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THE IMPLICIT MISSION STATEMENT REGARDING FOSTERING THE INTEGRATION IN THE LABOR MARKET THROUGH ICT IN THE ECONOMIC EDUCATION INTRODUCTION

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Abstract

The modern world, marked by the phenomenon of globalization and the continuous change, represents a real challenge for the educational system. As the human resources are the most important creational force of value in the work process, a specific attention must be given to the mission statemenet the formal instruction process, by which the individual acquires the abilities and competencies demanded by the labor market. The success of each individual within the society is determined by his capacity to correctly and quickly understand the surrounding reality.

Keyword: mission statement, business organization, human resources, economic educational system, Information and Communication Technology (ICT), implicit mission.

JEL Classification: M1, M2, D2, I2, J8, L2

I. Introduction

Most knowledge and competences are acquired through the instructive-educative process. The implementation of a mission statement and an efficient qualification system within the higher education represents two coordinates for developing the human assets

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and for business organization. This system must be directly correlated to the actual and dynamic requirements of the labor market accordin to mission of department/ organization. Our contribution it is about the implicit mission statement. The students' fast integration on the labor market is thus ensured after their university studies are over. In the business environment there can be no complex economic models without the advanced processing offered by the Information and Communication Technology (ICT), such as data mining, complex economic reality simulation software, automated search within the huge financial databases, cloud computing, game theory and advanced statistical processing. We assist to an exponential growth of the volume of information that must be analyzed, stored, processed and interpreted towards decision making, therefore the usage of ICT is imposed both in the instructive-educative process, as well in daily life. The collaboration between economists and programmers represents the key to success for the future research in the field of economics. The curricula in the economic profile faculties must offer the knowledge that would allow the graduates to handle the ICT instruments. They must be able to occupy any company position that requires a degree in economics, but at the same time, they must handle the ICT knowledge. Besides the computer knowledge, jobs like business analyst or software architect imply a deep understanding of the economic phenomenon.

II. The ICT Role in Training the Professional Skills Required by the Labor Market

The majority of knowledge and competencies are acquired through the educational training process. Therefore, to develop the human capital, an efficient qualifications system is necessary to be implemented in the superior education. To get a clear picture of direct correlation between the university specializations and the labor market, we can determine the employment rate for graduates in the first years after graduation. The universities, at every level and field of education, must clearly and specifically identify the market segment on which they act, which one of its trends influences them or which they need to adapt to (Sprandel, 2009). Students and the teaching are the main categories of human resources involved in the educational process. The pupils also play an important role, making the connection between the high schools and universities. Education in general and higher education in particular, have a decisive role in the formation of human capital and consequently in the economic development of

