gradually adapting to the conditions of global, networked operations. In such circumstances, the main task of the management is to create an entrepreneurial environment in which employees are willing to take initiative and responsibility to vote. A hierarchical model of management is not appropriate for accelerated business cycles, and the intensive process of decision making by delegation of responsibility, to the appropriate extent, “down” to
lower levels of management. In this way, cascade model or network management is implemented, which is necessary to adopt dynamics and the need for rapid decision making under the conditions of the New economy.

Many of the classic functions of management are reduced and dispersed in the New economy. Establishing a strategy and planning have become a dynamic, multidisciplinary processes that connect the more important business units, or sub models, and decision making, management and control are no longer only the privilege of selected employees. Classical managerial functions (planning, management, organization management, human resources, control) remain identical regardless of whether the organization operates on a national or global, online marketplace. However, the international context, like different cultural, legal, political and economic elements, affects the performance of these tasks and functions. The complexity related to each of these activities is much more expressed in the Internet environment (Griffin, 2005), so the classical managerial functions is increasing to a considerable extent; there is a need for very rapid action and decision-making, and the global network of business environment and general conditions of electronic connectivity of business require managers with specific skills and knowledge. This primarily relates to the intangible resource of knowledge management business, a good knowledge of Internet technologies, cooperation, partnerships, ability to find, attract and develop talented associates, management of human resources operations, motivating, stimulating the creation of these environments, inspiring associates and the like. The basic characteristics of management in the Internet environment is that the traditional managerial functions are “down” to the lower levels of management, while higher levels are intensively dealing with “soft” organizational elements that represent important features of innovative management (communication, motivation, cooperation, innovation, creation of supportive work environment, encouraging creativity, more casual approach, teamwork, etc.). These innovative management concepts and models of team management, goal management and knowledge management are appropriate in the circumstances indicated by the new economy, because in addition to traditional functions, inductive ways of thinking and “soft” organizational elements such as intuition, creativity, charisma, ability of motivation and synergy become the main managerial concerns. Managers must set an example and encourage the organization’s attitude to change. A manager who does not know how to use the Internet, who never sent or received emails, purchased a product via the Internet, browsed Web sites of competitors, cannot lead the company toward an electronic way of doing business.

In addition, many managers’ features are distributed along the entire organization, or business models. Doing business in the New economy is based on the concept of business model. The New economy business models are interactive, fluid and organic by nature, within which a large number of partners - companies that also are playing different roles - suppliers, customers, and partners are connected electronically. A big part of the business relies on electronic connectivity and intensive cooperation with the outside environment, i.e. the active strategic alliances. In such circumstances, the range and scope of managerial functions is significantly increased. For example, keeping as one of the basic management functions encompasses three key areas: managing the entire business model, managing strategic alliances and business entities conducted within the boundaries of the organization.

Given the extensive outsourcing of business, abandoning the traditional, internally oriented concept of leadership resulted in introducing a distributed leadership model that includes both internal and external parts of the business, that is, business model as a whole. Since organizational structure is becoming “flatter” and more horizontal, there is a need for creating new internal controls and supervisory mechanisms. Successful companies are introducing new internal supervisory bodies that coordinate activities of different organizational units and their products or services with the needs of their users. Such bodies are usually included the general manager of each organizational unit, the financial manager, human resources manager and operations manager of information resources. Given the extreme externalization of business operations and intensive connections through strategic alliances, there is a need for developing dispersed systems management of internal organizational processes.

Innovative management represents a methodological framework for the consideration of the needs and demands facing management in the New economy. Managers in the New economy must be original, creative, visionary, capable of
producing many different ideas, able to distinguish useful from useless information, make decisions in spite of information overload, very quick to make decisions, able to commit themselves and make decisions while they still do not know enough or not have sufficient information, capable to monitor extremely fast business cycles and the dynamics of the business, able to initiate, develop and encourage cooperation and partnership, a very good knowledge of Internet technology and strategic aspects of electronic commerce, have a clear vision of business in the Internet environment, and show by their own example that the Internet technology is a basis for the future business.

Managers in the New economy should be able to predict, anticipate and act quickly; they may often make rash decisions without adequate information base, intuitive decisions, able to manage and make decisions under conditions of full of uncertainty, well-managed risks of such mode of work, tend to be a team and work together, motivate staff, lead by their own example, constantly emphasize the strategic guidelines of the concept and advantages of Internet business models, able to recognize talents, manage human resources of business, good people and their needs assessment. Manager in the New economy is moderate, honest and open, impulsive, convincing, dominant, highly motivated, prone to initiative, willing to take risks, but also admit the error, critical, informal, future-oriented, creative, innovative, etc.

4. Implications of Internet Technology on Human Resource Management

In the business world, Internet, as the latest technology, is becoming very popular in all business segments. Human resource management is also an area where the tools of this technology are increasingly used. Specifically, the development of technologies has changed the manner of conducting individual practice of human resources management in organizations. The essence of these changes is reflected primarily in increased automation of certain activities of human resource management. In addition, the rapid development of the Internet has spurred the application of electronic human resource management.