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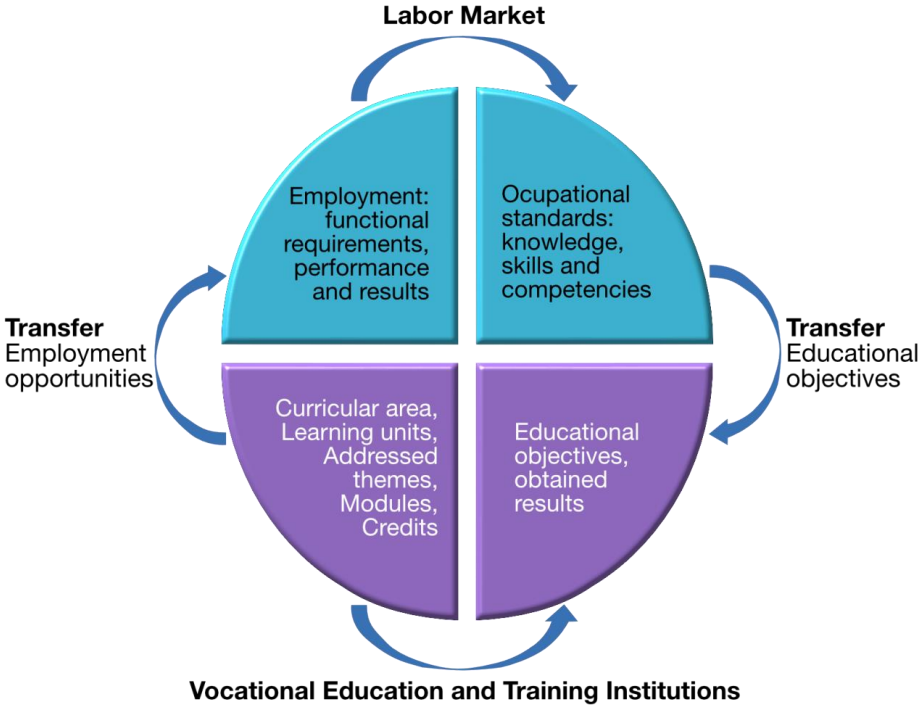
a country. Empirical studies conducted at company level have shown that there is a direct relationship between human capital and productivity of the company: employees with high level of training are characterized by a better state of health and are direct sources of innovation, creativity, and therefore competitiveness (Roșca & Păunescu, 2009). Due to the structural social changes and the economic fluctuations, the connection of universities to the labor market is complex and dynamic. Moreover, the labor market can be disrupted by different factors and the universities cannot change their curricular area to generate competences that are temporarily requested in a specific professional area.

Figure 1- The relationship between the educational system and the professional skills development that are required by the labor market accordin to implicit mission statement



Since we witness an exponential growth in the volume of information that must be analyzed, stored, processed and interpreted for the purpose of decision making, it is necessary to use Information and Communication Technologies (ICT) in both the training process and in the daily life (Ciocoiu & Șerban, 2012). The computer creates contexts for

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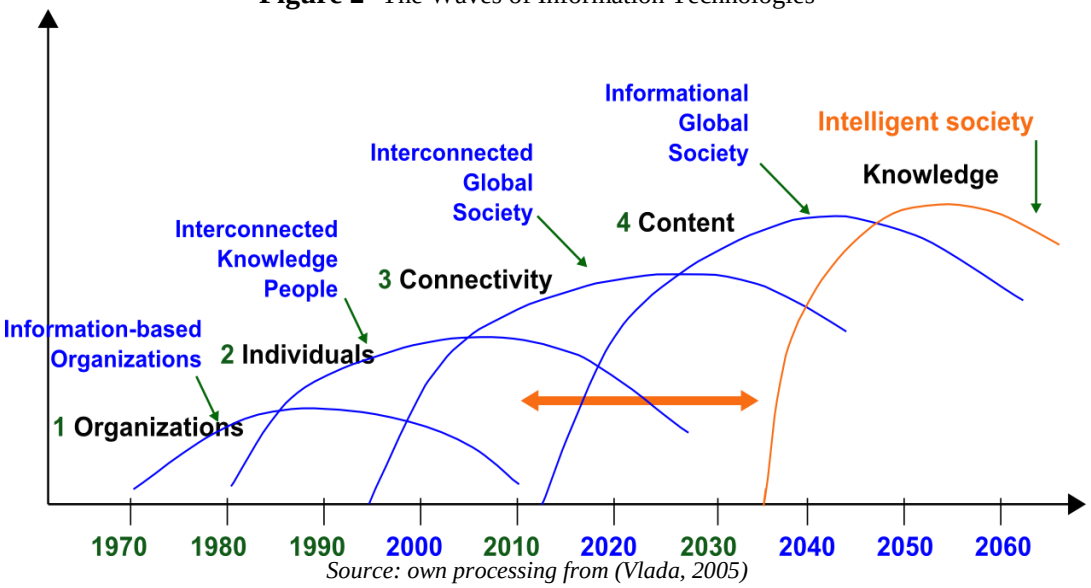
the applications of the studied concepts and allows the verification of solutions to problems or to identify the optimal operational conditions of a new experiment (Constantin & Dinica, 2006). At the same time, the Internet is the engine of all the changes at the social level. Along with other ICT instruments, it constitutes both a cause and an effect of globalization leading to social transformations in general and of the economic society in particular (Muntean, 2012). The usage of ICT helps the optimization of the time taken by data processing and its schedule for the elaboration of analysis or the decision making support services. (Ionescu et al., 2014), (Năstase & Popa, 2011). ICT covers a wide variety of information preparation and processing activities that facilitate an increased usage of these activities in all areas of society. Due to the huge amount of information and knowledge, there is an intention to transition from the informational society to a society of knowledge. The result is an interconnected global community, called a society-network (see Fig.2), and many European programs are specifically designed to achieve this objective (Vlada, 2005).

Figure 2- The Waves of Information Technologies



Source: own processing from (Vlada, 2005)

The European Commission has integrated its initiatives in education and training under the umbrella of a single program known as the Lifelong Learning Programme (LLP). This program enables the European citizens, regardless of age, to benefit from

learning opportunities throughout Europe. LLP proposes to strengthen exchanges, cooperation and mobility between the educational systems and professional training in the EU. The basic objective of this program is to contribute, by promoting lifelong learning, to the development of the European Union as a society based on knowledge, with durable economic growth, more jobs and greater social cohesion. The program has several components: Comenius (for secondary education), Erasmus (for higher education), Leonardo da Vinci (for vocational education and training), Grundtvig (adult education), a transversal program to ensure the best results and the Jean Monnet program, meant to sustain legal activities related to European integration and to the European educational institutions.

III. The role of ICT in the Higher Economic Education

Regarding the higher economic education, its curricular area must have the following characteristics

1. The graduate should be able to take up employment in a wide range of positions;
2. The training should be oriented mostly on projects and applications, without too much theory;
3. The focus should be on the practical works in business (marketing, finance, accounting, management) and IT (analysis/design, databases, programming, networks, Web, etc.) related to the economics profession;
4. It should offer ERASMUS mobilities in universities from the European Union;
5. The study program should offer the acquirement of economic and information technology knowledge that would allow the graduates to carry out activities in the economic sector with the help of ICT tools.

The professional competencies and abilities that the economic higher education graduate should hold are:

1. The acquisition and formation of knowledge in the economic field;
2. The training of specialized knowledge specific to Informatics applied in the economics profession;
3. The development of a high level of semantic understanding in the economic information systems field;
4. An advanced knowledge of the mechanisms, models and theories related to the economic information systems field, and

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5. The development of creative thinking in the field of business resources management using the modern informational technologies.

The higher economic education curricular area has to prepare students that should be able to fit within the following career paths that are required by the current economics labor market, after the end of the studies:

1. The analysis and design of information systems in the economics and business fields;
2. Consultancy in the conception and development of informatics applications intended for the economic environment;
3. The conception and management of enterprise information systems;
4. The use of modern instruments for the design of economics applications;
5. The development and management of databases and data stores;
6. The administration of databases or the design of distributed systems;
7. The conception, design and implementation of systems intended for electronic businesses;
8. The economics complex analysis using the modern techniques and instruments offered by ICT;
9. The carry out of activities specific to an economist but with abilities to utilize computing and informatics applications;
10. Modern audit techniques;
11. The capability of business analyst;
12. Software analysis and consultancy for businesses;
13. Web application developer for companies, Web designer and
14. Database expert and Business Intelligence.

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IV. Economic Information Systems

The Economic Information Systems (EIS) play an important role in the business administration, financial-accounting processing and management. EIS fulfill the following essential functions: the data collecting, the data preparation and their transformation into information, the insurance of necessary control elements and the support of decisional processes within the economic entities. The concept of EIS represents an ensemble of human and capital resources for the collecting and processing of data that is necessary for information production at all the levels of an organization (Oprea, 1999). Because of the complexity of the economic transactions and events and of the new regulations regarding the international accounting norms and standards, the specialists from the economy field, the accounting professionals, the auditors, the fiscal experts, researchers and the specialist teachers have to hold advanced knowledge about EIS.