Although the electronic management of human resources is widespread in many companies around the world, it is difficult to find an explicit definition of this concept in the literature. One definition is that e-HRM is used for networking and supporting persons engaged in various HRM activities (Strohmeier, 2007). Regardless of this general definition of e-HRM, we can suppose what the main characteristic of this concept is. So, it is about the use of information technology as a medium to connect physically separated persons performing certain activities of human resource management and as a tool to aid in the execution of these activities.

Lepak and Snell (1998) divide the electronic Human Resource Management (e-HRM) into three parts:

- operational e-HRM, related mainly to the administrative activities of human resource management,
- relational e-HRM, related to advanced human resource management activities such as recruitment, selection, training, development, management of occupational success and reward employees,
- transformational e-HRM, related to human resource management activities that have strategic character.

During the introduction of electronic human resource management, it is necessary to pay attention to several issues that will be presented below.

Before the introduction of the electronic management of human resources it is necessary to carry out re-engineering of existing human resources management activities in order to ensure its effectiveness. It is even desirable to complete reengineering before or during the selection of software in order to achieve later compliance activities with a new electronic management of human resources.

The next critical step in the implementation of electronic human resource management is training the employees in the sector for the new system and the ways it changes business processes. In this step, it is necessary to pay attention to some aggravating factors, such as overly high expectations of employees from the new system or resistance to change. In any case, without adequate training, employees in the human resources department will not be able to use the new electronic system in an efficient manner.

One of the key success factors of the implementation of electronic human resource management is top management’s support to and participation in the implementation and application of the system. In addition, intersection communications and communications with the
company’s customers and business partners are another element important for successful system implementation (Remus, 2007).

Although the development of information technology, especially the Internet technology, is changing almost all activities of human resource management, we will explain their influence on hiring new employees, i.e. the recruitment and selection activities.

4.1. Recruiting Candidates Electronically

The essence of recruitment, as the first stage of the recruitment process, is to find suitable candidates to meet organizational needs in a cost-effective manner. It can be defined as the process of attracting candidates, for the best choice to fill the vacant position, conducted by the organization. Recruitment includes consideration of the demands of work, seeking and considering suitable candidates, attracting and encouraging for reporting and contact with candidates. Some of the factors that determine the success of recruitment are: labour market conditions, the image of the organization, attractiveness of a post, but also the way of advertising the vacancies. Traditional methods of recruiting that are commonly used are advertising in print media or the services of public or private employment agencies. However, to facilitate the process of hiring, companies are increasingly reliant on information technology, specifically the Internet technology in finding new methods of recruitment.

One of the sources of external recruitment of candidates, based on Internet technology, is specialized web sites where employers leave information on job vacancies, and potential candidates post their resumes. Also, companies can use their web sites to attract candidates, or to advertise vacancies. One of the prerequisites of this way of recruiting candidates is an attractive site that is also easy to navigate. Also, a number of companies to e-recruit candidates develop their own online applications for vacancies.

If properly used, Internet based recruitment methods can have several advantages over traditional methods. Some of these advantages include speed, simplicity, lower cost, and the possibility of attracting a larger number of potential candidates. Some companies are using e-recruitment to develop their identity and distinguish themselves from competitors. Today, high-tech companies recruit their workers exclusively via the Internet.

Although there are advantages of using electronic recruitment systems in organizations, some analysts warn of the consequences of certain inadequate uses of such systems. For example, replacing traditional recruitment methods with computerized systems can make the recruitment process impersonal and inflexible, and have a negative impact on the rate of attracting candidates (Stone, Stone-Romero, & Lukaszewski, 2003). Also, use of online recruitment can have a negative impact on the members of some minority groups, or to individuals who do not have access to computerized systems or do not possess the necessary skills to use them (Hogler, Henle, & Bemus, 1998).

Despite the widespread use of online recruitment so far, very little research has been undertaken to examine the effectiveness of these systems, which is problematic because companies invest a lot of time and resources in the development and implementation of electronic systems for recruiting and/or other activities of human resource management. Based on the review of specific research on the effects of e-recruitment Stone, Lukaszewski and Isenhour (2006) suggest the following guidelines for the use of the electronic system of recruitment:

- Organizations that are well known and have a prominent reputation in the market may benefit more from e-recruitment;
- Organizations should use e-recruitment as a recruitment source, but not the only source of recruitment of candidates for vacant positions;
- Organizations should use e-recruitment, if they require a large number of candidates, or when they need highly educated candidates, especially if they require candidates for high-tech jobs;
- Organizations should be aware that e-recruitment may not be the preferred source for all of the candidates for the job, and in this way will not always get to a candidate who can help the organization to achieve its goals;
- If they want to use e-recruitment, organizations should ensure that their websites are simple to use, easy to navigate and attractive for candidates. Also, electronic recruitment systems should be easy to use so that they can be used by all individuals regardless of their educational level;
- Organizations should ensure that electronic systems for recruitment are complied with the strategic objectives of the firm;
- Organizations should be aware that the electronic (online) system of recruitment of
candidates are protecting privacy less than traditional recruiting systems and therefore there is a need to develop an information privacy policy in relation to the candidates.