In the research paper "The five Information Technology Blind Spots of Economists", Eric van Heck asked himself the following question: "Why did most economists fail to predict the global financial crisis?" His answer was that the economists have problems regarding the EIS usage and therefore most of them could not benefit from the complex financial analysis results offered by these. Also, the few economists that did have predicted the global financial economic crisis did not make the prediction from the perspective of Information Systems (van Heck, 2013). To be able to observe and correct the weaknesses of a digital global economic system it is necessary to use automatic analysis and prediction technologies. Also, complex economic models cannot be

conceived without the advanced processing offered by ICT, such as data mining, complex economic environment simulation software, automatic searches in the immense financial databases, cloud computing, game theory, advanced statistical processing. The collaboration between the economists and the programmers represents the key to success for the future of research in the economic fields.

As a reflection of the informational society in which we live in, the concept of Business Intelligence is implemented more and more in the business environment, in the accounting firms, audit, consulting and accounting software. Among the modern techniques and instruments offered by ICT are: the Microsoft Office suite, the accounting software, the Enterprise Resource Planning (ERP) software, Data Mining and the international business reporting standard XBRL.

IV.1. ERP Applications

Throughout time, the management techniques and practices have evolved in a set of practices specific to each business activity. Although the outcome of a long process of improvement, these techniques are also subject to an ongoing process of resynchronizing with the structural changes in the business environment. Here intervenes the ERP application, whose role is to facilitate the incorporation and actualization within the company's business processes. An ERP application (see Fig. 3) is a software infrastructure that offers support for the management and coordination of various structures, processes and flows of the company, in order to achieve the business objectives. ERP is a combination of business management practices and information technology, whereby the company's business processes are integrated with the information system, in order to obtain some specific business objectives. An ERP system is composed of a series of modules that are intended for the various departments, such as: production, financial-accounting, purchasing and sales. Although varied in its nature, the information is operated only once. This saves time, resources, decreases the likelihood of operating mistakes; it facilitates access to the newest information. One of the distinguishing characteristics of an ERP application is the storage of all information in a single database. For example, a client makes an order (by telephone, fax or email). This order is then operated by different departments (sales, warehouse, purchasing, billing, and accounting) as various activities are provided in order to satisfy the request. The determination of the causes that generate sales losses is also extremely difficult. By implementing an ERP system, the whole process can be automated: from the order taking through a portal (business to business or business to consumer) or through other channels, to delivery and

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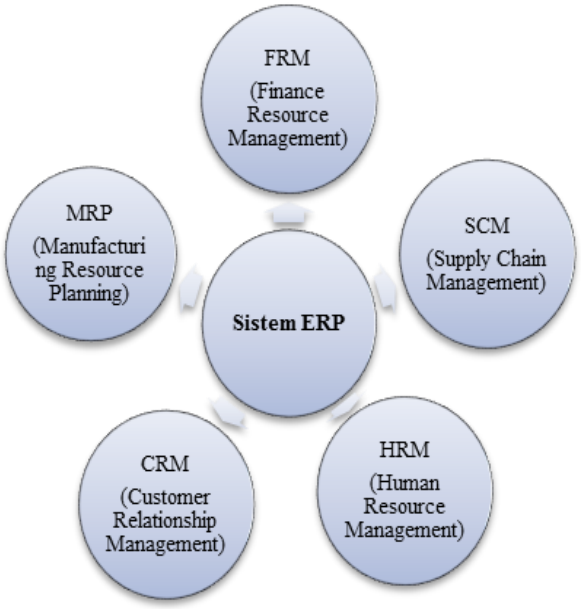
billing, at any time having the possibility to check the order status and the identification of any non-compliance with the original request.

Figure 3 - The modules of an ERP system



Among the advantages of implementing ERP systems are:

- the facilitation of current operations management
- the reduction of operational costs
- the replacement of a non-integrated informational system (several applications, obsolete or not, that are operated independently), with a completely integrated and multifunctional one
- the replacement of one or more technologically obsolete systems
- the improvement of information quality and accessibility
- the integration of business processes and of the informational systems that support them
- the capacity to support the projected business growth
- the simplification of new business integration process (the acquisition of other companies) in the current technological infrastructure
- the implementation of new business strategies

- the optimization of business processes
- the reduction of structural costs
- the improvement of response times for client requests
- the increase of the order fulfillment
- the standardization of business processes across the company

The ERP application enables the decision factors to create the complete analysis over the fulfillment of the business plan. Through the activity simulation options and the flexible and dynamic character of the applications can be realized plans for prevention, assessment and definitions in advance of evolution trends of the industry in which the company belongs, qualitative analysis, the integration with new technologies of e-business and online communication. According to PAC (the market analysis company Pierre Audoin Consultants), for the year 2009, the ERP market in Romania has recorded a much stronger decrease than that of the entire software and IT services market. The ERP solutions were dominated by the SAP group. Regarding the market share held by the ERP solutions vendors, the first place in the ranking made by PAC is held by SAP (23-24%), followed by Oracle (with about 15% market share), on the 3rd and 4th places being Siveco and TotalSoft (about 11–12%), followed by Wizrom (approx. 7%) and Micrsoft (under 5%). The largest increase in market share, according to the same sources, was recorded by TotalSoft, which managed an increase of nearly 60%, followed by Transart and Senior Software (market shares below 5%), that have recorded increases of 20% and 15% respectively. Siveco and Epicor recorded significant decreases. A special emphasis was placed on presenting the strategic alternatives in achieving ERP information systems and defining the trends in the integrated systems, although this trend could be ended by the incorporation of ERP and ERM (Enterprise Resource Management) systems (PAC, 2009).

The main trends in the ERP market are:

- developing integration and flexibility
- the expansion to e-business applications
- a wider cooperation with the new users
- Internet technology adoption

IV.2. Business Intelligence and the Financial Audit

When performing an audit of financial statements, the auditor should have enough information about the audited company. The knowledge about a client also implies an understanding of their used information system. As Business Intelligence systems become

increasingly used by organizations, the auditors' interest for them also increases (Stanciu et al., 2009). The software instruments specific to Business Intelligence fall into the following categories:

- Spreadsheet applications (e.g. Microsoft Office Excel)
- Report generators (e.g. Microsoft Access)
- Online Analytical Processing OLAP instruments
- Data Mining instruments

IV.3. Data Mining

To discuss these days about the financial audit by ignoring the computer assisted audit techniques is at least unrealistic. Thanks to the quality and accuracy of the information processing done by the information systems, they serve the purpose to assist the reasoning and the activity of the auditor (Chersan et al., 2013). The Computer Assisted Audit Techniques (CAAT) allow the verification of all the accounts and transactions within the audit procedures. Techniques such as Data Mining can be used for the extraction and analysis of the most relevant information stored in the large databases owned by companies. They represent automated or semi-automated procedures for modeling and analysis of large amount of data. Data Mining constitutes a subset of CAAT developed for testing and monitoring of the risks using data analysis techniques (Stanciu, 2014). These techniques can be used throughout the audit work, from the customer acceptance or maintenance, planning, conducting the actual auditing, the documenting and the creation of the audit report.

Another new concept in the audit worldwide is the “continuous audit in the information systems environment”. Being integrated in every step of management of an organization, the proposed audit process practically works permanently in the background, in an information systems environment (Belciug et al., 2010).