To increase the efficiency of e-recruitment process, organizations should use online system with multiple purposes (for example to attract candidates, communicate with candidates, assess knowledge, skills and abilities of candidates, provide feedback to the candidate and the like). In other words, the power systems should be designed so as to carry out the recruitment of candidates but also the pre-selection of candidates.

4.2. Electronic Selection of Candidates

Selection is the process of applying established methods and techniques to choose between several qualified candidates for the job and shortlist them to those that best suit the demands of work which will be employed. So it is a process in which the choice of the group of applicants for a certain position is further narrowed. The main objective of this selection is to achieve the best possible match between the demands of work, the organization's objectives and conditions in which the work is done on the one hand, and the capabilities and characteristics of job applicants on the other. Good job selection is reflected in shortening the period of professional training, in reducing employee turnover, reducing accidents at work, as well as increasing the level of job satisfaction. The most conventional instruments of selection are: biography, interview, and various forms of testing.

The interview is a purposeful conversation between two or more persons for better understanding of candidates and their qualities and assessing whether the applicant is able to perform the job(s) he applied for. One can say that the interview was useful method of selection in all organizations and conclude that the activity of human resource management can not be fully automated with the help of an electronic system for the selection. Coupled with this is the fact that companies often test applicants additionally, and some of the tests by their nature can not be the subject of automation (for example, tests for drug use, probation, work samples, etc.).

The two main reasons for the introduction of an electronic selection are reducing costs and maximizing the utilization of human capital. Electronic systems of selection which do not contribute to the above mentioned reasons will not be sustainable in the long run. Therefore, when developing and implementing an electronic system for the selection of candidates, it is necessary for such a system to ensure monitoring, measurement and managing the costs of selection. In addition, in today's dynamic environment, the speed of the selection process becomes an important issue, and partial automation of the process of selection is reducing the time required to select a suitable candidate for a vacancy.

Major electronic methods of selection are electronic resumes, online assessment (testing) and online interviews (Bodea, Bodea, & Zsolt, 2003). Electronic CV means that applicants submit their application and CV electronically using e-mail or the website. Electronic assessment and testing mean that candidates fill online interactive forms. Answers which the candidate offers to questions in the form are automatically added, simultaneously generating a profile of the candidate. Usually electronic systems of automatic selection of the candidates give the feedback to candidates about the test results automatically (Bode et al., 2003). It has already been stated that the interview as the main method of selection cannot be fully automated or computerized. However, the use of technology (webcams, videoconferencing technology etc.) can allow conducting interviews between people in geographically remote locations, which is very important in today’s globalized environment.

Computerized testing of candidates started with simple applications on PCs, but eventually evolved into complex Internet based applications. Today, companies have a lot of application solutions at their disposal depending on their unique requirements. The development and implementation of the selected technology solutions for electronic selection of candidates must take into account several issues: the existing conditions for the implementation of the selected technological solution, the cost of development and implementation, professional standards in the selection process, the appearance of the user interface and the management of data generated (Kehoe, Dickter, Russell, & Sacco, 2006).

Although technology speeds up and reduces the cost of certain phases of selection, it simultaneously complicates the activity of human resource management (at least in the initial stages of the transition to an electronic system of selection). The organization may take several attempts to simplify design, implementation and initial use of the electronic system of selection. According to Kehoe et al. (2006) some of these procedures are as follows:
Inclusion of own IT resources in the early stages of implementing an electronic system for the selection. That is, an employee in the IT department of the organization should be actively involved in the selection of suppliers who will supply complete solution (application for electronic selection) or to be involved in the development of solutions if the organization decides to develop it on its own;

During the development of electronic systems for the selection it should take into account the real purpose of the selection process and the needs of key stakeholders in the process. In other words, technology must not be allowed to inhibit or limit selection process;

All subsequent users of the system need to be involved in all stages of the development of electronic systems for the selection to be able to provide useful suggestions for improving the final solution.

Whatever the strengths and weaknesses exposed electronic solutions compared to traditional activities and processes in the recruitment process, the technology continues to evolve by offering more efficiently applications for certain activities of human resource management.

5. Conclusion

In an era of globalization, where new business opportunities may arise in any part of the world, there is an increasing pressure on managers to possess the knowledge and skills necessary for success in the global environment. It is therefore considered that the managers with global capabilities are key to the success of any organization that operates on a global level, while they use Internet technology. It should be noted that the negative consequences of a wrong choice of global managers are expensive and bring negative publicity to globalization.

In order to be successful, a manager in the Internet environment must be cosmopolitan, culturally flexible, unbiased, well acquainted with the international environment and a good connoisseur of modern information and communication, and Internet technologies. In other words, they challenge the global success of those managers who do not follow the changes in the global environment, including technological, and those who do not take into account the specific characteristics of the areas where they are when they plan, organize, lead and control, and those managers who are not sensitive to differences in national values, customs and practices. Successful global managers have specific knowledge (international socio-political and economic) and skills (adapting to other cultures and ability to manage diversity), think globally (Golsmith, Greenberg, & Robertson, 2003) and actively use modern information and communication, and Internet technology.

References