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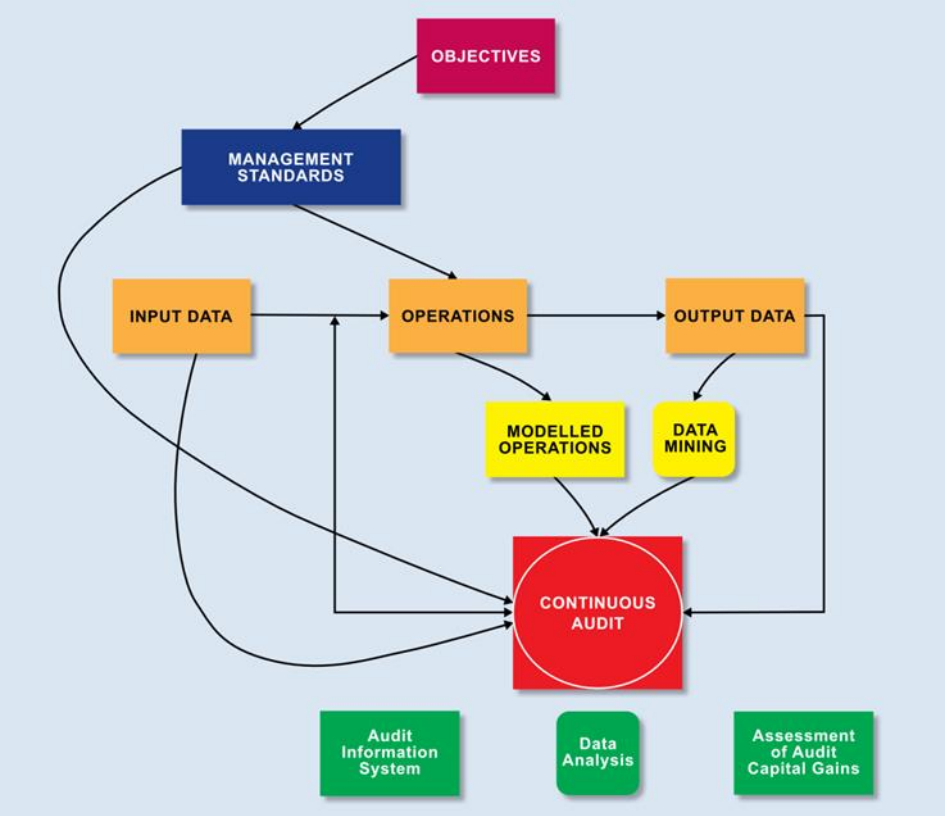
Figure 4 - The defining elements of the continuous audit



IV.4. XBRL (eXtensible Business Reporting Language), the Universal Language for Financial Reporting

Globally, the financial reporting is made using the international standards for accounting US GAAP (United States Generally Accepted Accounting Principles) and IFRS (International Financial Reporting Standards). As there are significant differences in taxonomy, form and content between these two standards, the creation of a conversion between these standards was necessary to guarantee the comparability of the financial reports (Andreica & Dogar, 2012). XBRL, that is a specific language using the fundamental constructive elements of XML, successfully achieved these conversions, being widely used today in the business mediums.

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V. Conclusions and suggestions

The modern world, marked by the phenomenon of globalization and the continuous change, represents a real challenge for the educational system. Most knowledge and competences are acquired through the instructive-educative process. Therefore, to develop the human assets it is imposed to implement an efficient qualification system within the higher education. This system must be correlated directly to the actual and dynamic requirements of the labor market according to implicit mission statement. The fast integration of the students on the labor market is thus ensured after their university studies are over. We assist to an exponential growth of the volume of information that must be analyzed, stored, processed and interpreted towards decision making, therefore the usage of ICT is imposed both in the instructive-educative process, as well in daily life. The curricula in the Economic profile faculties must offer the knowledge that would allow the graduates to handle the ICT instruments according to kinds of managerials strategies. The graduates must be able to occupy any company position that requires a degree in Economy, but at the same time, ICT knowledge, as business analyst or software architect, that, besides computer knowledge, imply a deep understanding of the economic phenomenon and mission statement generally

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